

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P198302

Luminaire Tested: **TT-C2-LED-E1-DL-CG-8030-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198302
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C2-LED-E1-DL-CG-8030-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
DRIVE LANE DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: (160) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3642.6 lumens
Efficiency: N/A
Efficacy: 61.9 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U4 - G1

Input Watts (W): 58.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

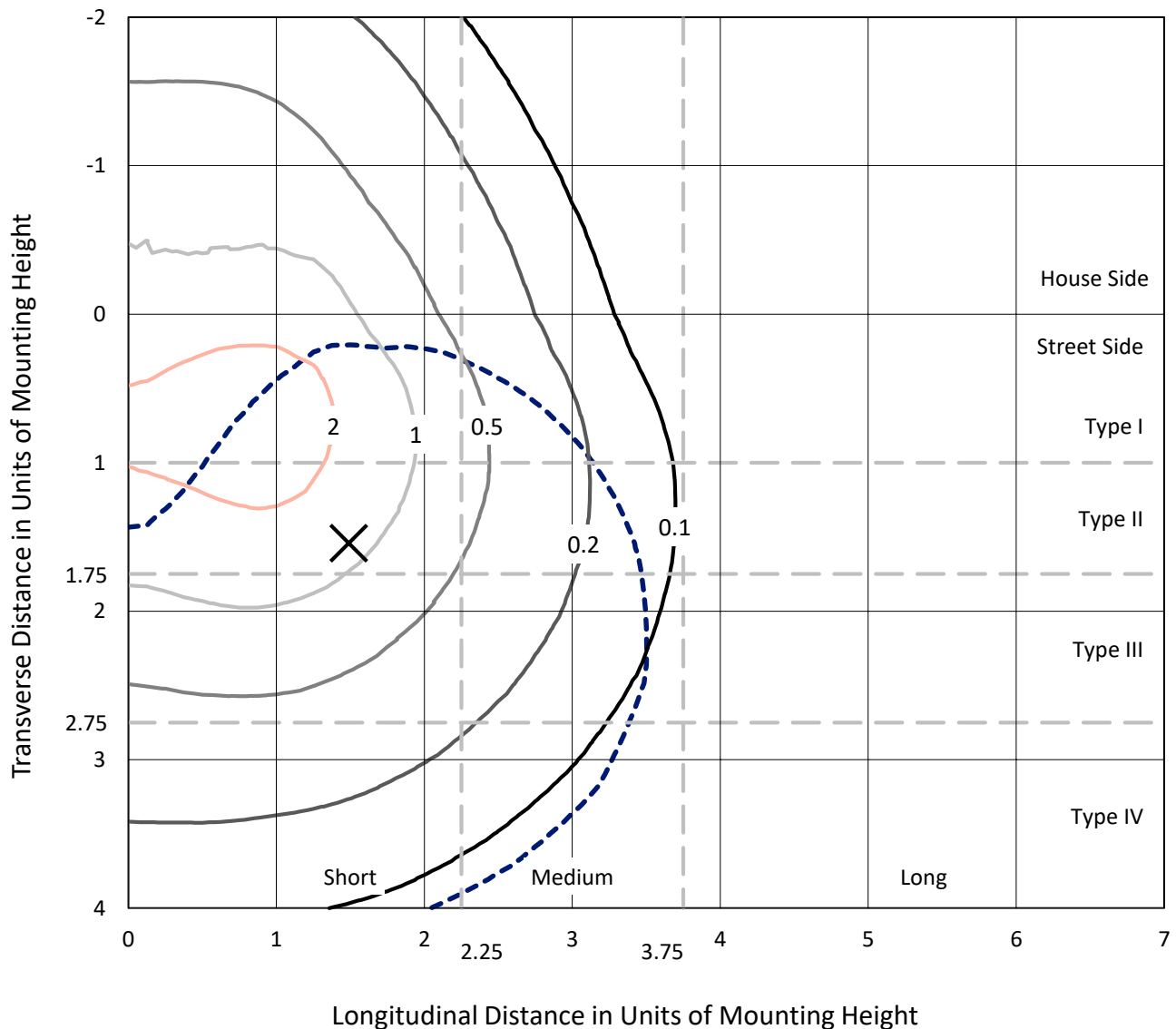


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

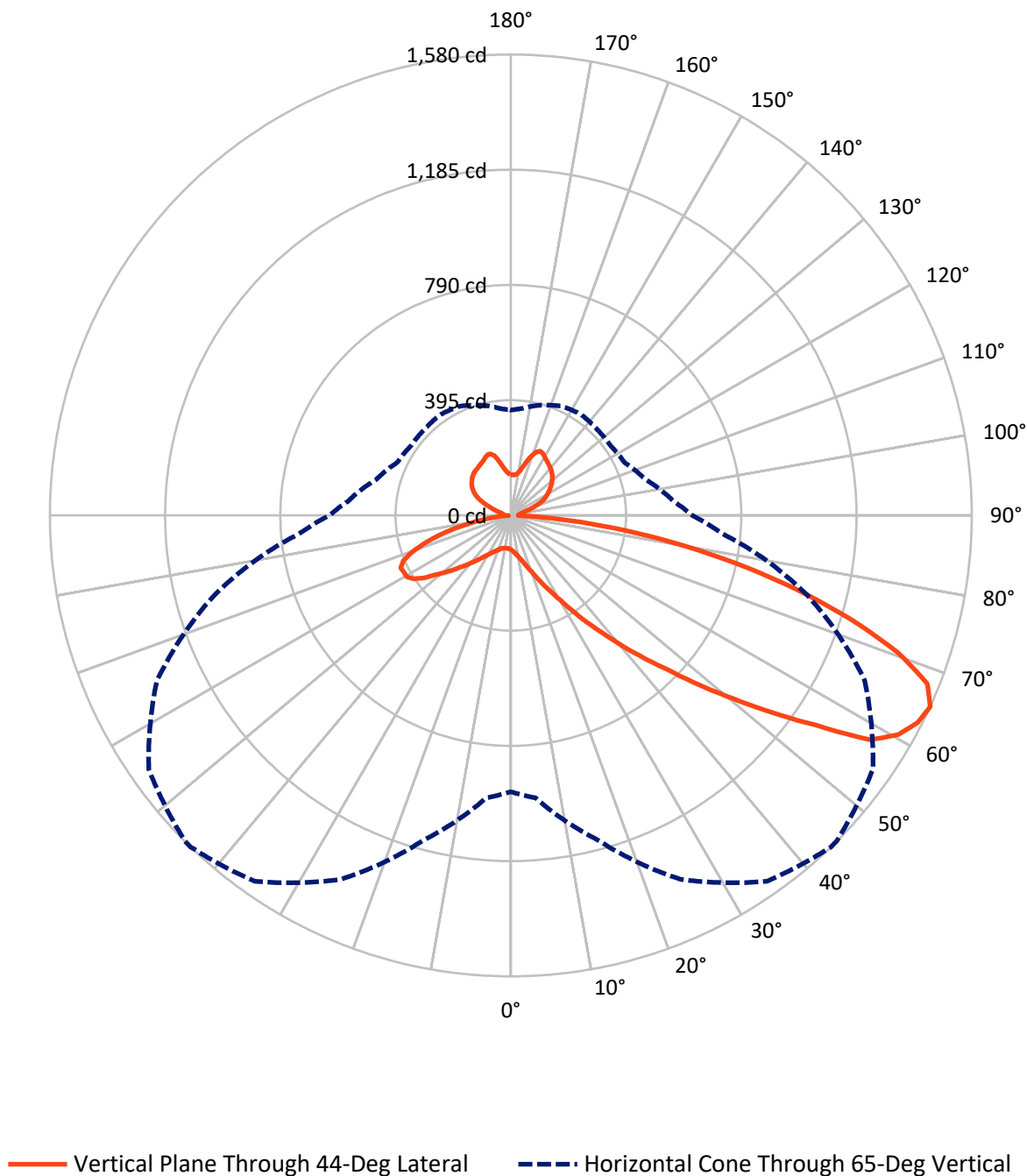


Based on 10 foot mounting height. Maximum calculated value = 2.7 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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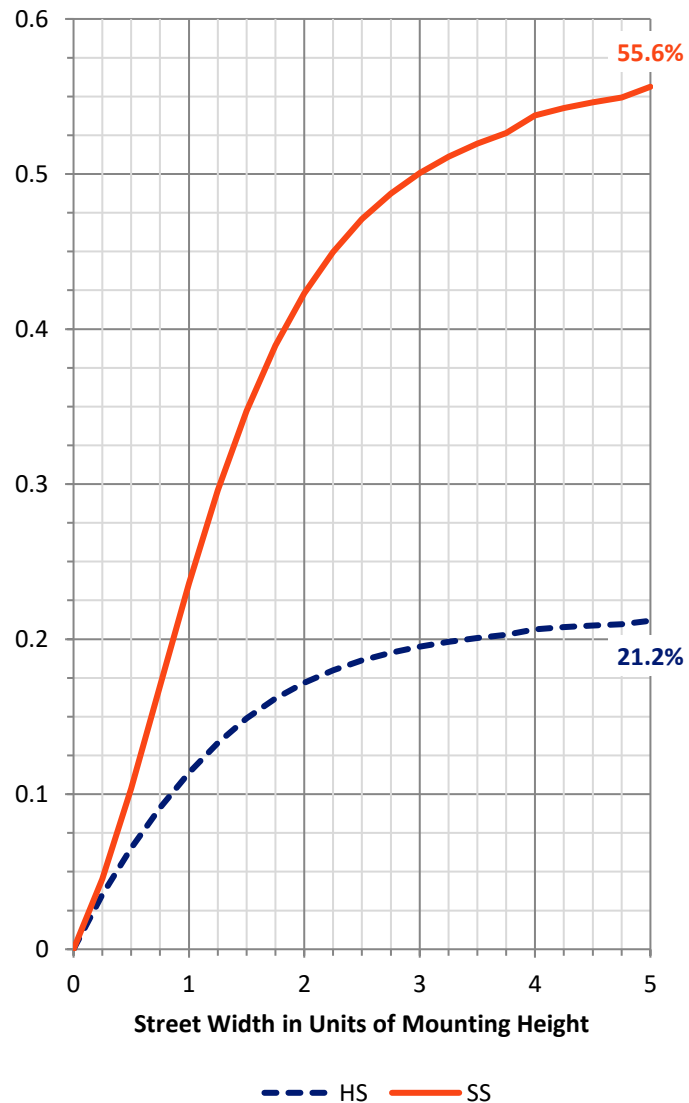
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	780.5	387.3	1167.8
	% Fixture	21.4	10.6	32.1
Street Side	Lumens	2062.2	412.6	2474.8
	% Fixture	56.6	11.3	67.9
Total	Lumens	2842.7	800.0	3642.6
	% Fixture	78.0	22.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	11.8	0.3
10°-20°	41.3	1.1
20°-30°	92.6	2.5
30°-40°	189.0	5.2
40°-50°	363.4	10.0
50°-60°	631.2	17.3
60°-70°	808.4	22.2
70°-80°	578.9	15.9
80°-90°	126.0	3.5
90°-100°	36.3	1.0
100°-110°	55.2	1.5
110°-120°	110.8	3.0
120°-130°	144.2	4.0
130°-140°	148.0	4.1
140°-150°	133.4	3.7
150°-160°	102.6	2.8
160°-170°	55.1	1.5
170°-180°	14.3	0.4
0°-90°	2842.7	78.0
0°-180°	3642.6	100.0

Coefficient of Utilization



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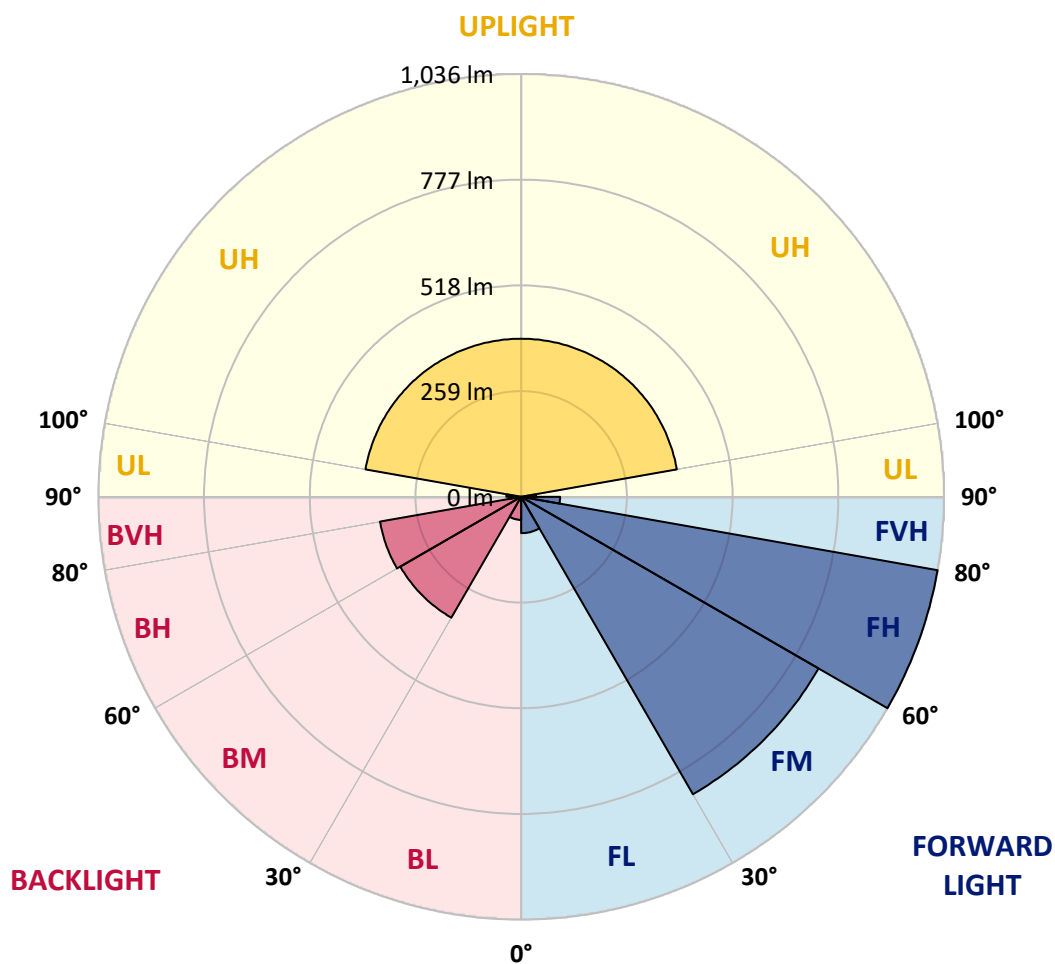
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	89.2	2.4			
FM	(30°-60°)	841.6	23.1			
FH	(60°-80°)	1036.1	28.4			G1/1800
FVH	(80°-90°)	95.3	2.6			G1/100
BL	(0°-30°)	56.5	1.6	B0/110		
BM	(30°-60°)	342.0	9.4	B1/1000		
BH	(60°-80°)	351.2	9.6	B1/500		G1/500
BVH	(80°-90°)	30.7	0.8			G1/100
UL	(90°-100°)	36.3	1.0		U2/50	
UH	(100°-180°)	387.3	10.6		U3/500	

BUG Rating: B1-U4-G1

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8
2.5°	123.3	123.3	123.3	122.7	122.2	121.7	121.7	121.1	120.6	120.1	119.0
5°	130.7	130.2	130.2	129.1	128.6	127.5	127.5	126.5	124.9	123.3	121.7
7.5°	138.7	139.3	138.7	137.7	136.1	135.0	134.5	132.3	130.2	127.5	124.9
10°	148.3	148.9	148.9	147.8	146.2	143.5	143.5	140.3	137.1	133.9	129.1
12.5°	162.2	161.7	161.1	161.1	157.9	154.7	155.8	151.5	146.2	141.4	135.5
15°	175.0	176.1	177.1	174.5	172.3	169.1	168.6	163.3	157.4	150.5	143.0
17.5°	193.7	194.7	194.2	193.1	190.5	186.7	185.7	179.3	171.3	161.7	151.5
20°	217.7	218.2	216.1	215.0	212.9	208.1	206.5	199.0	188.3	175.0	162.7
22.5°	244.4	242.8	242.2	241.2	240.6	235.3	234.8	223.6	208.1	193.1	175.5
25°	267.3	268.9	270.0	271.6	271.0	265.7	265.7	252.9	234.2	214.0	191.5
27.5°	294.0	296.7	299.9	303.6	303.1	299.3	301.5	289.2	264.1	239.6	210.8
30°	322.8	327.1	332.4	341.5	344.1	340.4	340.4	324.9	300.4	267.3	232.1
32.5°	361.2	363.4	368.2	382.6	390.6	390.6	390.0	373.0	343.1	301.5	257.7
35°	401.2	401.8	414.6	432.2	442.3	450.3	446.6	430.0	396.4	345.2	290.3
37.5°	442.3	442.9	461.0	481.8	504.7	511.1	514.4	499.4	456.2	393.8	326.0
40°	483.4	490.3	511.7	540.5	574.6	587.4	585.8	572.5	520.8	447.1	365.0
42.5°	525.0	539.4	561.3	605.6	646.1	666.9	668.0	656.3	601.9	517.0	415.6
45°	574.6	583.7	617.3	668.5	726.7	753.9	756.6	751.3	700.0	602.4	476.5
47.5°	626.4	634.9	675.5	740.0	812.6	867.6	872.4	867.6	804.1	674.4	530.9
50°	683.0	686.2	734.7	821.1	926.3	986.5	989.8	991.9	906.0	767.3	583.7
52.5°	735.8	736.8	799.3	912.4	1046.8	1122.1	1125.8	1121.5	1053.8	883.6	683.0
55°	788.1	789.1	868.1	1017.0	1176.5	1269.9	1293.3	1295.5	1172.8	958.3	709.6
57.5°	836.6	841.4	949.2	1121.0	1322.7	1451.3	1449.7	1413.9	1242.7	986.5	715.5
60°	880.4	895.8	1026.6	1237.9	1441.1	1526.0	1534.5	1456.1	1267.2	998.8	710.7
62.5°	917.7	934.8	1099.7	1330.7	1515.3	1565.5	1562.3	1473.2	1301.9	1041.5	742.2
65°	947.6	972.1	1152.0	1376.6	1531.3	1580.4	1579.9	1515.8	1338.7	1050.6	729.4
67.5°	964.1	1002.0	1160.0	1377.6	1519.0	1539.9	1532.4	1452.9	1269.9	992.4	667.5
70°	973.2	997.8	1140.7	1316.8	1413.4	1407.5	1409.1	1312.6	1151.4	895.3	593.3
72.5°	940.1	960.4	1060.7	1185.6	1249.1	1219.2	1233.1	1144.5	1001.0	763.5	499.9
75°	858.0	867.6	916.1	995.6	1029.8	1009.5	1009.5	945.5	807.8	626.4	403.9
77.5°	718.2	721.4	740.0	782.7	792.3	786.5	784.9	729.9	620.0	478.6	302.0
80°	513.3	525.0	533.0	551.7	572.0	563.4	552.2	507.9	433.8	327.6	208.1
82.5°	318.5	319.6	327.6	339.9	343.1	354.3	352.7	317.5	262.0	195.8	121.7
85°	148.9	146.2	153.7	162.2	167.0	166.5	170.2	153.1	121.1	89.6	55.5
87.5°	23.5	33.1	35.2	34.7	38.4	38.9	40.6	36.8	25.1	17.6	13.3
90°	36.0	36.0	36.0	34.0	29.0	26.2	26.0	28.0	32.0	34.0	34.0
92.5°	40.0	39.0	38.0	34.0	29.0	27.0	27.0	28.0	32.0	35.0	36.0
95°	44.0	43.0	41.0	36.0	32.0	30.2	30.0	30.0	34.0	37.0	39.0
97.5°	42.0	42.0	40.0	37.0	35.0	33.2	33.0	33.0	34.0	36.0	36.0
100°	45.0	45.0	44.0	40.0	38.0	36.0	36.0	36.0	38.0	38.0	37.0
102.5°	51.0	51.0	49.0	46.0	44.0	42.0	42.0	43.0	44.0	42.0	41.0
105°	60.0	60.0	57.0	54.0	53.0	51.8	52.0	54.0	53.0	49.0	48.0
107.5°	72.0	72.0	70.0	67.0	66.0	67.6	68.0	68.0	66.0	60.0	59.0
110°	86.0	86.0	89.0	85.0	86.0	86.8	87.0	84.0	84.0	78.0	74.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	101.0	102.0	108.0	107.0	110.0	107.2	107.0	102.0	105.0	100.0	95.0
115°	121.0	122.0	128.0	128.0	129.0	124.4	124.0	121.0	125.0	123.0	116.0
117.5°	140.0	141.0	144.0	141.0	141.0	136.4	136.0	138.0	141.0	139.0	133.0
120°	152.0	153.0	155.0	149.0	149.0	147.0	147.0	150.0	153.0	148.0	145.0
122.5°	161.0	162.0	164.0	154.0	155.0	157.6	158.0	159.0	162.0	155.0	153.0
125°	169.0	169.0	172.0	163.0	165.0	167.6	168.0	167.0	168.0	163.0	160.0
127.5°	177.0	177.0	181.0	171.0	176.0	177.8	178.0	176.0	175.0	173.0	166.0
130°	187.0	188.0	191.0	179.0	186.0	186.2	186.0	183.0	183.0	184.0	171.0
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	195.0	190.0	192.0	192.0	179.0
135°	210.0	210.0	209.0	192.0	199.0	201.2	201.0	196.0	201.0	199.0	185.0
137.5°	221.0	219.0	213.0	197.0	205.0	207.8	208.0	203.0	210.0	204.0	191.0
140°	229.0	226.0	216.0	200.0	207.0	212.4	213.0	212.0	217.0	209.0	195.0
142.5°	235.0	231.0	218.0	201.0	208.0	216.8	218.0	220.0	223.0	211.0	198.0
145°	235.0	230.0	218.0	202.0	211.0	221.4	223.0	230.0	227.0	211.0	201.0
147.5°	230.0	227.0	219.0	207.0	216.0	227.2	229.0	239.0	229.0	212.0	204.0
150°	224.0	221.0	220.0	214.0	222.0	233.4	235.0	242.0	232.0	214.0	210.0
152.5°	216.0	214.0	221.0	220.0	230.0	239.6	241.0	242.0	235.0	219.0	215.0
155°	208.0	207.0	219.0	224.0	237.0	242.2	243.0	238.0	234.0	224.0	220.0
157.5°	203.0	203.0	216.0	224.0	234.0	234.4	235.0	228.0	229.0	226.0	222.0
160°	199.0	198.0	210.0	213.0	219.0	218.4	219.0	215.0	219.0	221.0	218.0
162.5°	185.0	184.0	193.0	193.0	198.0	197.4	198.0	196.0	200.0	204.0	207.0
165°	169.0	167.0	173.0	173.0	176.0	176.4	177.0	176.0	181.0	185.0	190.0
167.5°	154.0	152.0	156.0	155.0	159.0	158.6	159.0	160.0	165.0	168.0	172.0
170°	142.0	141.0	145.0	144.0	147.0	146.8	147.0	148.0	152.0	155.0	159.0
172.5°	137.0	135.0	139.0	138.0	141.0	140.8	141.0	141.0	145.0	146.0	149.0
175°	136.0	134.0	137.0	137.0	139.0	138.8	139.0	138.0	141.0	141.0	143.0
177.5°	137.0	136.0	139.0	138.0	140.0	139.0	139.0	138.0	140.0	140.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8
2.5°	118.5	118.5	117.4	116.3	115.2	114.7	114.2	113.6	113.6	113.1	113.1
5°	121.1	120.1	118.5	116.8	115.2	114.2	113.1	112.6	111.5	111.0	111.0
7.5°	123.3	122.2	119.5	117.4	115.2	113.6	112.0	111.0	110.4	109.9	109.9
10°	127.5	125.4	122.2	118.5	115.8	113.6	112.0	111.0	110.4	109.9	109.9
12.5°	133.4	130.2	124.9	121.1	117.4	114.7	113.1	112.0	111.0	111.0	110.4
15°	139.8	136.1	129.7	123.8	119.5	116.8	114.7	114.2	113.1	113.1	113.1
17.5°	147.3	143.0	135.0	128.1	123.3	120.1	117.9	116.8	116.3	116.8	117.4
20°	156.9	151.0	140.9	133.4	127.5	124.3	122.7	121.1	121.1	122.2	122.2
22.5°	168.1	161.1	148.9	139.8	133.9	129.7	128.6	127.5	127.0	128.1	128.1
25°	179.8	171.8	157.4	147.3	140.3	136.6	135.5	134.5	135.0	135.5	133.9
27.5°	198.0	186.7	168.1	156.3	148.3	144.6	143.0	142.5	143.0	143.5	142.5
30°	215.0	201.7	180.9	167.0	156.9	153.1	151.5	151.5	152.1	152.1	152.1
32.5°	238.5	222.0	195.3	178.7	168.6	163.8	163.3	163.3	162.2	162.7	162.2
35°	266.2	246.5	215.0	194.7	183.0	177.7	176.1	175.0	175.0	175.0	175.0
37.5°	296.1	272.1	235.3	212.9	199.6	193.1	189.9	188.3	188.9	188.9	187.8
40°	329.7	302.0	259.3	231.6	219.3	209.7	206.0	204.4	203.8	202.8	200.1
42.5°	374.6	339.3	288.7	255.6	237.4	230.5	223.6	220.4	217.7	217.2	212.9
45°	427.4	389.5	326.5	289.7	265.7	250.2	243.3	238.0	233.2	231.6	228.4
47.5°	471.1	425.2	360.2	319.1	292.4	276.4	265.2	257.2	250.8	247.0	248.1
50°	520.2	469.0	398.6	346.8	320.7	303.6	292.9	279.6	270.0	264.1	266.2
52.5°	600.8	543.7	451.9	394.8	350.0	332.9	319.1	303.6	290.8	282.8	287.1
55°	623.2	563.4	477.5	425.2	390.6	371.9	351.1	331.9	313.7	303.1	303.1
57.5°	622.1	561.8	479.7	433.8	413.5	400.2	384.7	360.7	337.2	321.7	320.7
60°	614.1	553.8	474.3	427.9	412.4	415.1	408.7	388.4	360.7	339.3	336.1
62.5°	634.9	573.6	488.2	433.8	411.4	414.0	419.4	407.6	380.4	353.7	350.5
65°	621.6	559.7	477.0	429.5	417.2	417.8	421.5	413.0	391.1	366.6	361.2
67.5°	567.2	512.7	439.1	398.0	390.0	399.6	411.4	408.7	390.0	373.5	367.1
70°	498.3	450.3	387.4	353.2	347.3	361.2	381.0	384.7	379.4	368.7	366.6
72.5°	422.0	379.9	326.5	300.9	298.8	309.5	329.2	342.0	345.7	350.5	350.5
75°	338.8	305.7	259.8	242.2	242.2	254.0	270.0	286.5	296.7	309.5	313.2
77.5°	257.2	228.4	195.8	180.9	180.9	191.5	203.8	217.2	234.2	251.8	249.2
80°	176.1	157.4	133.9	126.5	124.9	130.7	141.4	150.5	165.4	177.1	184.1
82.5°	100.8	94.4	80.6	74.2	73.6	81.1	88.6	89.6	99.8	106.7	108.8
85°	48.0	42.2	39.5	35.2	35.7	37.3	40.0	42.2	44.8	47.5	47.5
87.5°	10.7	10.1	9.1	9.6	9.6	8.5	9.6	9.1	10.1	10.7	9.6
90°	34.0	34.0	34.0	32.0	27.0	21.0	25.0	30.0	33.0	34.0	34.0
92.5°	36.0	35.0	33.0	31.0	27.0	23.0	25.0	29.0	34.0	36.0	36.0
95°	38.0	38.0	35.0	33.0	29.0	26.0	27.0	31.0	34.0	35.0	36.0
97.5°	36.0	35.0	35.0	34.0	30.0	25.0	26.0	30.0	33.0	35.0	35.0
100°	37.0	37.0	38.0	38.0	33.0	27.0	28.0	32.0	35.0	36.0	36.0
102.5°	41.0	42.0	43.0	45.0	39.0	32.0	33.0	35.0	38.0	40.0	41.0
105°	49.0	49.0	52.0	54.0	48.0	39.0	38.0	41.0	44.0	48.0	49.0
107.5°	60.0	61.0	65.0	65.0	58.0	50.0	47.0	50.0	54.0	60.0	61.0
110°	75.0	77.0	78.0	75.0	71.0	65.0	60.0	62.0	67.0	73.0	74.0

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CATALOG NUMBER: TT-C2-LED-E1-DL-CG-8030-UPL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	94.0	94.0	91.0	86.0	84.0	82.0	77.0	80.0	85.0	87.0	87.0
115°	113.0	111.0	104.0	100.0	99.0	102.0	99.0	103.0	106.0	102.0	102.0
117.5°	129.0	128.0	121.0	117.0	116.0	120.0	121.0	125.0	125.0	120.0	120.0
120°	142.0	142.0	137.0	134.0	134.0	137.0	137.0	139.0	139.0	134.0	136.0
122.5°	150.0	153.0	151.0	148.0	149.0	149.0	145.0	148.0	149.0	145.0	146.0
125°	158.0	162.0	162.0	159.0	160.0	159.0	149.0	154.0	156.0	154.0	154.0
127.5°	163.0	169.0	170.0	168.0	168.0	169.0	154.0	158.0	163.0	160.0	161.0
130°	169.0	176.0	178.0	174.0	175.0	175.0	159.0	164.0	169.0	164.0	167.0
132.5°	176.0	182.0	186.0	181.0	183.0	181.0	165.0	171.0	176.0	171.0	174.0
135°	184.0	190.0	195.0	190.0	191.0	187.0	170.0	177.0	184.0	179.0	179.0
137.5°	190.0	196.0	204.0	200.0	199.0	191.0	175.0	182.0	192.0	187.0	187.0
140°	195.0	201.0	213.0	212.0	206.0	195.0	180.0	186.0	200.0	195.0	196.0
142.5°	198.0	204.0	220.0	222.0	212.0	197.0	184.0	190.0	205.0	204.0	205.0
145°	202.0	208.0	225.0	230.0	216.0	199.0	187.0	193.0	208.0	211.0	214.0
147.5°	206.0	212.0	230.0	236.0	219.0	202.0	191.0	195.0	212.0	220.0	225.0
150°	211.0	216.0	231.0	235.0	219.0	205.0	194.0	199.0	215.0	227.0	233.0
152.5°	216.0	220.0	229.0	230.0	220.0	208.0	201.0	205.0	219.0	232.0	239.0
155°	219.0	221.0	224.0	222.0	220.0	213.0	208.0	212.0	224.0	234.0	240.0
157.5°	219.0	219.0	216.0	213.0	216.0	219.0	215.0	220.0	229.0	232.0	235.0
160°	215.0	214.0	210.0	208.0	213.0	223.0	224.0	228.0	233.0	229.0	232.0
162.5°	207.0	207.0	204.0	204.0	209.0	221.0	227.0	231.0	230.0	224.0	226.0
165°	192.0	194.0	196.0	198.0	203.0	212.0	216.0	219.0	220.0	215.0	217.0
167.5°	174.0	177.0	181.0	184.0	189.0	195.0	196.0	199.0	200.0	197.0	200.0
170°	160.0	163.0	166.0	168.0	172.0	177.0	178.0	180.0	181.0	178.0	181.0
172.5°	151.0	153.0	155.0	156.0	159.0	162.0	162.0	164.0	165.0	163.0	166.0
175°	144.0	146.0	147.0	148.0	149.0	151.0	151.0	152.0	153.0	151.0	153.0
177.5°	141.0	142.0	142.0	142.0	143.0	144.0	143.0	144.0	145.0	143.0	145.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

(END OF REPORT)