

Horizon Sports Complex
Louisville, KY

Lighting System

Fixture	Beam Height	Mount Height	Fixture Qty	Luminaire Type	Load	Group
AS42	60'	60'	2	TLC-LED-150	2.30 kW	A
AS44	60'	60'	2	TLC-LED-150	1.15 kW	A
AS46	60'	20'	2	TLC-LED-150	2.30 kW	B
AS48	60'	60'	2	TLC-LED-150	1.15 kW	B
B1	70'	70'	4	TLC-LED-150	2.30 kW	C
B2	70'	20'	4	TLC-LED-150	4.60 kW	A
B3	70'	70'	5	TLC-LED-150	1.15 kW	A
B4	70'	20'	5	TLC-LED-150	5.75 kW	A
BS-B8_OS	60'	20'	5	TLC-LED-150	1.15 kW	B
CS-C2	60'	20'	1	TLC-LED-150	1.15 kW	B
CS-C4	60'	20'	4	TLC-LED-150	4.60 kW	C
CS-C6	60'	20'	4	TLC-LED-150	1.15 kW	A
CS-C8	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C10	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C12	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C14	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C16	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C18	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C20	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C22	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C24	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C26	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C28	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C30	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C32	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C34	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C36	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C38	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C40	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C42	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C44	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C46	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C48	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C50	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C52	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C54	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C56	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C58	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C60	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C62	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C64	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C66	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C68	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C70	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C72	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C74	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C76	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C78	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C80	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C82	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C84	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C86	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C88	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C90	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C92	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C94	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C96	60'	20'	4	TLC-LED-150	4.60 kW	B
CS-C98	60'	20'	4	TLC-LED-150	1.15 kW	B
CS-C100	60'	20'	4	TLC-LED-150	4.60 kW	B

Group	Description	Avg Load	Max Load	Fixture Qty
A	Field 1	31.05 kW	31.05 kW	27
B	Field 2	31.05 kW	31.05 kW	27
C	Field 3	18.4 kW	18.4 kW	18
D	Soccer	23.0 kW	23.0 kW	20

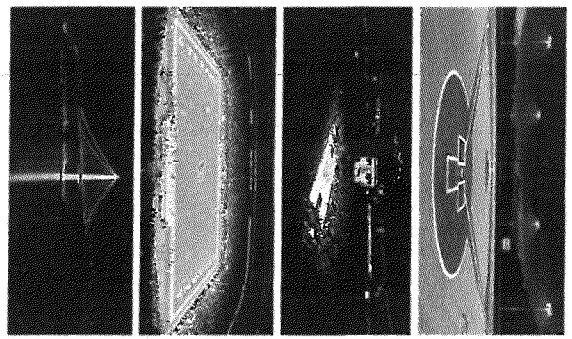
Fixture Type	Source	Wattage	Lumens	LPF	LPF	LPF	Quantity
TLC-LED-150	LED 6700K - 75 CRI	1150W	121,000	>=1,000	>=1,000	>=1,000	90

Grid Name	Calculation Metric	Avg	Min	Max	Max/Min	Group	Fixture Qty
Field 1 (Infield)	Horizontal Illuminance	31.8	23	38	1.69	A	27
Field 1 (Outfield)	Horizontal Illuminance	23.8	16	36	2.45	A	27
Field 2 (Infield)	Horizontal Illuminance	38.4	29	45	1.90	B	27
Field 2 (Outfield)	Horizontal Illuminance	23.4	15	37	2.43	B	27
Field 3 (Infield)	Horizontal Illuminance	34	20	46	1.95	C	18
Field 3 (Outfield)	Horizontal Illuminance	28.6	18	46	2.60	C	18
Soccer	Horizontal Illuminance	34	24	48	1.98	D	20

Light Level Summary	Source	Wattage	Lumens	LPF	LPF	LPF	Quantity
TLC-LED-150	LED 6700K - 75 CRI	1150W	121,000	>=1,000	>=1,000	>=1,000	90

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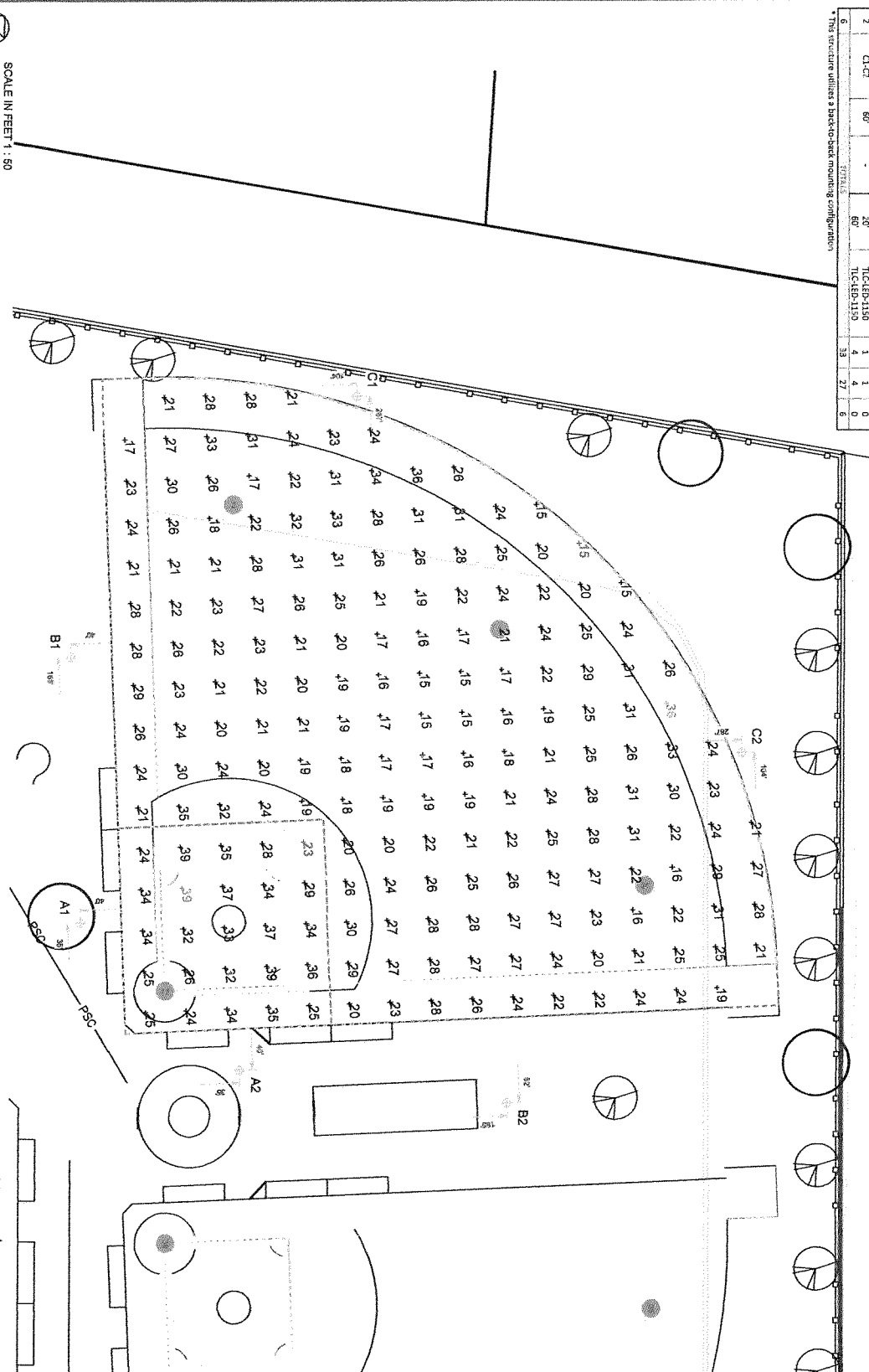
Horizon Sports Complex
Louisville, KY

GRID SYSTEM
Name: Field 1
Size: 300'x300' / 300' - Basepath 60'
Spacing: 20'0" x 20'0"
Height: 3.0' above grade

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	POLE SIZE	BASE	ARM	HEIGHT	MANUFACTURER	MODEL	WATTAGE	OTHER
2	A1-A2	60"	BL-300	20'	20'	TLC-LED-1150	1	1	0
1	B1	70"	-	20'	20'	TLC-LED-1150	1	1	0
1	B2	70"	-	20'	20'	TLC-LED-1150	1	1	0
2	C1-C2	60"	-	20'	20'	TLC-LED-1150	4	4	0
6						TLC-LED-1150	38	27	6

* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1:50
0 50 100

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ILLUMINATION SUMMARY

Parameter	Indirect	Onfield
Guaranteed Average	30	20
Start Average	31.79	23.79
Maximum	39	36
Minimum	23	15
Avg / Min	1.37	1.60
Guaranteed Max / Min	2.8	2.45
UG (adjacent pps)	1.64	1.83
CU	0.84	
No. of Poles	29	181

Color / CRI: 5700K - 75 CRI
Luminaire Output: 27
No. of Luminaires: 27
Total Load: 31,05 NW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Ampage Draw Sheet and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Pole location(s) ± dimensions are relative to 0.00 reference point(s)

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ILLUMINATION SUMMARY

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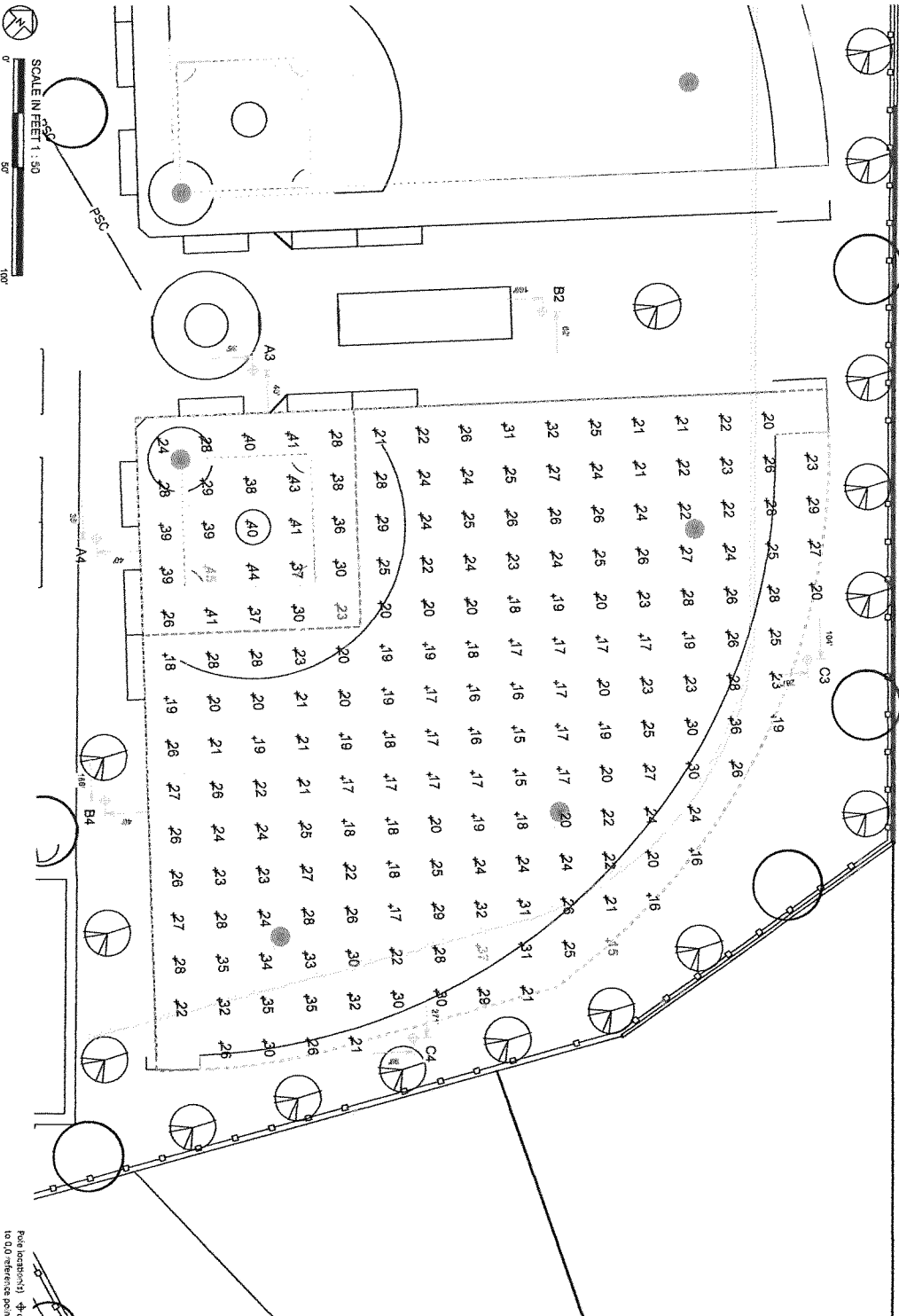
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Horizon Sports Complex
Louisville, KY

EQUIPMENT LIST FOR AREAS SHOWN							
QTY	LOCATION	SIZE	SOCKET	MOUNTING	LUMINAIRE	QTY	THIS OTHER
2	A3-A4	60"	ES-20"	20"	TLC-LED-1150	1	2
1	B1	70"	-	20"	TLC-LED-1150	1/1*	1
1	B4	70"	-	20"	TLC-LED-1150	3/5*	1
2	C3-C4	60"	-	20"	TLC-LED-1150	4	4
6				60"	TLC-LED-1150	4	4
						27	27

*This structure utilizes a section ball mounting configuration.



Pole locations () dimensions are relative to 0.00 reference point(s)

ILLUMINATION SUMMARY	
Guaranteed Average	30
Seen Average	35.35
Maximum	45
Minimum	23
Avg / Min	1.51
Guaranteed Max / Min	2.5
UG (adjacent pts)	1.56
CU	0.63
No. of Points	25

ILLUMINATION SUMMARY	
Color / CRI	5700K - 75 CRI
Luminaire Output	121,000 lumens
No. of Luminaires	27
Total Load	51,055 W
Luminaire Type	L30 175
TLC-LED-1150	551,000
	551,000
	551,000

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume a 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY

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SCALE IN FEET 1:50

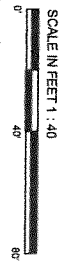
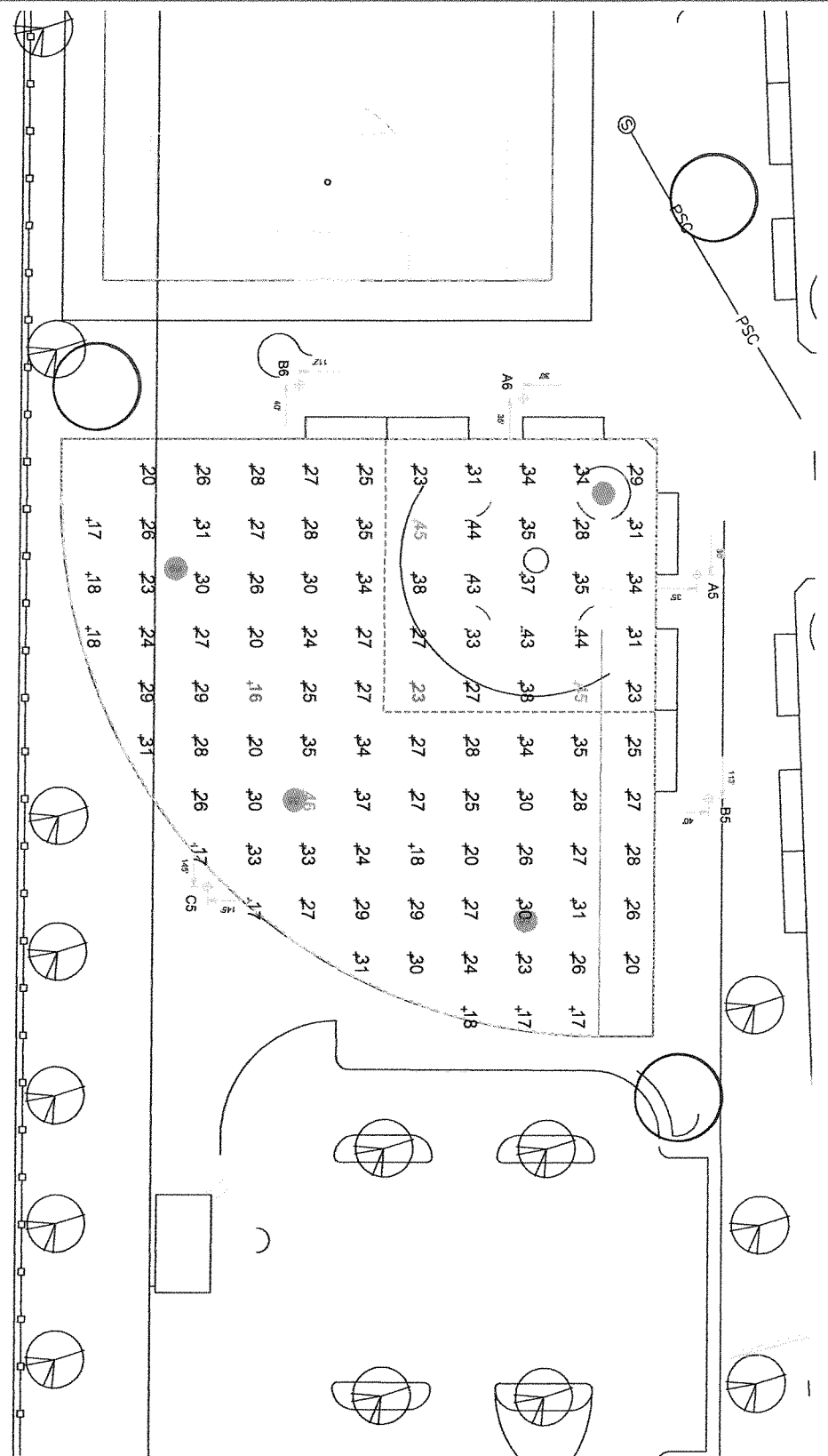
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QTY	LOCATION	SIZE	ELEVATION	HEIGHT	TLC-LED-1150	TLC-LED-1150	Luminaire		TLC-LED-1150	TLC-LED-1150
							NO.	WATTAGE		
2	A5-A6	60"	60"	20'	1	2	2	2	0	0
3	B5-B6, CS	60"	60"	20'	1	3	3	3	0	0
5					18	3	18	3	0	0



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ILLUMINATION SUMMARY

Name: Field 3
Size: 200' x 200' - basepath 50'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

GRAND SUMMARY

Horizon Sports Complex
Louisville, KY

ILLUMINATION SUMMARY		Infield		Outfield	
Guaranteed Average	30	20	26.56		
Scan Average	33.98	46	46		
Maximum	45	16	16		
Avg / Min	23	1.63	1.63		
Guaranteed Max / Min	2.5	3	3		
UG (adjacent Pst)	1.95	2.80	2.80		
CU	1.90	1.96	1.96		
No. of Points	25	73			

Color / CRI: 5700K - 75 CRI
Luminaire Output: 121,000 lumens
No. of Luminaires: 16
Total Load: 18.4 KW

Luminaire Type	L80 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>51,000	>51,000	>51,000

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15. Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing. Installation Requirements: Results assume a 3% nominal voltage at the side of the driver and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY

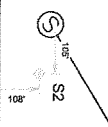
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EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	SIZE	GRADE	WARNING HEIGHT	LUMINAIR TYPE	200' FEET TORQUE	200' FEET TORQUE	200' FEET TORQUE	200' FEET TORQUE
1	S1-24	40'	60"	60"	TLC-LED-1150	5	5	5	0
TOTAL:						20	20	20	0



29	48	44	41	33	24	33	41	44	48	29
32	41	35	40	33	31	33	40	35	41	32
29	35	27	29	27	25	27	29	27	35	29
29	35	27	29	27	25	27	29	27	35	29
32	41	35	40	33	31	33	40	35	41	32
29	48	44	41	33	24	33	41	44	48	29



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Pole location(s) + dimensions are relative to 0,0 reference point(s)

GRID SUMMARY

Name: Soccer
 Size: 300' x 165'
 Spacing: 30.0' x 30.0'
 Height: 3.0' above grade

ILLUMINATION SUMMARY

Guaranteed Average: 30
 Scan Average: 34.03
 Maximum: 48
 Minimum: 24
 Avg / Min: 1.40
 Guaranteed Max / Min: 2.3
 Max / Min: 1.98
 UG (adj/cfm Psh): 1.67
 CU: 0.83
 No. of Points: 66

Luminaire Type	L80 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>51,000	>51,000	>51,000

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.3% dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY

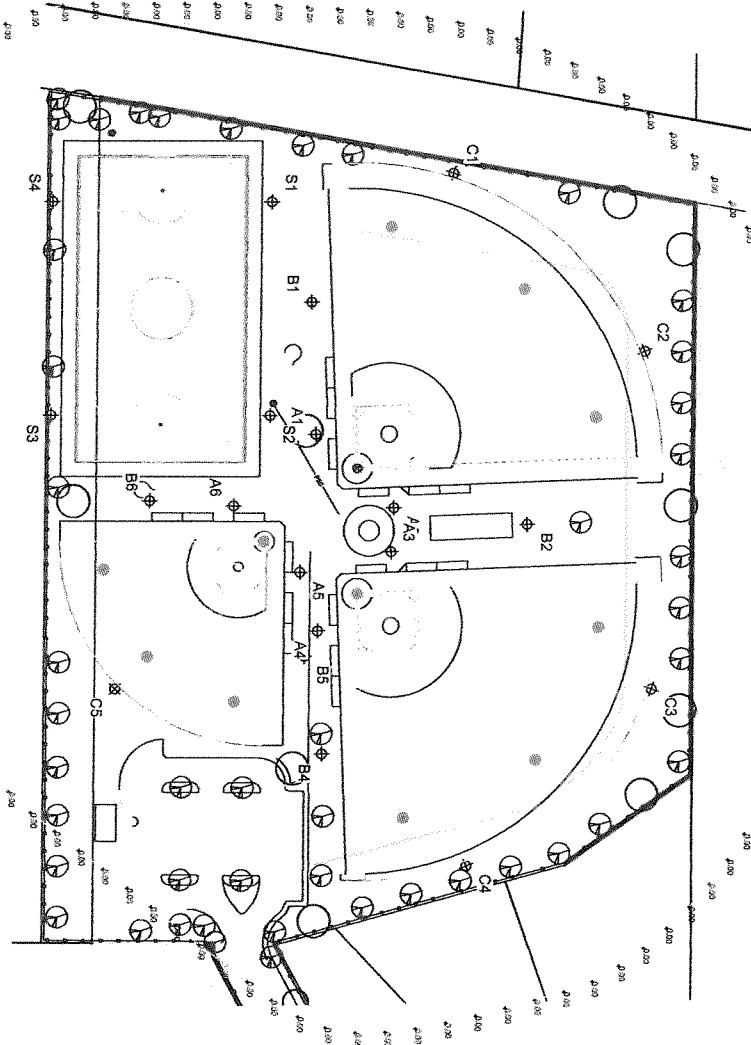
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QTY	LOCATION	SIZE	SHAPE	BEYOND	HEIGHT	LUMINAIRE TYPE	FOOT COUNTS	WATT	THROW
4	A1-A4	60"	Rect	-	20'	TIC-ED-1150	1	1	0
2	A5-A6	60"	Rect	-	60'	TIC-ED-1150	2	2	0
2	B1-B4	70"	Rect	-	50'	TIC-ED-1150	2	2	0
1	B2	70"	Rect	-	20'	TIC-ED-1150	4	4	0
3	B5-B6	60"	Rect	-	70'	TIC-ED-1150	5/3*	10	0
4	C1-C4	60"	Rect	-	20'	TIC-ED-1150	1	1	0
4	C1-C4	60"	Rect	-	50'	TIC-ED-1150	4	4	0
4	S1-S4	60"	Rect	-	60'	TIC-ED-1150	5	5	0
4	S1-S4	60"	Rect	-	90'	TIC-ED-1150	90	90	0

*This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 120
 0' 120' 240'

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Horizon Sports Complex
 Louisville, KY

GRID SUMMARY
 Name: 150' Spill/Glare Line
 Spacing: 30.0'
 Height: 6.0' above grade

ILLUMINATION SUMMARY

MAXIMUM ILLUMINATION FOOT-COUNTS

Scan Average:	0.0007
Maximum:	0.00
Minimum:	0.00
No. of Points:	104

Color / CRI: 5700K - 75 CRI
 Luminaire Output: 121,000 lumens
 No. of Luminaires: 90
 Total Load: 109.5 kW

Luminaire Type	150' Ht	180' Ht	170' Ht
TIC-ED-1150	551,000	551,000	551,000

Prepared per TIC-21-11. See Appendix A for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Appenze Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume a 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Point location(s) + dimensions are relative to 0.00 reference point(s)

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ILLUMINATION SUMMARY

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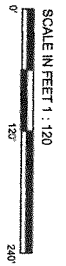
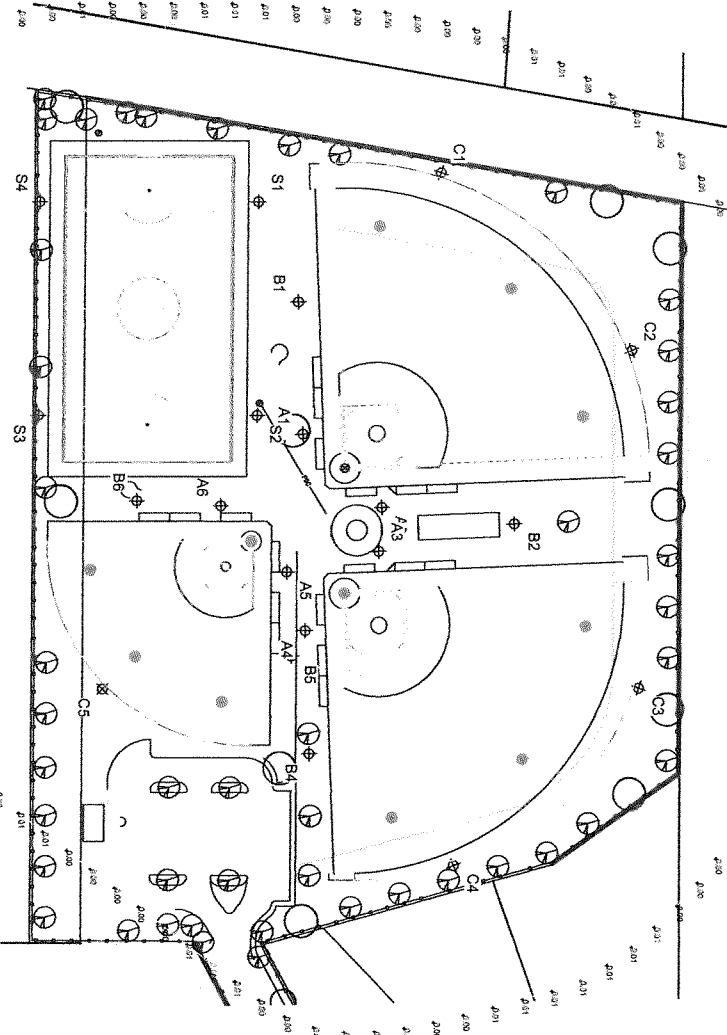
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CITY	LOCATION	SIZE	GRADE	ELEVATION	MOUNTING HEIGHT	LUMINAIRES			THIS	TOTAL
						LUMI. TYPE	POLE DIA.	GRID		
4	A1-A3	60'	-	20'	20'	TIC-ED-1150	1	1	0	0
2	A1-A6	60'	-	20'	20'	TIC-ED-1150	2	2	0	0
2	B1, B4	70'	-	20'	20'	TIC-ED-1150	1	1	0	0
1	B2	70'	-	20'	20'	TIC-ED-1150	1/2	2	0	0
3	B5-B7, C5	60'	-	20'	20'	TIC-ED-1150	3	1	0	0
4	C1-C4	60'	-	20'	20'	TIC-ED-1150	4	4	0	0
4	S1-S4	60'	-	20'	20'	TIC-ED-1150	5	5	0	0
20							30	30	0	0

This structure utilizes a back-to-back mounting configuration.



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Horizon Sports Complex
Louisville, KY

GRID SUMMARY
Name: 150' Spill/Gire Line
Spacing: 30.0'
Height: 6.0' above grade

LUMINATION SUMMARY		
Scan Average:	0.0099	Entire Grid
Maximum:	0.02	
Minimum:	0.00	
No. of Points:	104	
Color / CRI:	5700K - 75 CRI	
Luminaire Output:	121,000 lumens	
No. of Luminaires:	90	
Total Load:	103.5 kW	

Guaranteed Performance: The ILLUMINATION described above is guaranteed by Musco Lighting. Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at the site of the driver and structures located within 3 feet (1m) of design locations.

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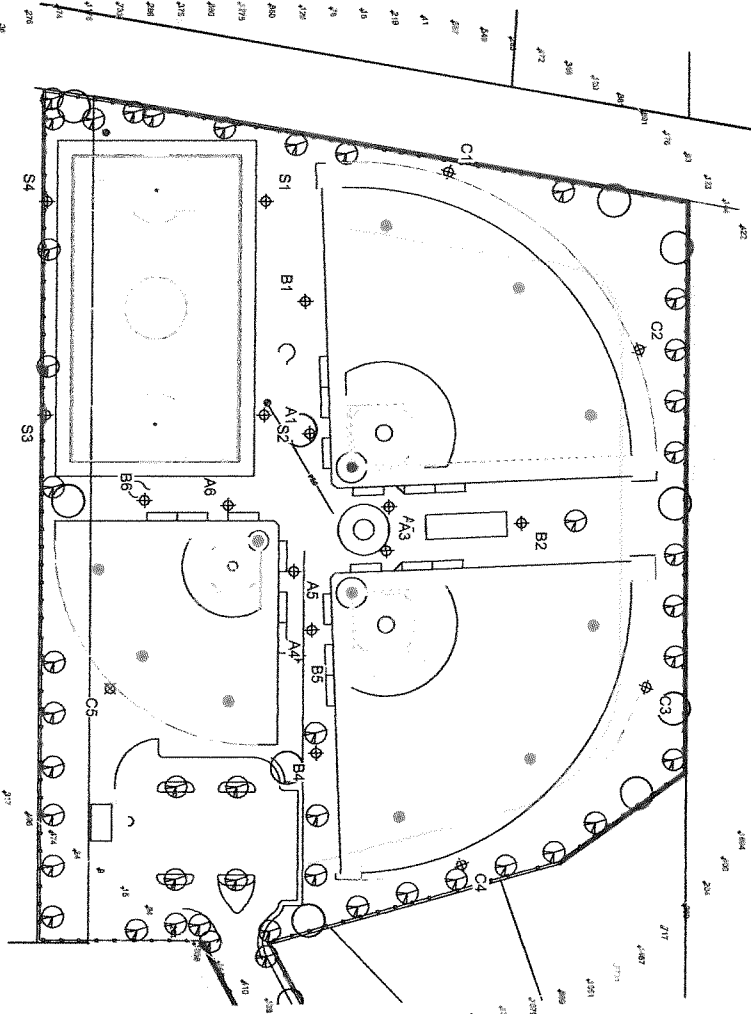
Horizon Sports Complex
Louisville, KY

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CITY	LOCATION	POLE	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires			
						LUMINAIRE TYPE	NO. OF LUMINAIRES	TOTAL TORQUE (LBS. IN)	
4	AL146	60"	-	-	20'	TLC-ED-1150	1	1	0
2	AS-4E	60"	-	-	60'	TLC-ED-1150	2	2	0
2	B1-B4	70"	-	-	20'	TLC-ED-1150	1	1	0
1	B2	70"	-	-	20'	TLC-ED-1150	4	4	0
3	B5-B6, C3	60"	-	-	20'	TLC-ED-1150	1/2*	2	0
4	C1-C4	60"	-	-	20'	TLC-ED-1150	5/2*	10	0
4	S1-S4	60"	-	-	20'	TLC-ED-1150	1	1	0
4	S5-S8	60"	-	-	20'	TLC-ED-1150	1	1	0
20		60"	-	-	60'	TLC-ED-1150	4	4	0
20		60"	-	-	60'	TLC-ED-1150	5	5	0
20		60"	-	-	60'	TLC-ED-1150	5	5	0

* This structure utilizes a back-to-back mounting configuration



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Point locations (d) dimensions are relative to 0.0' reference point(s)

GRID SUMMARY	
Name:	150' Spill/Glare Line
Spacing:	30.0'
Height:	6.0' above grade

ILLUMINATION SUMMARY			
NATIONAL FOOT-CANDLE PER FOOTPRINT			
Scan Average:	5982244		
Maximum:	173149		
Minimum:	0.00		
No. of Points:	104		
Color / CRI: 5700K - 75 CRI			
Luminaire Output:	121,000 lumens		
No. of Luminaires:	90		
Total Load:	103.5 kW		
Luminaire by Type			
TLC-ED-1150	51,000	51,000	51,000

Guaranteed Performance: The ILLUMINATION described above is guaranteed per foot Musco Warranty. Warranty does not include a 0.9% dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at the side of the driver and structures located within 3 feet (1m) of design locations.

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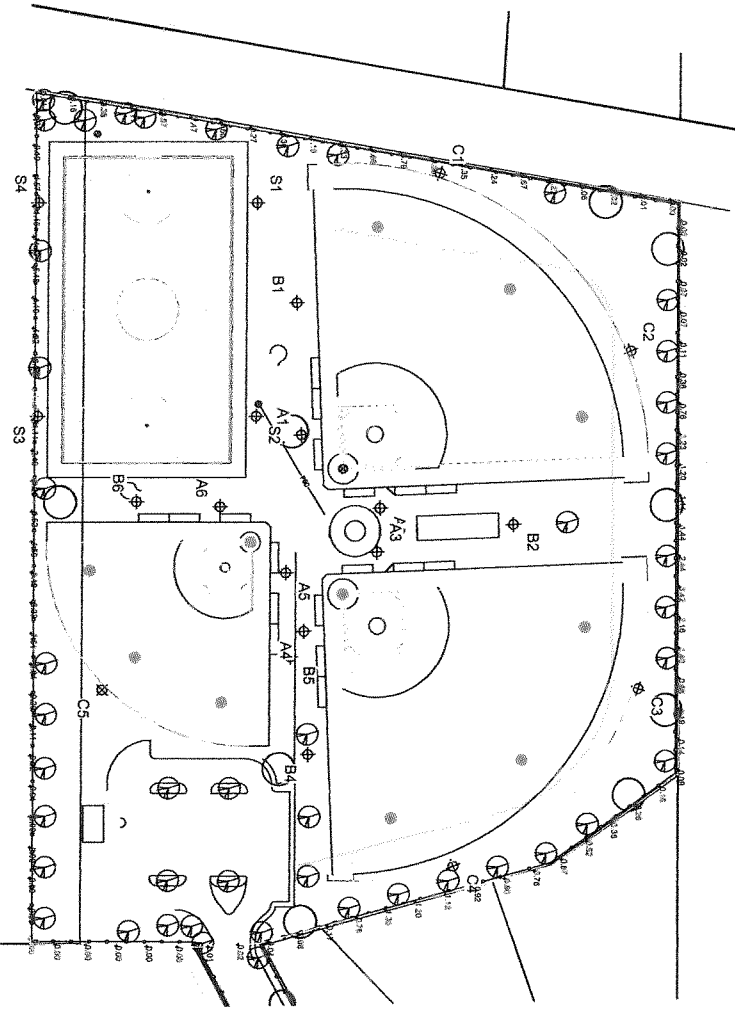
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ILLUMINATION SUMMARY

FOOTCANDLE DISTRIBUTION SHEET

QTY	LOCATION	Pole Size	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	FOOT CANTLES	FOOT CANTLES
4	A1-A4	60"	-	20'	TLC-ED-1150	1	1
2	A5-A6	60"	-	20'	TLC-ED-1150	2	2
2	B1-B4	70"	-	20'	TLC-ED-1150	1	1
1	B7	70"	-	20'	TLC-ED-1150	4	4
3	B5-B6, C3	60"	-	20'	TLC-ED-1150	5/5*	10
4	C1-C4	60"	-	20'	TLC-ED-1150	3	3
4	S1-S4	60"	-	60'	TLC-ED-1150	4	4
200					TLC-ED-1150	50	50

* This structure utilizes a bi-rack mounting configuration



SCALE IN FEET 1 : 120
ENGINEERED DESIGN By: B.Taylor • File #186715B • 07-Jul-17

Horizon Sports Complex

Lexington, KY

GRID SUMMARY
Name: Spill/Gate Property Line
Spacing: 30.0'
Height: 6.0' above grade

ILLUMINATION SUMMARY

Luminaire Type	L80 hrs	L90 hrs	L10 hrs
TLC-ED-1150	351,000	351,000	351,000

Guaranteed Performance: The ILLUMINATION described above is guaranteed per Footcandle Illumination Requirements and includes a 0.95 dirt depreciation factor.
 Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.
 Electrical System Requirements: Refer to Ampere Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
 Installation Requirements: Results assume ± 3% nominal voltage at the side of the driver and structures located within 3 feet [1m] of design locations.

Pole location(s) ± dimensions are relative to 0.0' reference point(s)



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ILLUMINATION SUMMARY

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ILLUMINATION DESIGN SERVICES

Horizon Sports Complex
Louisville, KY

GRID SUMMARY
Name: Spill/Glare Property Line
Spacing: 30.0'
Height: 6.0' above grade

ILLUMINATION SUMMARY
MANUFACTURER: VAVA VERTICAL FOOTCANDLES
Scan Average: 2,9292
Maximum: 15,335
Minimum: 0.00
No. of Points: 91
Color / CRI: 5700K - 75 CRI
Luminaire Output: 121,000 lumens
No. of Luminaires: 90
Total Load: 103.5 kW

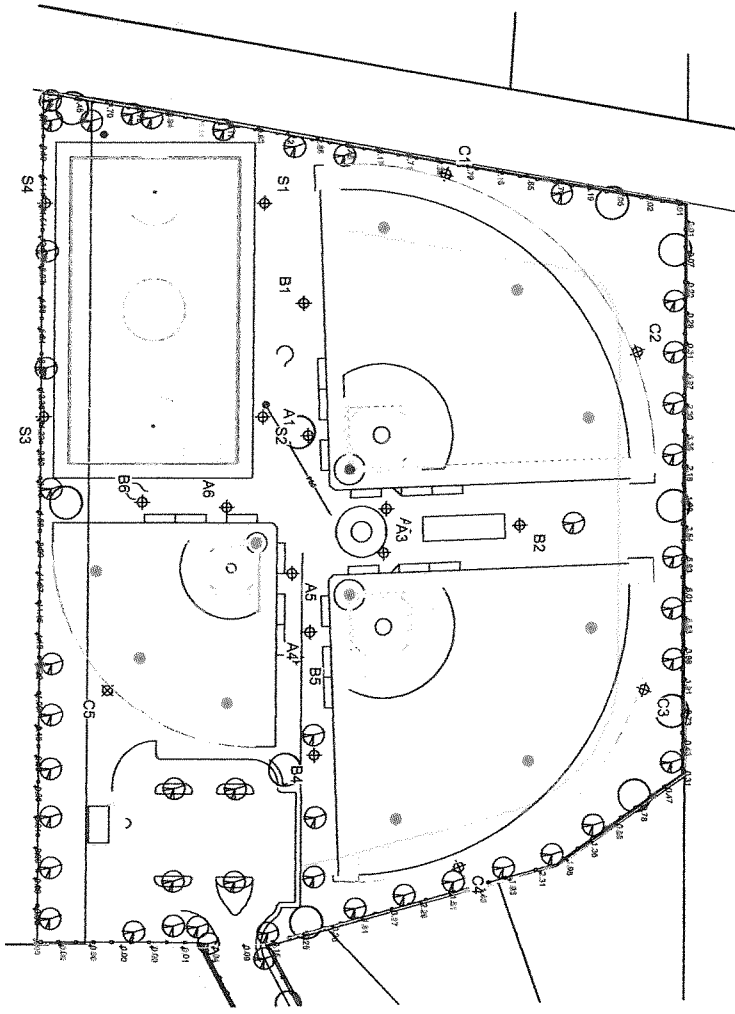
Luminaire Type	L80 hrs	L40 hrs	L10 hrs
TIC-ED-1150	551,000	551,000	551,000

Guaranteed Performance: The ILLUMINATION described above is guaranteed per Your Musco Warranty document and includes a 0.3% dirt depreciation factor.
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume ± 3% nominal voltage at the line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	POLE SIZE	GRADE ELEVATION	REQUIRED HEIGHT	LUMINAIRE TYPE	NO. OF LUMINAIRES	POLE DIA.	GRID	ORIGIN
4	A1-A4	60"	-	60"	TIC-ED-1150	1	1	0	0
2	A1-A6	60"	-	60"	TIC-ED-1150	2	2	0	0
2	B1, B4	70"	-	70"	TIC-ED-1150	2	2	0	0
1	B2	70"	-	70"	TIC-ED-1150	4	4	0	0
3	B4-B6, C3	60"	-	70"	TIC-ED-1150	1/4	2	0	0
4	C1-C4	60"	-	60"	TIC-ED-1150	5/8"	1	0	0
4	C1-C4	60"	-	60"	TIC-ED-1150	3	3	1	0
4	C1-C4	60"	-	60"	TIC-ED-1150	4	4	1	0
4	S1-S4	60"	-	60"	TIC-ED-1150	4	4	0	0
20					TIC-ED-1150	90	5	90	0

* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 120
0 120 240
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ILLUMINATION SUMMARY

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Horizon Sports Complex
Louisville, KY

GRID SUMMARY
Name: Split/Gaze Property Line
Spacing: 30.0'
Height: 6.0' above grade

ILLUMINATION SUMMARY

Scan Average: 48889.7578
Maximum: 229772.20
Minimum: 0.92
No. of Points: 91
Color / CRI: 5700K - 75 CRI
Luminaire Output: 121,000 lumens
No. of Luminaires: 90
Total Load: 103.5 kW

Luminaire Type	L80 hrs	L80 hrs	L70 hrs
TIC-ED-1150	551,000	551,000	551,000

Guaranteed Performance: The ILLUMINATION described above is guaranteed per Your Musco Warranty, occurrence and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

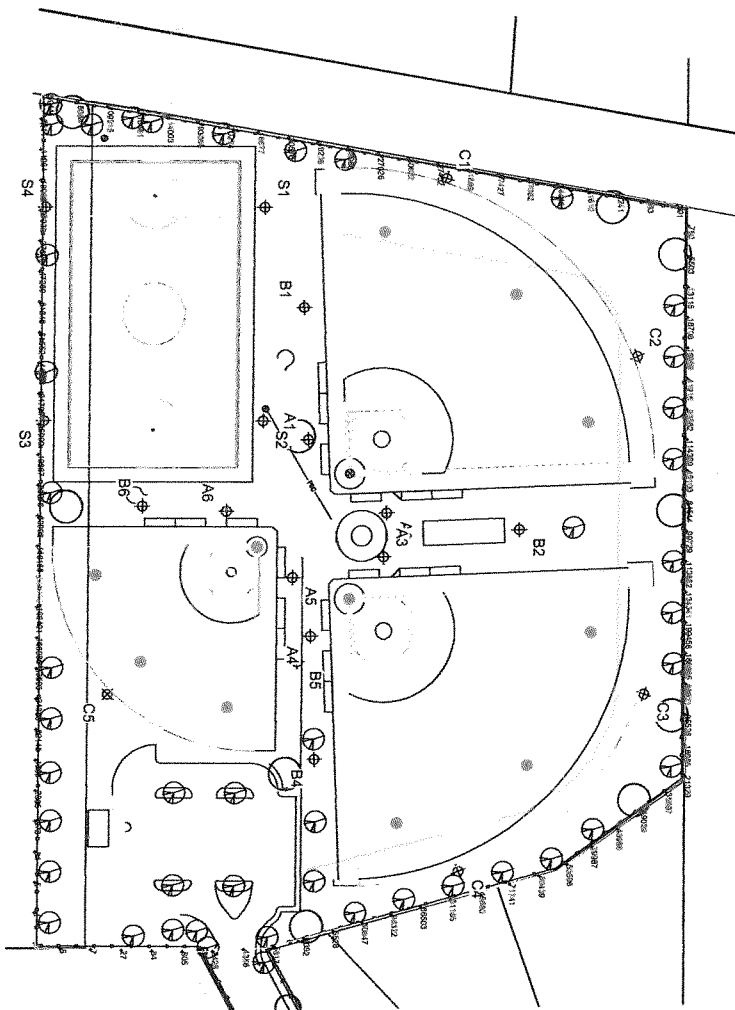
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume a 3% nominal voltage at the site of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR PANELS SHOWN

QTY	LOCATION	POLE SIZE	BASE ELEVATION	HOISTING HEIGHT	LUMINAIRE TYPE	NO. / PANEL	NO. / TOWER
4	A1-A4	60"	20'	60'	TIC-ED-1150	1	0
2	A5-A6	60"	50'	60'	TIC-ED-1150	2	0
2	B1-B6	70"	20'	70'	TIC-ED-1150	1	0
1	B2	70"	20'	70'	TIC-ED-1150	4	0
3	B5-B6, C5	60"	20'	70'	TIC-ED-1150	5/2*	0
4	C1-C4	60"	20'	60'	TIC-ED-1150	1	0
4	C1-C4	60"	60'	60'	TIC-ED-1150	4	0
4	S1-S4	90"	60'	60'	TIC-ED-1150	5	0
20					TIC-ED-1150	90	0

*This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 120
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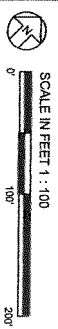
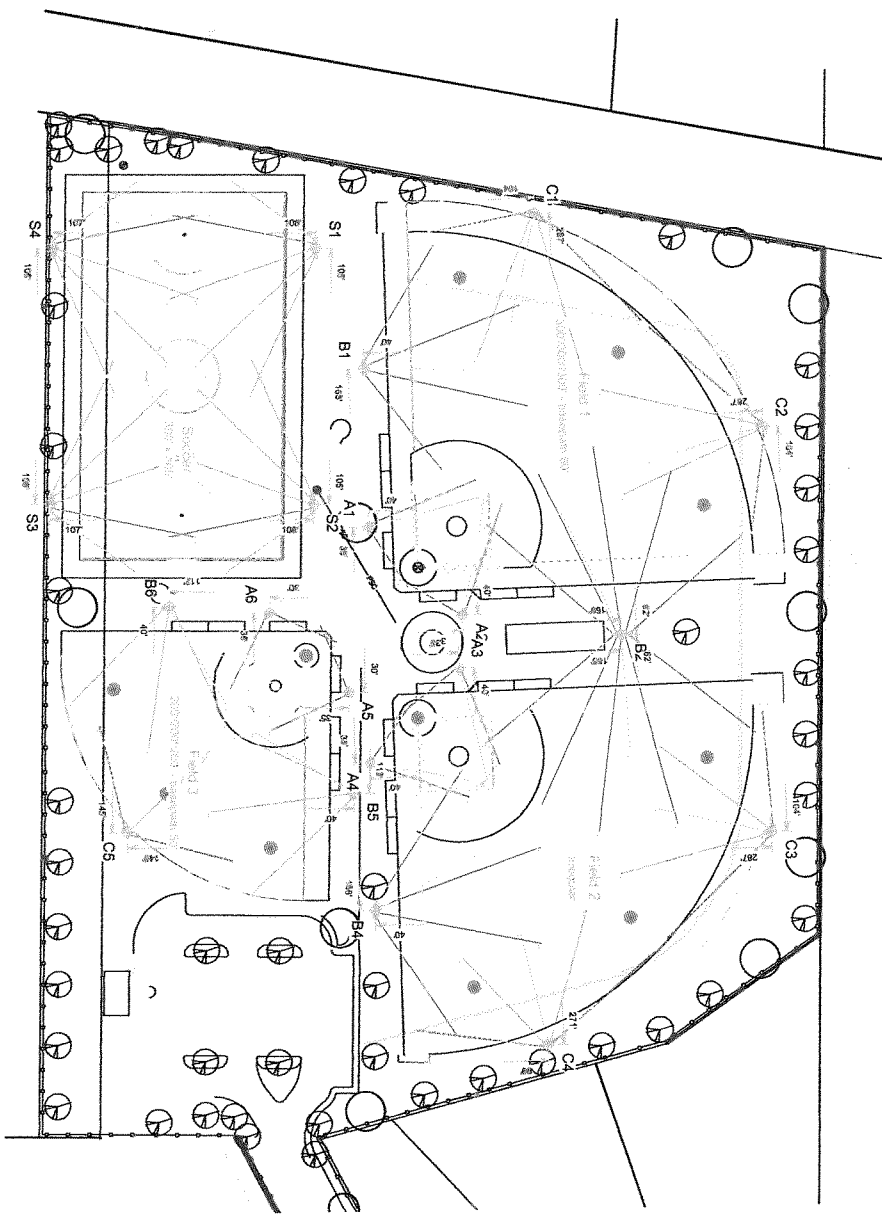
Pole location(s) + dimensions are relative to 0.0' reference point(s)

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ILLUMINATION SUMMARY

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Horizon Sports Complex
Louisville, KY

EQUIPMENT LAYOUT
INCLUDES:
- Field 1
- Field 2
- Field 3
- Seater
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical string.
Installation Requirements: Results assume + 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole	CLASS	HEIGHT	SPACING	TYPE	QUANTITY
4	A1A4	20'	20'	TICLED-1150	1
5	A5A4	60'	60'	TICLED-1150	2
2	B1B4	20'	20'	TICLED-1150	2
1	B5	20'	20'	TICLED-1150	4
3	B5-B6, C5	20'	70'	TICLED-1150	1/2*
4	C1-C4	60'	60'	TICLED-1150	3
4	C5	60'	60'	TICLED-1150	4
20	S1-S4	60'	60'	TICLED-1150	5

* This structure utilizes a stake-to-beam mounting configuration

STRUCTURE TYPE: STAKE-TO-BEAM MOUNTING CONFIGURATION

Ballast Specifications	Line Amperage Per Luminaire
5 (Type - Phase Voltage)	208 120 240 327 347 340 480
TICLED-1150	20 68 61 37 42 33 19

Pole location(s) + dimensions are relative to 0.00 reference point(s)

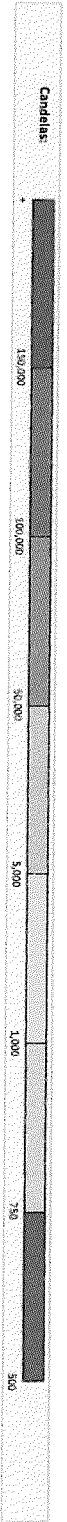
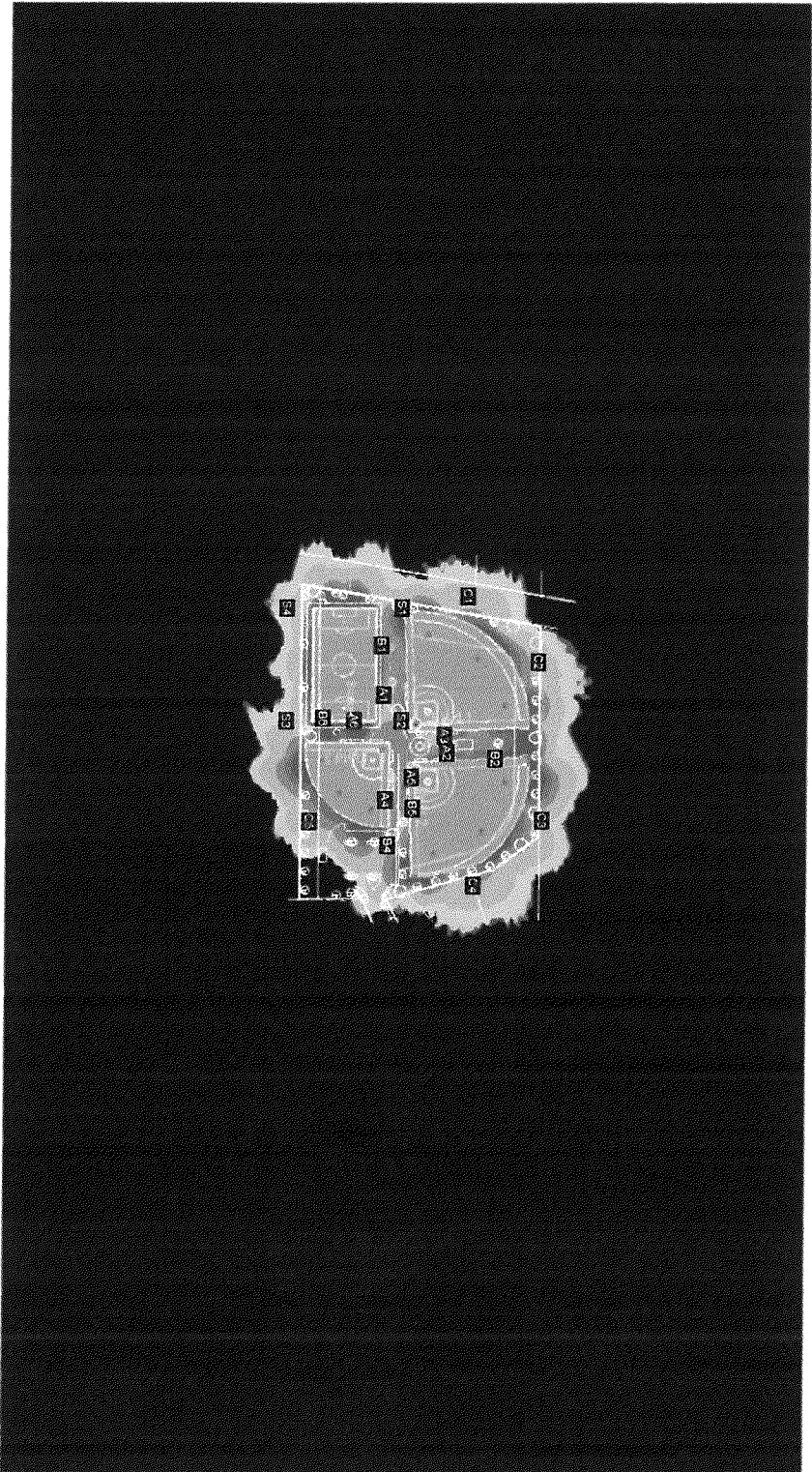
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EQUIPMENT LAYOUT

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Horizon Sports Complex
Louisville, KY

GLARE IMPACT

Map indicates the maximum candela an observer would see when being the brightest light source from any direction.

A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

GLARE

Observer's Level

High Glare: 150,000 or more candela
Should only occur on or very near the lit area where the light source is in direct view. Care must be taken to minimize high glare zones.

Significant Glare: 25,000 to 75,000 candela
Equivalent to high beam headlights of a car.

Minimal to No Glare: 5000 or less candela
Equivalent to 100W incandescent light bulb.

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ENVIRONMENTAL GLARE IMPACT

Horizon Sports Complex

Louisville, KY

BASEBALL / SOFTBALL ANALYSIS

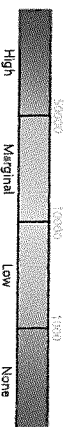
Summary

For playability, four primary positions are analyzed: the batter and the three outfield positions.

For the batter, the view back to the pitcher is analyzed for excessive direct light and glare from sources in the outfield. The maximum candela from any source present in their view is shown.

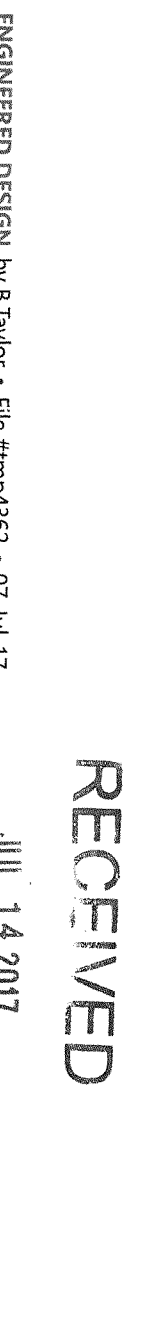
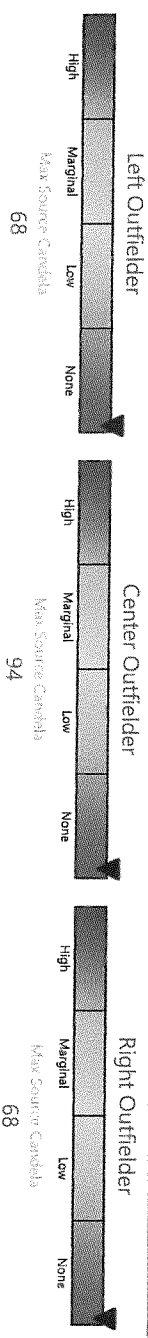
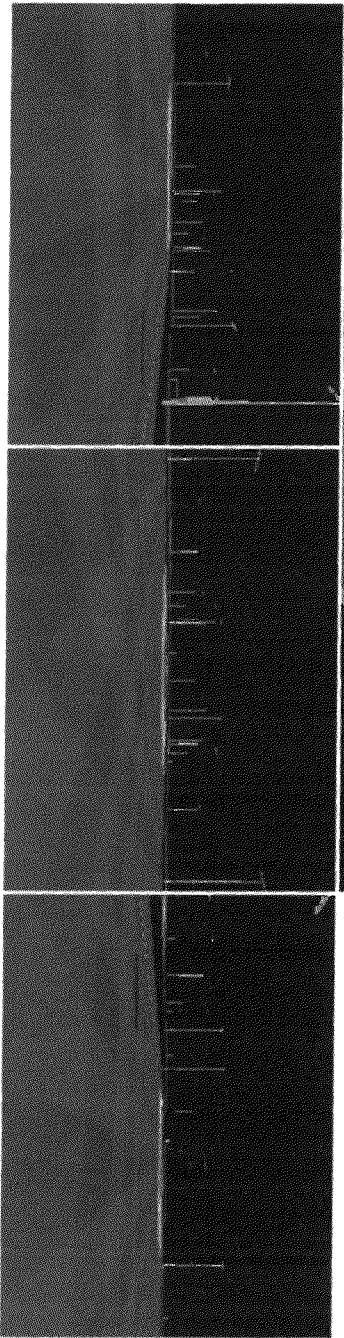
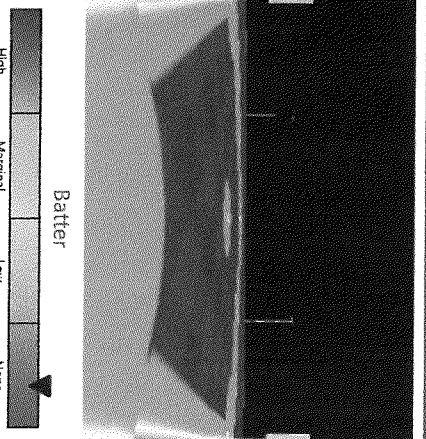
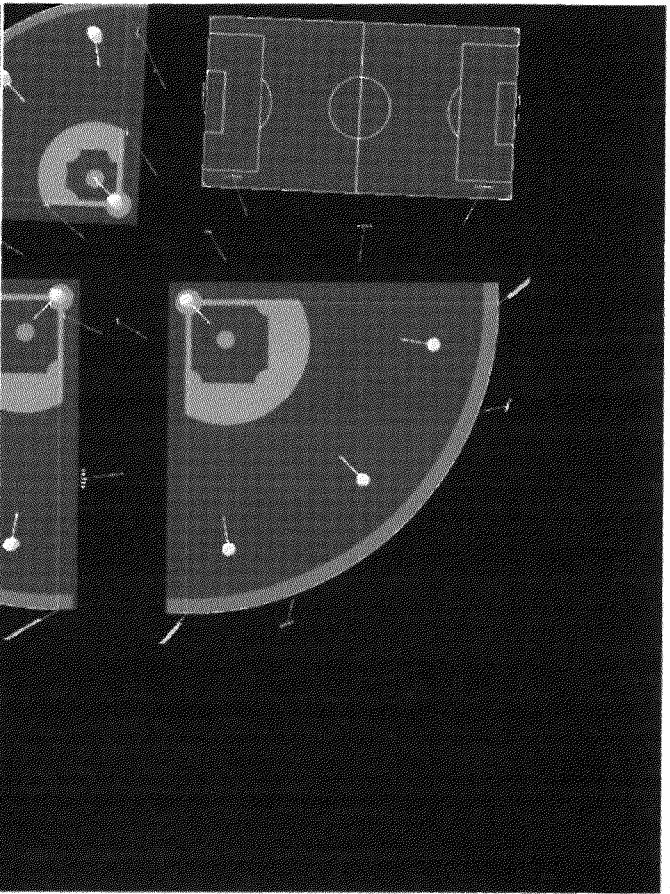
For the outfield, the view from the left, center, and right field are analyzed. In each case, the outfielder is looking back at home plate. The maximum candela is again used to evaluate the lighting for the outfielder at that position.

Maximum Source Candela



Impact on Playability

For the viewpoints shown, the maximum candela from any source within the field-of-view is reported. Higher values can adversely impact a player's ability to properly see a pitch or a ball in flight.



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DESIGN SERVICES

BASEBALL / SOFTBALL PLAYABILITY



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Horizon Sports Complex

Louisville, KY

BASEBALL / SOFTBALL ANALYSIS

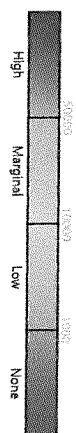
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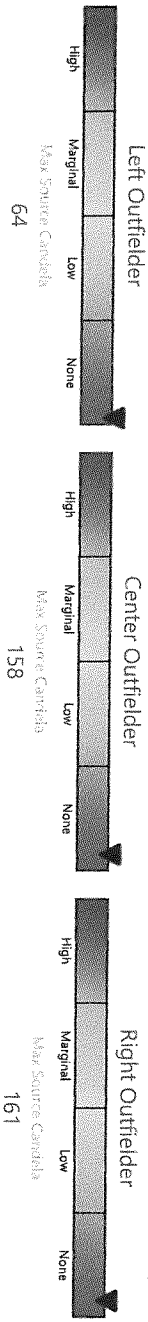
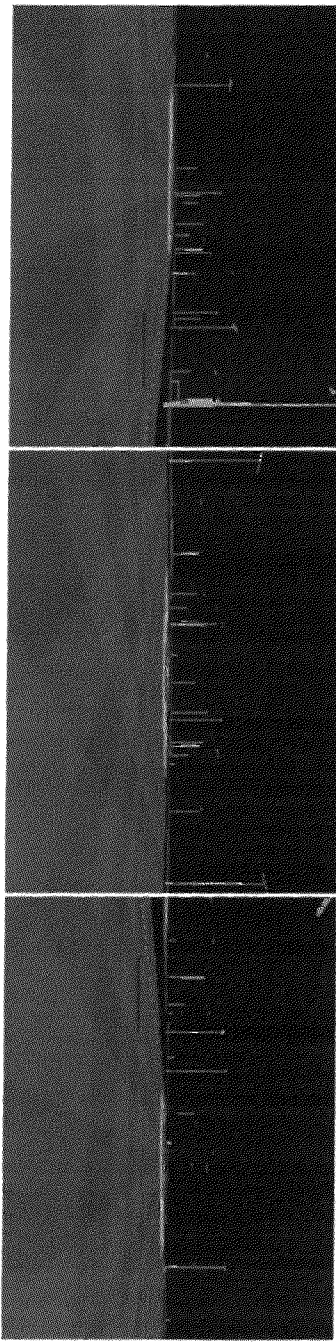
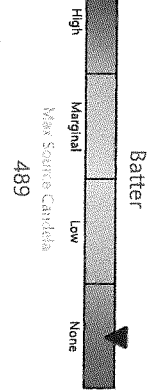
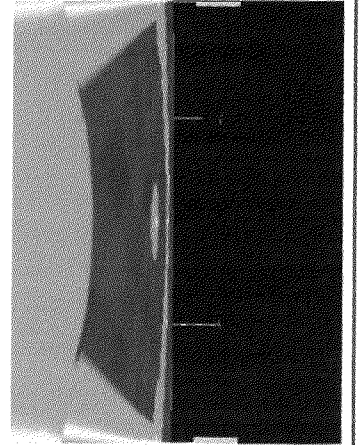
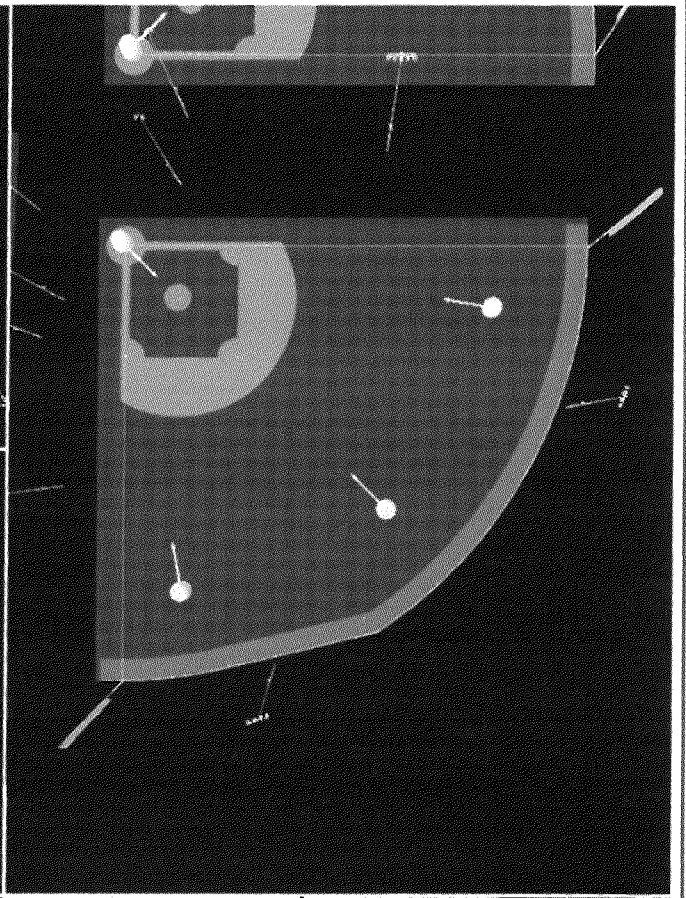
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Maximum Source Candela



Impact on Playability

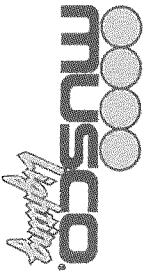
For the viewpoints shown, the maximum candela from any source within the field of view is reported. Higher values can adversely impact a player's ability to properly see a pitch on a ball-in-flight.



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DESIGN SERVICES

BASEBALL / SOFTBALL PLAYABILITY

Horizon Sports Complex

Louisville, KY

BASEBALL / SOFTBALL ANALYSIS

Summary

For playability, four primary positions are analyzed: the batter and the three outfield positions.

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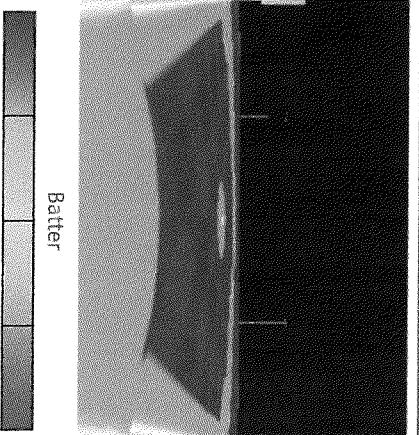
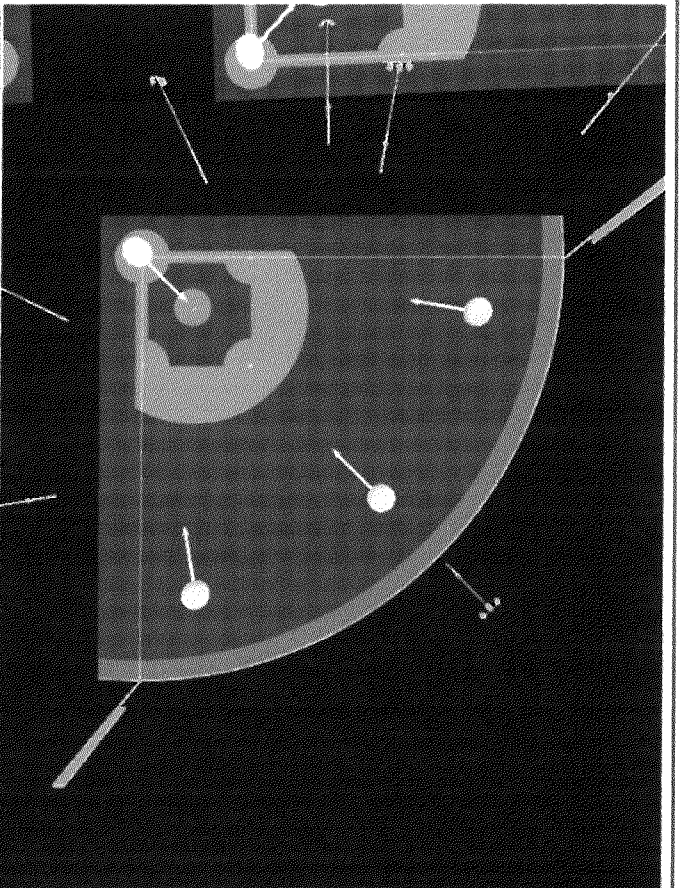
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Maximum Source Candela

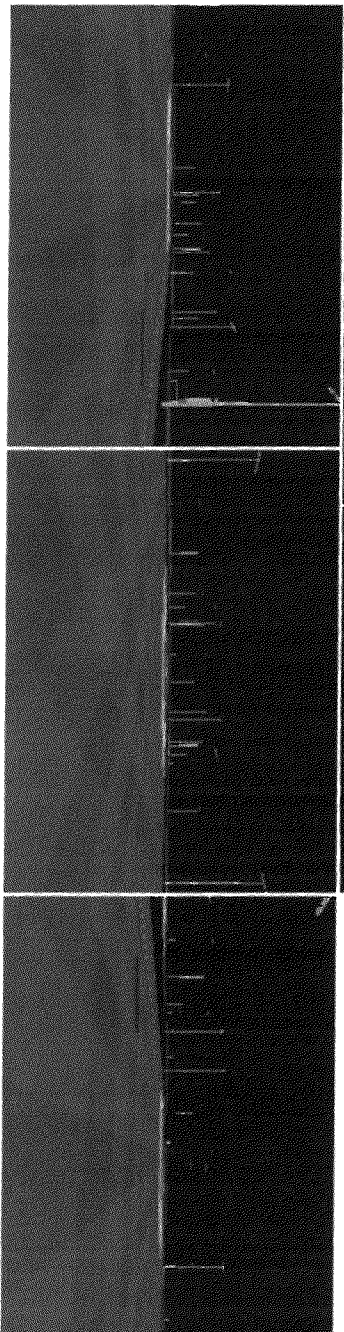
Score	10000	15000
High	Marginal	Low
None		

Impact on Playability

For the viewpoints shown, the maximum candela from any source within the field of view is reported. Higher values can adversely impact a player's ability to properly see a pitch or a ball-in-flight.



High	Marginal	Low	None
	Max Source Candela		
	N/A		

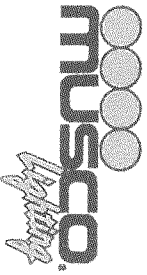


Left Outfielder				Center Outfielder				Right Outfielder			
High	Marginal	Low	None	High	Marginal	Low	None	High	Marginal	Low	None
	Max Source Candela				Max Source Candela				Max Source Candela		
	87				496				87		

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