

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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Peachtree City, GA 30269

Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P1445164

Luminaire Tested: TPTN-VA3-735-U-MQ-CG-GM

Issue Date: 05/21/2026

Test Information

Test Method: LM-79-2024
Report Number: P1445164
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: MCGRAW-EDISON
Catalog Number: TPTN-VA3-735-U-MQ-CG-GM
Description: TOPTIER NANO SPIDER MOUNT VISUAL COMFORT LED LUMINAIRE 60W 70CRI 3500K w/
TYPE V MEDIUM DISTRIBUTION OPTIC AND GLASS
Light Source: 3500K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5288 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type V - Short
BUG Rating: B2 - U0 - G1

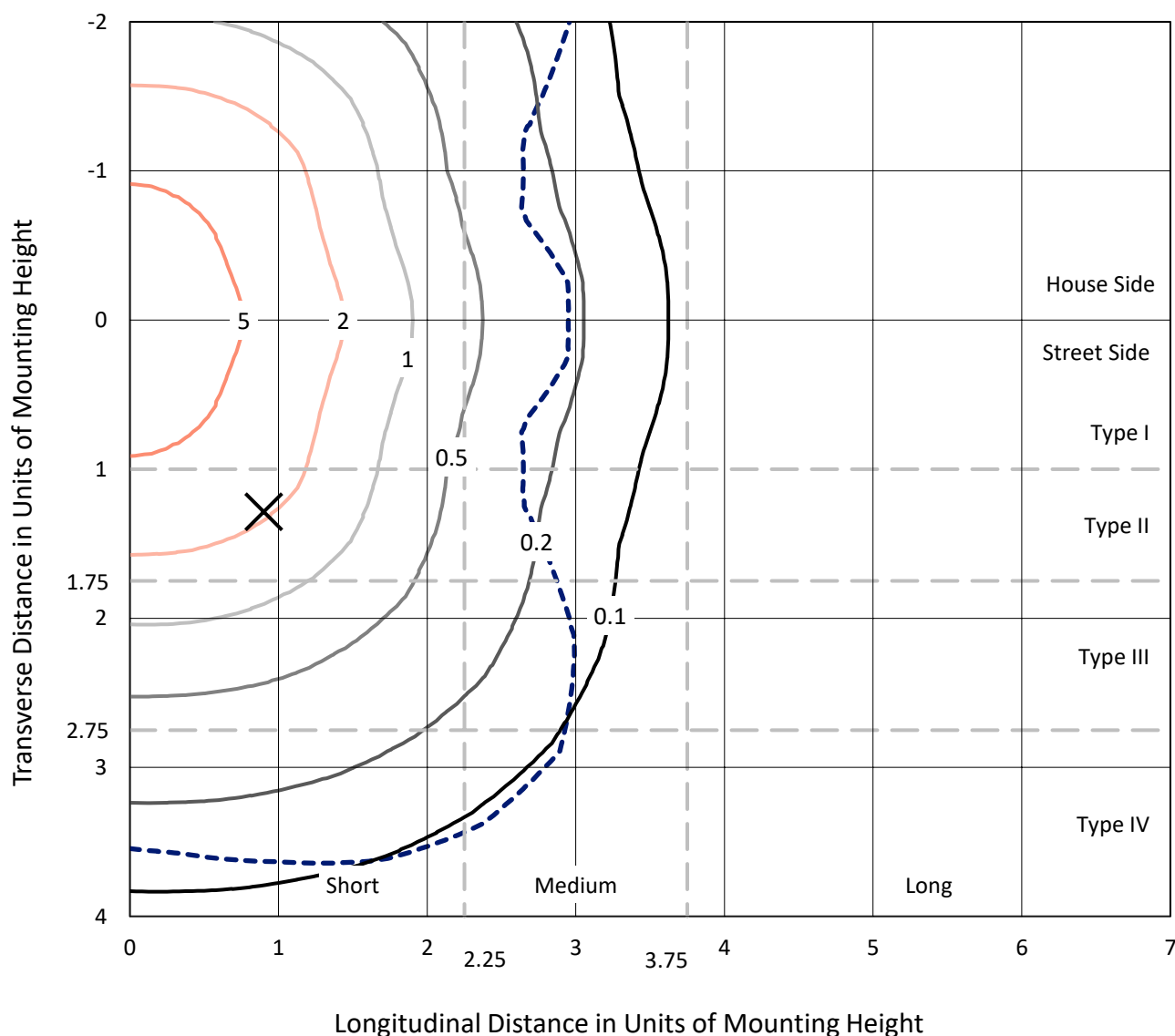
Input Watts (W): 60
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): 5.3%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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CATALOG NUMBER: TPTN-VA3-735-U-MQ-CG-GM

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

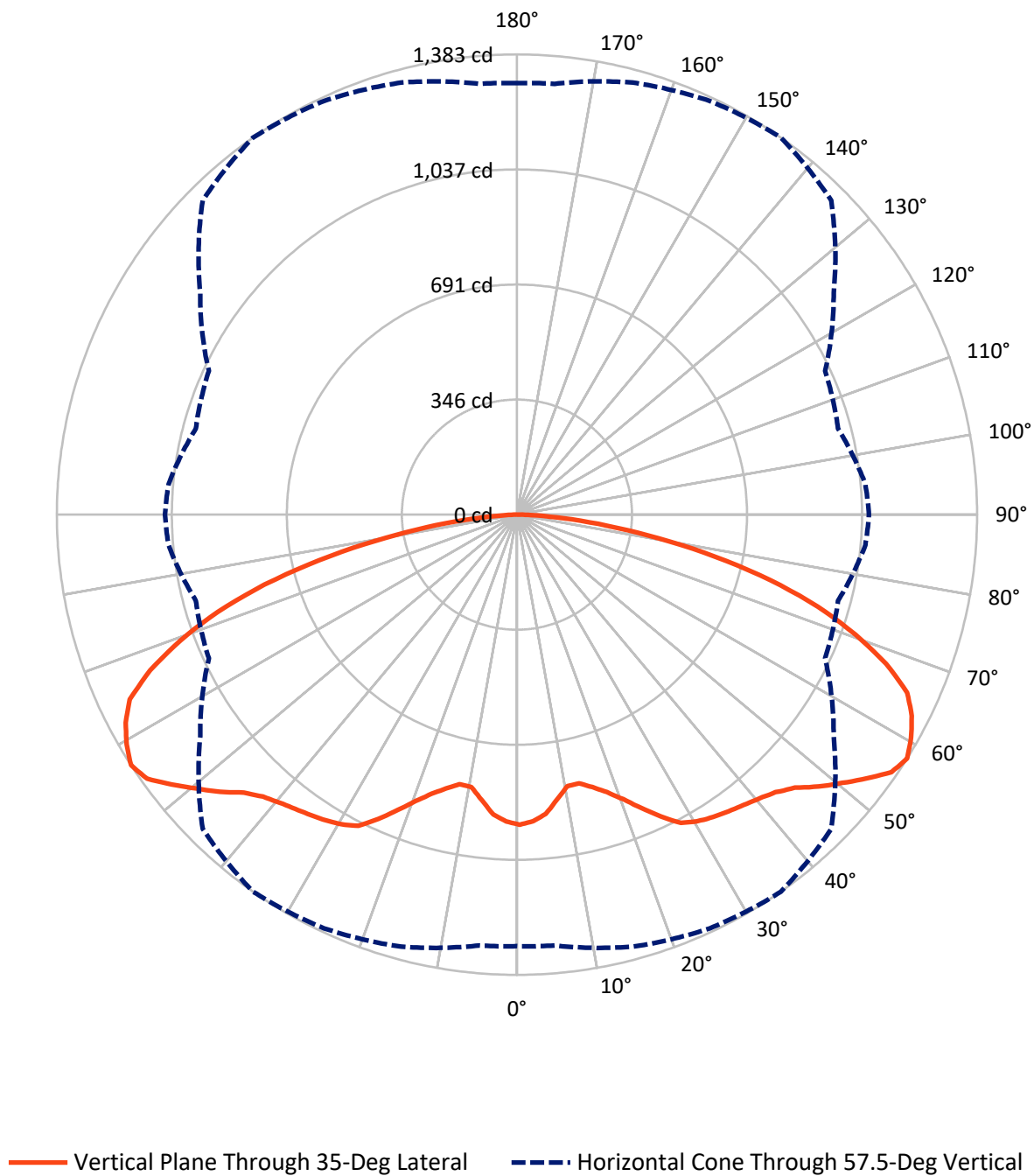


Based on 10 foot mounting height. Maximum calculated value = 9.3 fc
 Type V - Short - N/A

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CATALOG NUMBER: TPTN-VA3-735-U-MQ-CG-GM

Luminous Intensity Polar Plot



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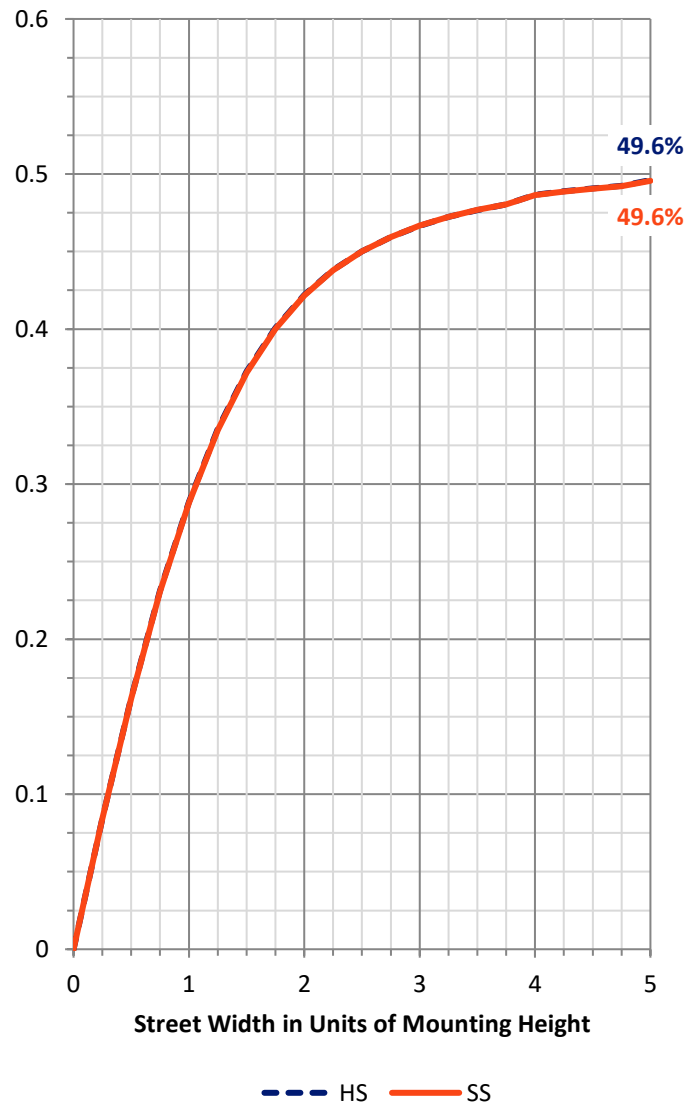
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2644.0	0.0	2644.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2644.0	0.0	2644.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	5288.0	0.0	5288.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.2	1.6
10°-20°	245.0	4.6
20°-30°	456.1	8.6
30°-40°	668.1	12.6
40°-50°	864.7	16.4
50°-60°	1079.5	20.4
60°-70°	1070.7	20.2
70°-80°	675.8	12.8
80°-90°	143.9	2.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	5288.0	100.0
0°-180°	5288.0	100.0

Coefficient of Utilization



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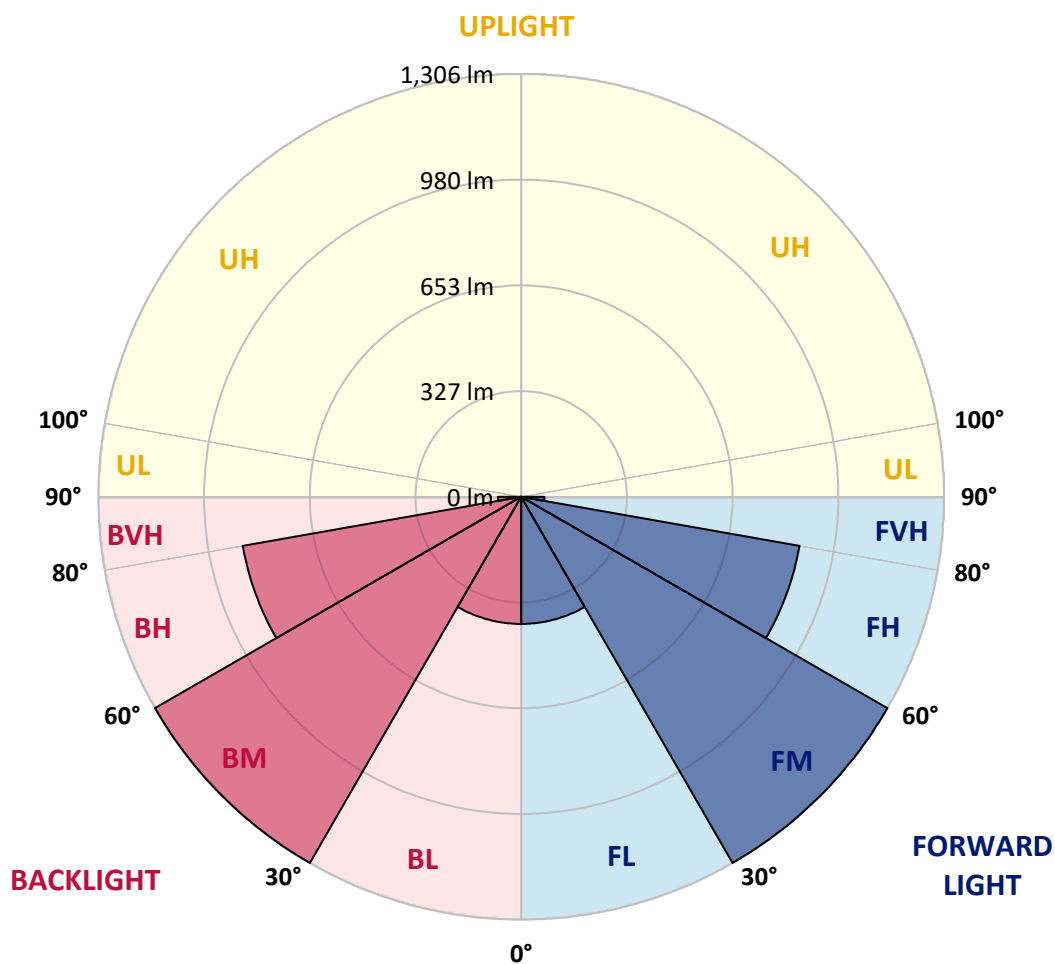
CATALOG NUMBER: TPTN-VA3-735-U-MQ-CG-GM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	392.7	7.4			
FM	(30°-60°)	1306.1	24.7			
FH	(60°-80°)	873.2	16.5			G1/1800
FVH	(80°-90°)	71.9	1.4			G1/100
BL	(0°-30°)	392.7	7.4	B1/500		
BM	(30°-60°)	1306.1	24.7	B2/2500		
BH	(60°-80°)	873.2	16.5	B2/1000		G1/1800
BVH	(80°-90°)	71.9	1.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1

Type V Short



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CATALOG NUMBER: TPTN-VA3-735-U-MQ-CG-GM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	931.5	931.5	931.5	931.5	931.5	931.5	931.5	931.5	931.5	931.5	931.5
2.5°	922.0	922.0	922.0	922.0	922.0	922.0	922.0	923.0	923.0	923.0	923.0
5°	901.2	900.2	900.2	900.2	903.1	905.0	909.7	912.6	915.4	916.4	916.4
7.5°	859.5	860.4	861.4	862.3	864.2	869.0	875.6	882.2	887.0	889.8	890.8
10°	826.3	826.3	827.3	826.3	829.2	834.9	843.4	854.8	863.3	868.0	868.0
12.5°	818.8	818.8	821.6	824.4	828.2	833.9	843.4	852.9	861.4	865.2	865.2
15°	831.1	833.9	837.7	845.3	849.1	850.0	855.7	863.3	871.8	876.6	877.5
17.5°	859.5	861.4	871.8	877.5	876.6	871.8	871.8	876.6	886.0	892.7	892.7
20°	911.6	913.5	918.3	919.2	912.6	899.3	888.9	890.8	903.1	911.6	913.5
22.5°	982.7	982.7	978.0	976.1	957.1	931.5	911.6	908.8	921.1	934.4	935.3
25°	1058.5	1058.5	1049.0	1032.0	1004.5	967.5	938.2	925.8	939.1	954.3	957.1
27.5°	1124.8	1123.9	1105.9	1077.5	1049.0	1003.5	964.7	943.8	953.3	972.3	975.1
30°	1168.4	1164.6	1135.3	1098.3	1068.9	1021.5	978.0	953.3	961.8	982.7	985.5
32.5°	1198.8	1193.1	1156.1	1115.4	1083.1	1034.8	986.5	960.0	967.5	990.3	992.2
35°	1216.8	1210.1	1171.3	1130.5	1094.5	1045.2	992.2	961.8	969.4	994.1	996.9
37.5°	1227.2	1220.5	1186.4	1145.7	1106.8	1059.5	997.9	964.7	970.4	996.0	998.8
40°	1231.0	1229.1	1201.6	1162.7	1121.0	1072.7	1005.4	965.6	970.4	997.9	1001.6
42.5°	1234.8	1236.7	1216.8	1180.7	1140.0	1088.8	1014.0	967.5	970.4	1000.7	1002.6
45°	1246.1	1247.1	1239.5	1210.1	1170.3	1119.2	1030.1	977.0	975.1	1006.4	1011.1
47.5°	1267.9	1270.8	1270.8	1251.8	1220.5	1169.4	1060.4	993.1	988.4	1027.2	1031.0
50°	1282.1	1285.9	1300.2	1286.9	1267.0	1212.0	1089.8	1004.5	1000.7	1041.4	1045.2
52.5°	1297.3	1302.0	1324.8	1331.4	1316.3	1255.6	1121.0	1024.4	1008.3	1054.7	1058.5
55°	1316.3	1317.2	1349.4	1372.2	1365.5	1316.3	1153.3	1037.7	1016.8	1068.0	1074.6
57.5°	1296.4	1299.2	1343.7	1371.2	1382.6	1335.2	1161.8	1021.5	998.8	1050.9	1057.6
60°	1258.5	1265.1	1310.6	1352.3	1360.8	1313.4	1141.9	991.2	962.8	1020.6	1024.4
62.5°	1213.0	1224.3	1266.0	1314.4	1331.4	1289.7	1115.4	948.6	919.2	986.5	988.4
65°	1136.2	1151.4	1213.0	1254.7	1288.8	1247.1	1079.4	892.7	867.1	923.9	923.9
67.5°	1037.7	1047.1	1105.9	1175.1	1196.9	1167.5	1003.5	822.5	779.9	836.8	843.4
70°	930.6	936.3	980.8	1054.7	1079.4	1067.0	909.7	732.5	682.3	745.8	747.7
72.5°	798.9	808.3	852.9	914.5	945.7	936.3	797.9	626.4	581.8	636.8	631.1
75°	640.6	652.0	695.6	751.5	787.5	777.1	670.9	508.9	473.8	510.8	509.8
77.5°	495.6	495.6	534.5	586.6	609.3	601.7	517.4	392.3	355.4	386.6	389.5
80°	344.0	343.0	376.2	413.2	432.1	431.2	372.4	272.0	248.3	265.3	260.6
82.5°	207.5	209.4	229.3	254.0	272.9	273.9	235.0	167.7	150.7	157.3	153.5
85°	90.0	94.8	109.0	125.1	139.3	139.3	123.2	83.4	73.9	68.2	62.5
87.5°	21.8	21.8	28.4	35.1	41.7	44.5	40.7	31.3	27.5	16.1	7.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2411-284-1

Test Date: 11/15/2024

Luminaire Tested: TTN-D0-735-U-WQ

Data in this report applies to families of products including TTN-D0-735-U-WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2411-284-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **TTN-D0-735-U-WQ**
 Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 3500K, 70 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K):	3405	CRI (Ra):	73.9		
CIE u':	0.2365	R1:	71.3	R9:	-18.0
CIE v':	0.5180	R2:	80.3	R10:	53.1
Duv:	0.0036	R3:	87.8	R11:	68.6
CIE x:	0.4148	R4:	73.2	R12:	42.6
CIE y:	0.4038	R5:	69.8	R13:	72.5
CIE z:	0.1814	R6:	71.8	R14:	92.7
Peak Wavelength (nm):	596	R7:	82.8	R15:	64.3
Dominant Wavelength (nm):	579	R8:	54.1		
Purity:	45.70672				
Rf:	76.6				
Rg:	95.4				



Test Conditions

Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2411-284-1

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085	10/22/2024	10/22/2025
Room Thermometer	IN0046	10/22/2024	10/22/2025

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CIE 1931 Chromaticity Diagram

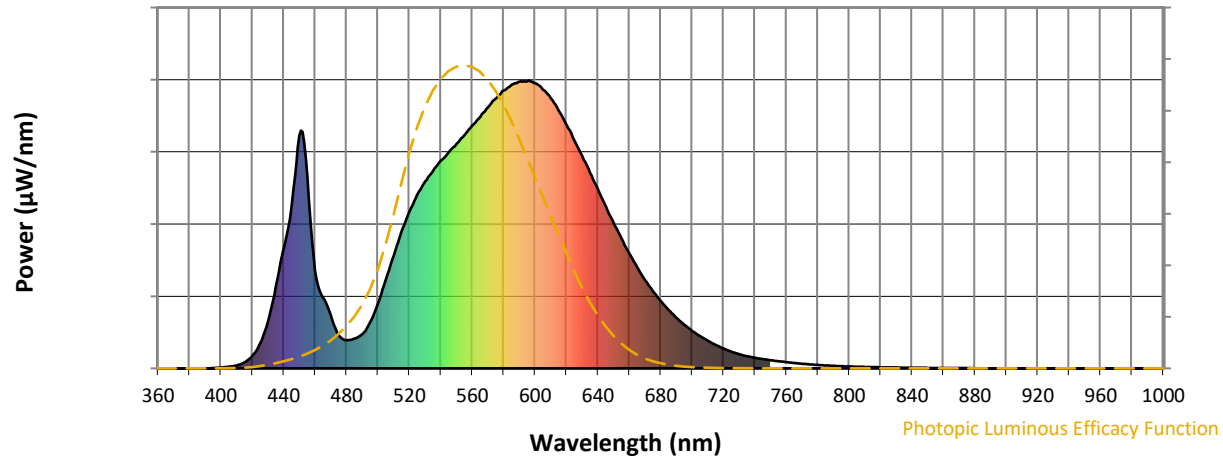


CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

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Photopic Flux vs. Wavelength

Photopic Lumens: NR

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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Scotopic Flux vs. Wavelength


Scotopic Lumens: NR
S/P: 1.33

λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.47

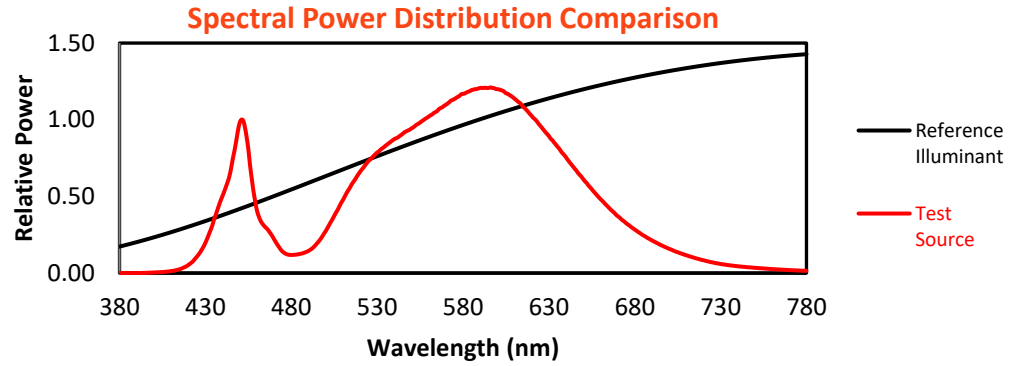
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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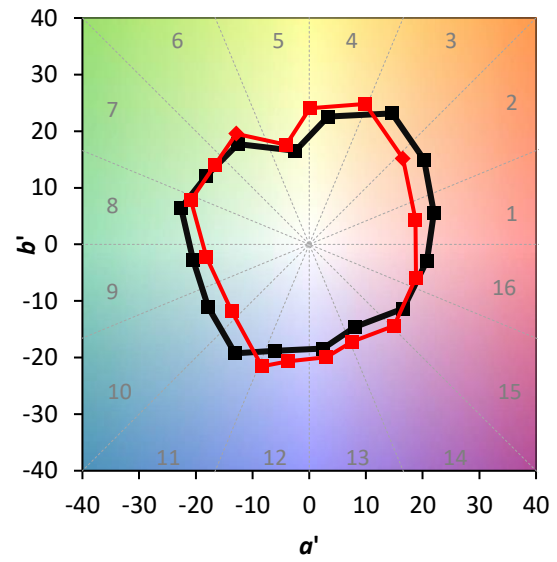
TM-30-18

Summary

$R_f = 76.6$
 $R_g = 95.4$
 $CIE R_a = 73.9$
 $R_g = -18.0$



Color Vector Graphics



Individual Sample Fidelity Index ($R_{f,i}$)

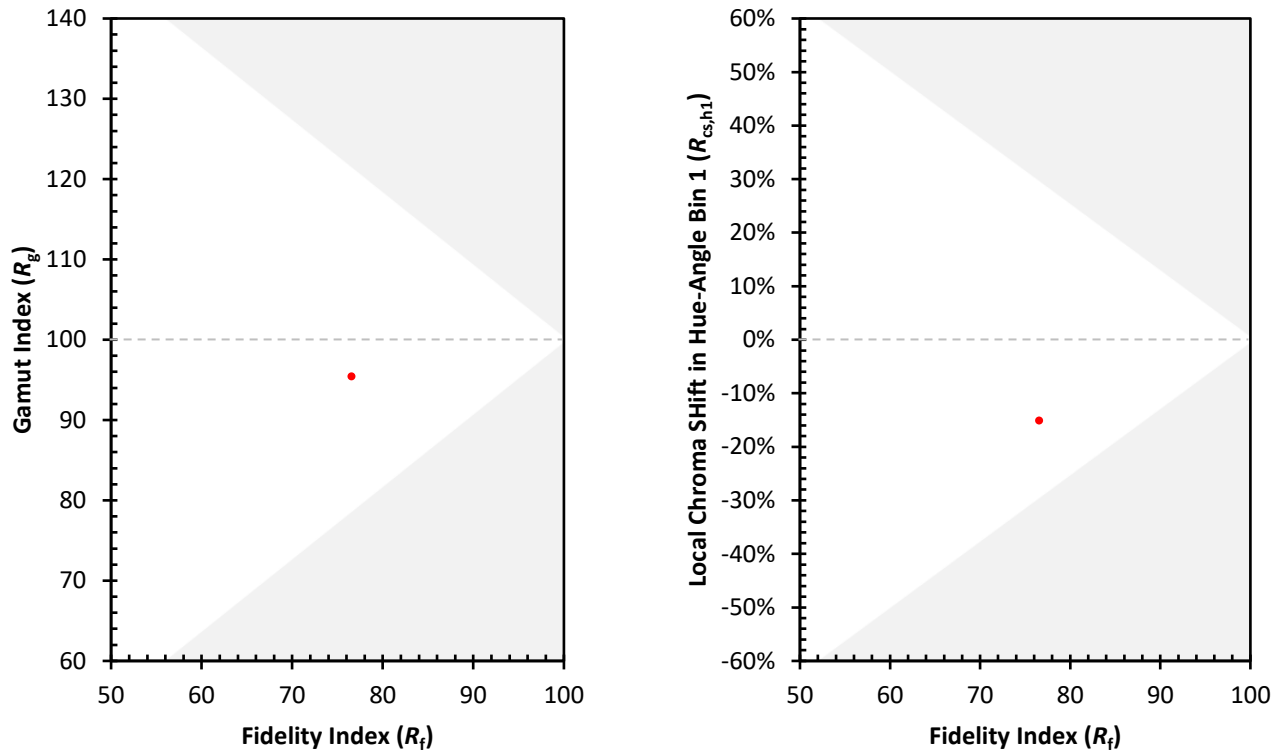
CES01 = 86	CES26 = 67	CES51 = 88	CES76 = 56
CES02 = 62	CES27 = 89	CES52 = 88	CES77 = 75
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 60
CES04 = 70	CES29 = 69	CES54 = 86	CES79 = 85
CES05 = 48	CES30 = 83	CES55 = 85	CES80 = 82
CES06 = 51	CES31 = 72	CES56 = 75	CES81 = 78
CES07 = 41	CES32 = 65	CES57 = 75	CES82 = 92
CES08 = 40	CES33 = 78	CES58 = 76	CES83 = 90
CES09 = 29	CES34 = 74	CES59 = 87	CES84 = 88
CES10 = 75	CES35 = 86	CES60 = 91	CES85 = 79
CES11 = 58	CES36 = 93	CES61 = 84	CES86 = 72
CES12 = 64	CES37 = 81	CES62 = 88	CES87 = 79
CES13 = 43	CES38 = 92	CES63 = 74	CES88 = 82
CES14 = 74	CES39 = 96	CES64 = 69	CES89 = 72
CES15 = 71	CES40 = 92	CES65 = 66	CES90 = 82
CES16 = 47	CES41 = 93	CES66 = 62	CES91 = 79
CES17 = 50	CES42 = 83	CES67 = 60	CES92 = 63
CES18 = 56	CES43 = 79	CES68 = 68	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 56
CES20 = 65	CES45 = 86	CES70 = 61	CES95 = 70
CES21 = 86	CES46 = 83	CES71 = 55	CES96 = 79
CES22 = 79	CES47 = 85	CES72 = 85	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 53	CES98 = 78
CES24 = 91	CES49 = 81	CES74 = 95	CES99 = 68
CES25 = 72	CES50 = 88	CES75 = 57	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)