

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: P198243

Luminaire Tested: **TT-C1-LED-E1-DL-LWR-LW-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198243
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-C1-LED-E1-DL-LWR-LW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
DRIVE LANE DISTRIBUTION WITH LumaWatt WIRELESS SENSOR
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3708.9 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U4 - G2

Input Watts (W): 50.9
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



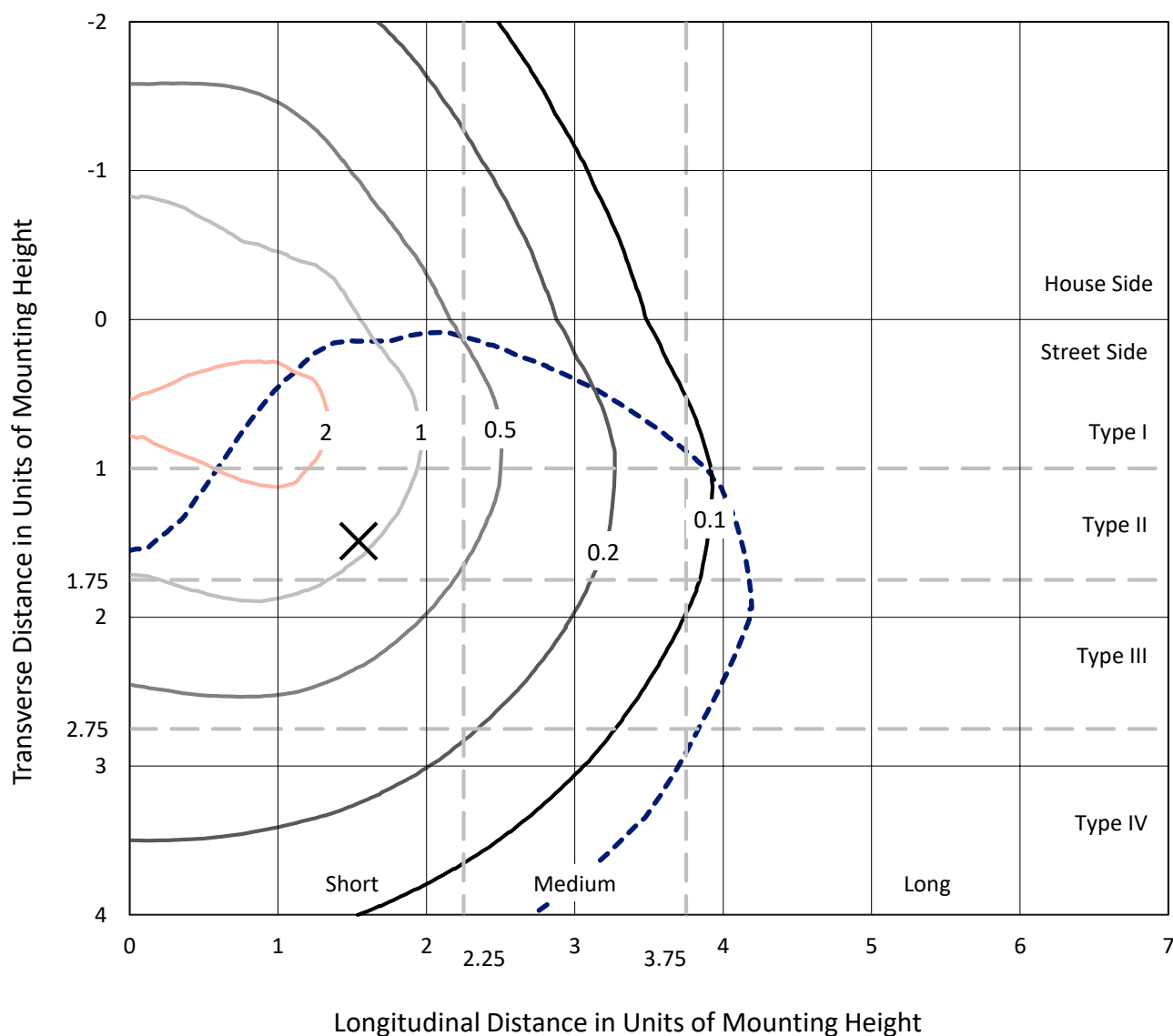
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

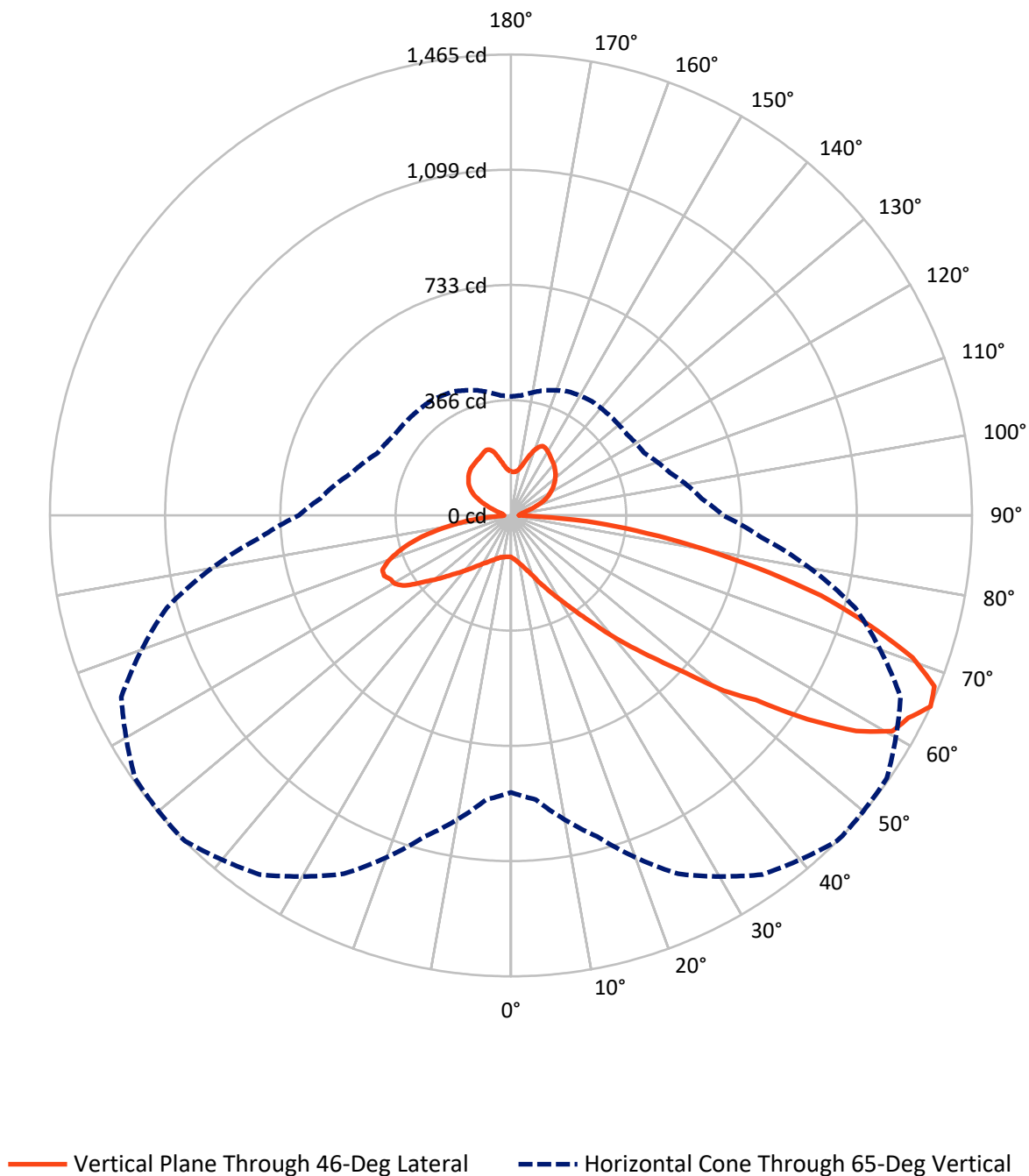


Based on 10 foot mounting height. Maximum calculated value = 2.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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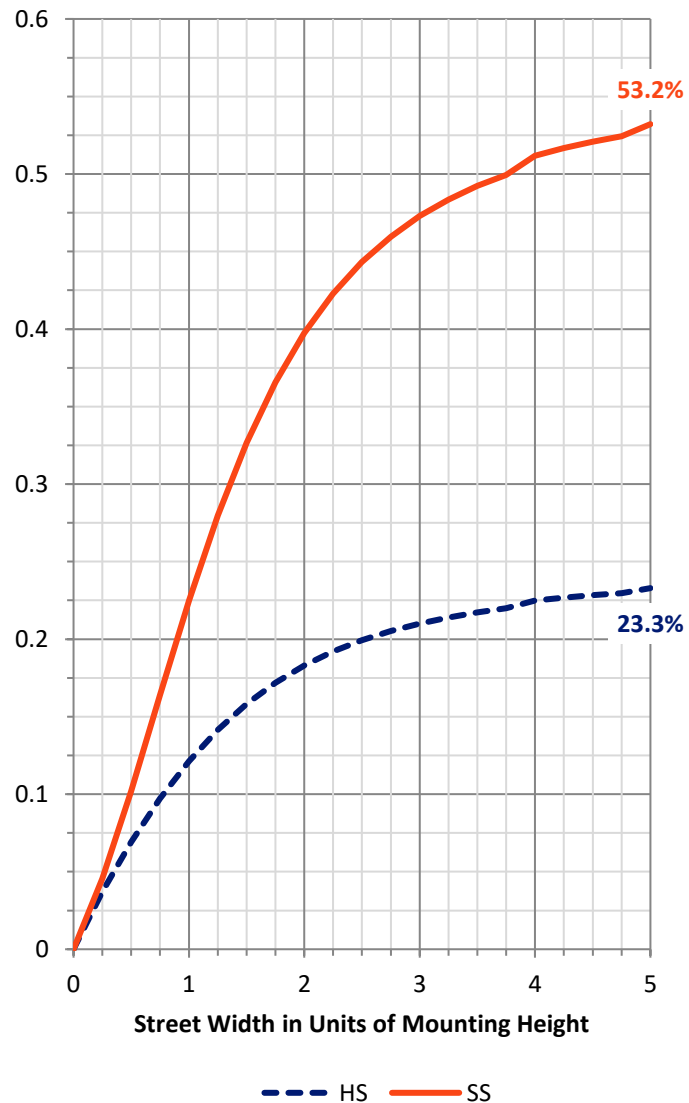
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	884.1	387.3	1271.4
	% Fixture	23.8	10.4	34.3
Street Side	Lumens	2024.9	412.6	2437.5
	% Fixture	54.6	11.1	65.7
Total	Lumens	2909.0	799.9	3708.9
	% Fixture	78.4	21.6	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.3	0.4
10°-20°	45.6	1.2
20°-30°	96.2	2.6
30°-40°	182.7	4.9
40°-50°	337.5	9.1
50°-60°	591.5	15.9
60°-70°	802.6	21.6
70°-80°	652.6	17.6
80°-90°	187.1	5.0
90°-100°	36.3	1.0
100°-110°	55.2	1.5
110°-120°	110.8	3.0
120°-130°	144.2	3.9
130°-140°	147.9	4.0
140°-150°	133.4	3.6
150°-160°	102.6	2.8
160°-170°	55.1	1.5
170°-180°	14.3	0.4
0°-90°	2909.0	78.4
0°-180°	3708.9	100.0

Coefficient of Utilization



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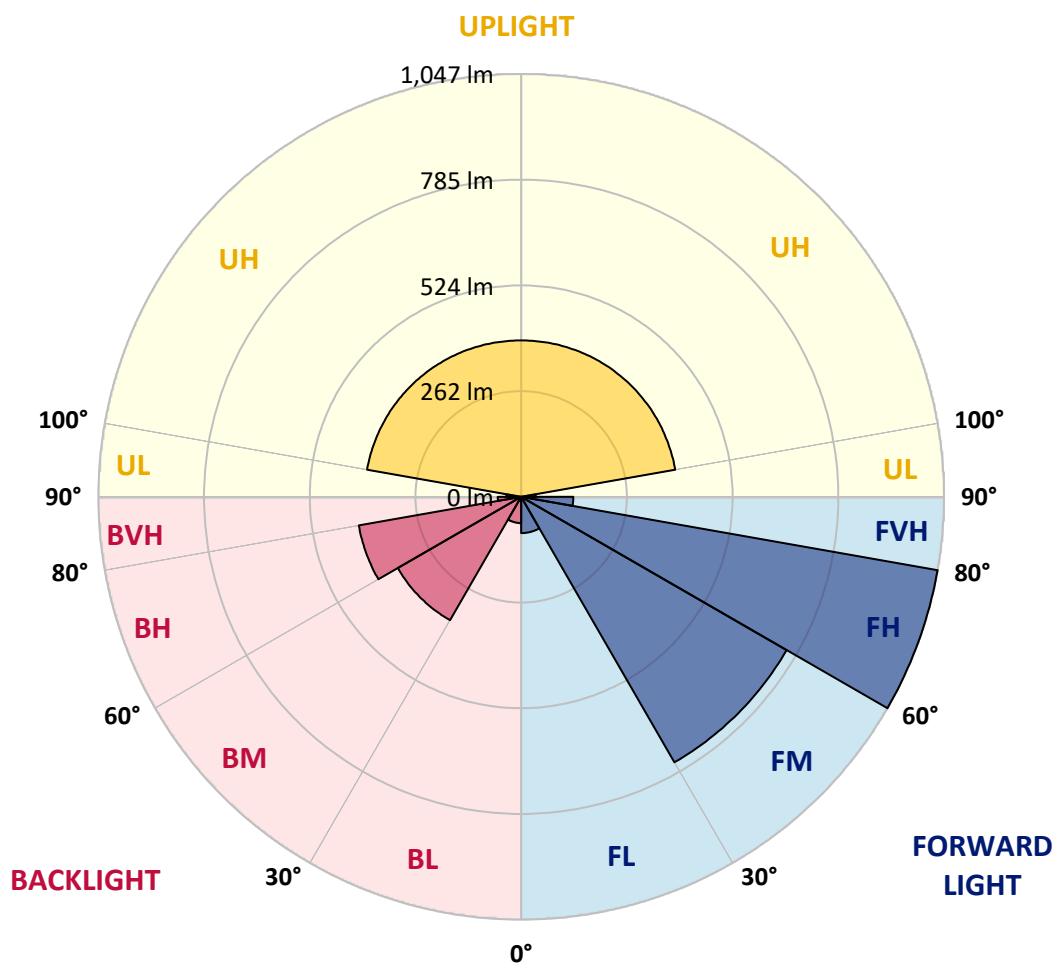
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	89.9	2.4			
FM	(30°-60°)	758.9	20.5			
FH	(60°-80°)	1047.0	28.2			G1/1800
FVH	(80°-90°)	129.1	3.5			G2/225
BL	(0°-30°)	65.1	1.8	B0/110		
BM	(30°-60°)	352.8	9.5	B1/1000		
BH	(60°-80°)	408.2	11.0	B1/500		G1/500
BVH	(80°-90°)	58.0	1.6			G1/100
UL	(90°-100°)	36.3	1.0		U2/50	
UH	(100°-180°)	387.3	10.4		U3/500	

BUG Rating: B1-U4-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	132.2	132.2	132.2	132.2	132.2	132.2	132.2	132.2	132.2	132.2	132.2
2.5°	137.5	138.1	138.1	138.1	137.5	136.9	136.9	136.3	135.7	135.7	135.2
5°	144.0	144.0	144.0	143.4	142.8	142.2	141.6	141.0	139.3	138.1	137.5
7.5°	151.6	151.6	151.6	151.0	149.8	148.1	148.7	146.9	145.1	142.8	140.4
10°	160.4	161.0	161.6	159.8	158.7	156.9	156.3	154.0	151.6	148.7	145.7
12.5°	171.0	170.4	171.6	169.8	168.6	165.7	165.1	162.2	158.1	154.5	151.0
15°	183.9	184.5	183.9	182.8	180.4	177.5	177.5	173.4	168.6	163.4	157.5
17.5°	202.1	202.1	199.8	199.2	195.1	191.6	190.4	186.9	179.2	172.8	165.7
20°	222.1	220.9	218.0	218.6	215.1	209.8	208.6	202.7	194.5	184.5	175.1
22.5°	245.0	243.9	240.3	239.8	235.1	230.9	230.9	222.7	211.5	198.6	185.7
25°	263.3	263.8	264.4	265.0	261.5	255.0	254.4	245.6	230.9	214.5	197.4
27.5°	285.6	288.5	287.9	290.9	289.1	283.2	282.1	272.7	254.4	235.1	213.9
30°	310.9	315.0	312.6	318.5	318.5	314.4	312.0	302.6	284.4	256.8	231.5
32.5°	339.1	339.7	343.2	350.8	354.3	352.0	350.2	341.4	317.9	287.4	254.4
35°	371.4	368.4	374.3	389.0	394.3	394.9	394.3	383.7	362.6	325.0	283.2
37.5°	403.7	402.5	413.7	428.4	444.2	450.7	447.8	444.2	413.7	366.7	313.2
40°	434.3	439.5	454.2	472.5	497.7	513.0	513.6	506.5	474.8	417.8	349.1
42.5°	464.2	474.8	493.6	525.3	557.7	582.3	579.4	573.5	545.9	477.7	394.9
45°	505.4	515.9	534.7	572.9	624.7	655.2	655.8	666.4	642.9	558.2	457.2
47.5°	543.0	552.4	580.0	631.1	694.6	750.4	748.1	763.3	733.4	632.3	505.9
50°	594.7	591.7	632.3	703.4	789.8	860.3	875.6	883.2	826.8	725.1	558.2
52.5°	640.5	637.6	688.1	783.3	890.8	981.9	973.7	992.5	969.0	850.9	669.9
55°	686.4	686.4	749.8	875.0	1016.6	1135.9	1142.9	1174.7	1111.2	944.9	709.3
57.5°	736.9	742.2	832.1	988.4	1161.7	1292.2	1293.4	1296.3	1194.1	982.5	719.8
60°	785.7	799.8	916.7	1100.0	1276.3	1383.3	1392.7	1352.1	1225.8	1006.6	724.0
62.5°	839.7	853.8	997.2	1192.9	1361.0	1420.3	1417.4	1377.4	1278.1	1074.2	776.3
65°	880.3	906.7	1056.6	1256.9	1393.3	1463.8	1465.0	1457.9	1366.2	1131.8	798.0
67.5°	921.4	961.4	1087.1	1281.6	1416.2	1453.2	1451.4	1424.4	1330.4	1099.5	754.5
70°	965.5	994.9	1108.3	1259.3	1347.4	1352.1	1353.9	1315.1	1238.7	1033.1	699.9
72.5°	980.8	1001.9	1076.0	1166.4	1207.6	1206.4	1190.0	1175.3	1110.6	931.4	621.7
75°	953.7	955.5	966.7	1006.0	1024.8	1009.0	1017.8	996.0	959.0	800.4	530.0
77.5°	848.0	845.0	813.3	799.2	799.8	796.2	796.8	770.4	754.5	659.3	430.1
80°	661.7	661.1	635.8	596.4	584.1	580.6	584.1	571.2	556.5	497.7	327.3
82.5°	458.9	451.9	440.7	409.6	407.8	400.8	402.5	400.2	393.1	353.8	232.1
85°	222.7	232.1	242.1	239.8	232.1	233.3	240.9	240.3	232.1	202.7	135.2
87.5°	30.6	44.1	45.8	44.1	55.8	69.9	55.8	57.0	45.8	47.0	30.0
90°	36.0	36.0	36.0	34.0	29.0	26.0	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	30.0	30.0	30.0	34.0	37.0	39.0
97.5°	42.0	42.0	40.0	37.0	35.0	33.0	32.8	33.0	34.0	36.0	36.0
100°	45.0	45.0	44.0	40.0	38.0	36.0	35.8	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	52.0	52.0	54.0	53.0	49.0	48.0
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	68.0	66.0	60.0	59.0
110°	86.0	86.0	89.0	85.0	86.0	87.0	86.8	84.0	84.0	78.0	74.0

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CATALOG NUMBER: TT-C1-LED-E1-DL-LWR-LW-UPL

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	106.2	102.0	105.0	100.0	95.0
115°	121.0	122.0	128.0	128.0	129.0	124.0	123.2	121.0	125.0	123.0	116.0
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	135.8	138.0	141.0	139.0	133.0
120°	152.0	153.0	155.0	149.0	149.0	147.0	147.2	150.0	153.0	148.0	145.0
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	158.0	159.0	162.0	155.0	153.0
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.8	167.0	168.0	163.0	160.0
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	177.4	176.0	175.0	173.0	166.0
130°	187.0	188.0	191.0	179.0	186.0	186.0	185.4	183.0	183.0	184.0	171.0
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	194.2	190.0	192.0	192.0	179.0
135°	210.0	210.0	209.0	192.0	199.0	201.0	200.2	196.0	201.0	199.0	185.0
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	207.0	203.0	210.0	204.0	191.0
140°	229.0	226.0	216.0	200.0	207.0	213.0	212.8	212.0	217.0	209.0	195.0
142.5°	235.0	231.0	218.0	201.0	208.0	218.0	218.0	220.0	223.0	211.0	198.0
145°	235.0	230.0	218.0	202.0	211.0	223.0	223.4	230.0	227.0	211.0	201.0
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	229.8	239.0	229.0	212.0	204.0
150°	224.0	221.0	220.0	214.0	222.0	235.0	235.8	242.0	232.0	214.0	210.0
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	241.0	242.0	235.0	219.0	215.0
155°	208.0	207.0	219.0	224.0	237.0	243.0	242.2	238.0	234.0	224.0	220.0
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	234.0	228.0	229.0	226.0	222.0
160°	199.0	198.0	210.0	213.0	219.0	219.0	218.4	215.0	219.0	221.0	218.0
162.5°	185.0	184.0	193.0	193.0	198.0	198.0	197.6	196.0	200.0	204.0	207.0
165°	169.0	167.0	173.0	173.0	176.0	177.0	176.6	176.0	181.0	185.0	190.0
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	158.8	160.0	165.0	168.0	172.0
170°	142.0	141.0	145.0	144.0	147.0	147.0	147.0	148.0	152.0	155.0	159.0
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	140.8	141.0	145.0	146.0	149.0
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.8	138.0	141.0	141.0	143.0
177.5°	137.0	136.0	139.0	138.0	140.0	139.0	138.8	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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CATALOG NUMBER: TT-C1-LED-E1-DL-LWR-LW-UPL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	132.2	132.2	132.2	132.2	132.2	132.2	132.2	132.2	132.2	132.2	132.2
2.5°	134.6	134.0	133.4	132.8	132.2	131.6	131.0	131.0	130.5	130.5	130.5
5°	136.9	136.3	135.2	134.0	133.4	132.2	131.6	131.0	129.9	129.9	129.3
7.5°	139.3	138.7	136.9	135.2	134.0	132.8	132.2	131.6	131.0	129.9	129.9
10°	144.0	142.2	139.9	137.5	135.2	134.0	132.8	132.2	132.2	131.6	131.6
12.5°	148.7	146.9	142.8	139.9	136.9	135.2	134.0	134.0	133.4	133.4	132.8
15°	154.5	152.2	147.5	143.4	139.9	138.1	136.3	136.3	136.3	136.3	136.3
17.5°	161.6	158.1	152.8	148.1	144.6	142.2	140.4	140.4	139.9	140.4	141.0
20°	171.0	166.3	159.2	153.4	149.3	147.5	146.3	145.7	145.7	146.3	146.9
22.5°	179.8	174.5	165.1	159.2	155.7	152.8	152.2	152.2	151.6	152.8	152.8
25°	190.4	183.9	173.9	166.3	161.6	159.2	159.2	159.2	159.8	160.4	159.2
27.5°	204.5	196.9	183.3	173.9	169.8	167.5	166.3	167.5	168.1	168.6	167.5
30°	218.6	210.4	193.3	182.8	176.9	174.5	174.5	175.7	176.3	176.9	175.7
32.5°	238.0	225.7	207.4	193.9	187.5	185.1	185.1	185.7	185.7	186.9	186.3
35°	265.0	248.0	225.1	209.2	199.8	196.3	195.7	196.3	197.4	196.9	199.2
37.5°	290.9	271.5	242.7	225.7	216.2	211.0	208.6	208.0	209.2	209.8	210.4
40°	321.4	297.9	264.4	243.3	231.5	225.7	222.1	222.1	221.5	222.1	219.8
42.5°	360.8	334.4	292.1	265.0	248.6	243.3	236.8	235.1	233.3	233.9	230.4
45°	414.3	380.8	330.2	294.4	272.7	261.5	255.0	249.7	247.4	246.2	242.7
47.5°	451.3	415.5	360.8	322.0	299.1	284.4	274.4	267.4	261.5	258.6	259.1
50°	500.7	454.2	397.8	350.8	327.3	310.9	299.1	286.8	277.9	274.4	276.2
52.5°	594.1	538.3	450.7	395.5	356.1	337.9	325.5	310.3	297.3	290.9	292.6
55°	625.2	568.2	487.7	431.3	396.1	373.7	354.3	336.1	319.1	308.5	309.1
57.5°	628.2	571.8	494.2	447.2	423.1	407.8	389.6	365.5	342.0	327.3	326.1
60°	625.2	567.7	493.0	445.4	428.4	427.8	416.6	395.5	367.9	346.1	344.4
62.5°	666.4	604.7	514.2	455.4	431.3	433.1	435.4	420.7	392.5	366.1	360.2
65°	674.0	608.8	523.0	467.8	449.5	446.0	444.2	434.3	411.3	382.5	377.8
67.5°	636.4	574.7	496.5	448.9	436.6	444.2	450.7	441.9	420.2	398.4	391.9
70°	586.5	530.6	457.8	413.7	406.6	418.4	432.5	435.4	423.1	405.5	403.1
72.5°	519.5	472.5	408.4	373.1	370.2	379.0	395.5	409.0	407.2	403.1	401.9
75°	442.5	406.1	350.2	323.2	323.2	334.4	346.7	361.4	372.6	379.6	381.4
77.5°	364.3	327.9	286.8	263.8	266.8	281.5	290.3	305.0	317.3	326.7	327.3
80°	273.8	253.9	218.0	205.7	206.8	216.8	229.2	238.0	248.0	256.2	253.9
82.5°	198.0	179.8	155.1	148.1	152.8	157.5	167.5	175.1	178.1	180.4	185.1
85°	114.0	108.7	95.2	91.1	92.3	97.0	102.8	104.6	107.5	106.4	108.7
87.5°	27.6	29.4	27.6	27.0	27.6	26.4	25.3	30.6	31.1	31.7	30.6
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-C1-LED-E1-DL-LWR-LW-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)