

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: P198242

Luminaire Tested: **TT-C1-LED-E1-DL-LWR-LW-8030-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198242
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-8030-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
DRIVE LANE DISTRIBUTION WITH LumaWatt WIRELESS SENSOR
Light Source: (160) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2994.9 lumens
Efficiency: N/A
Efficacy: 58.8 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): 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

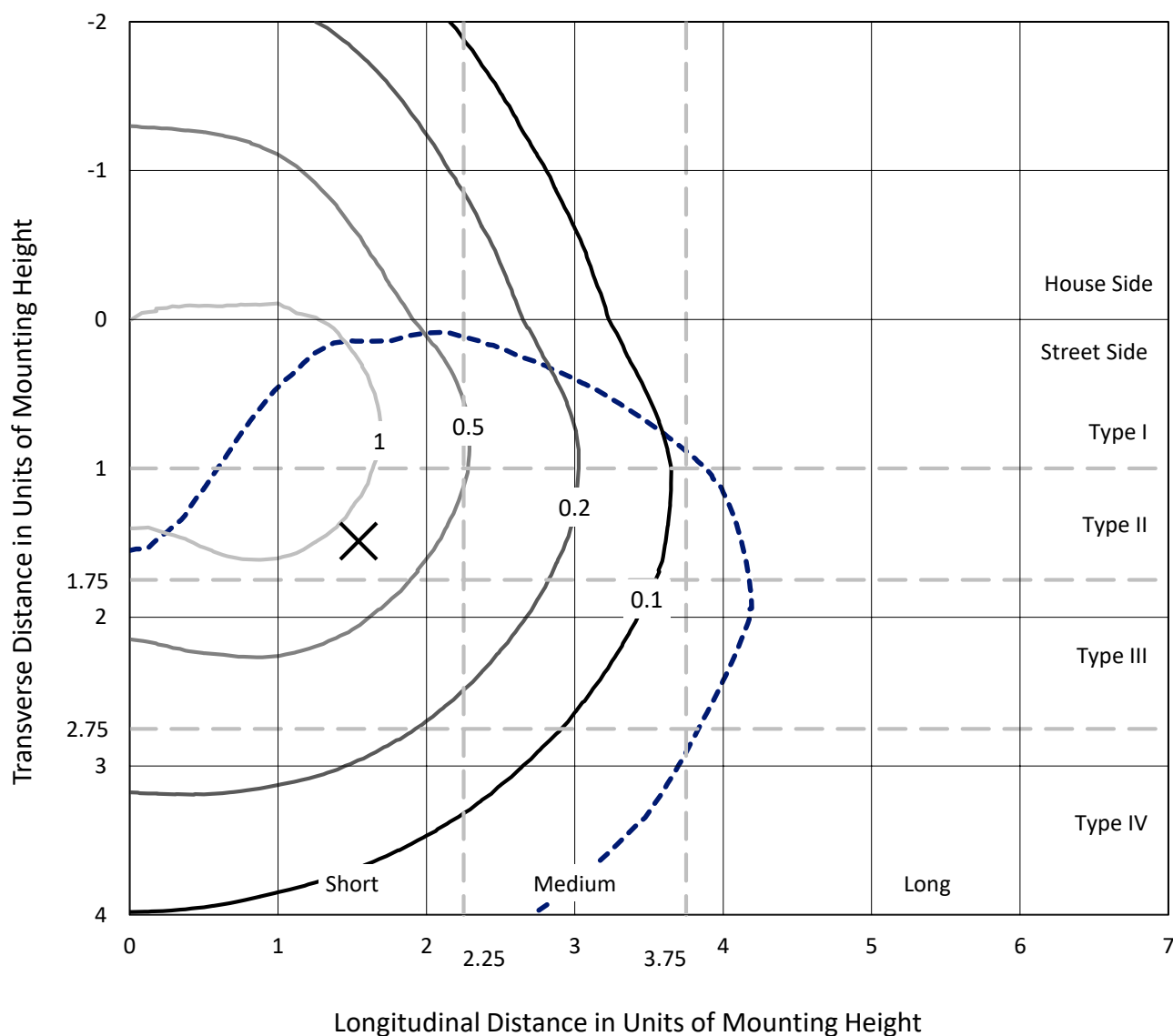


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

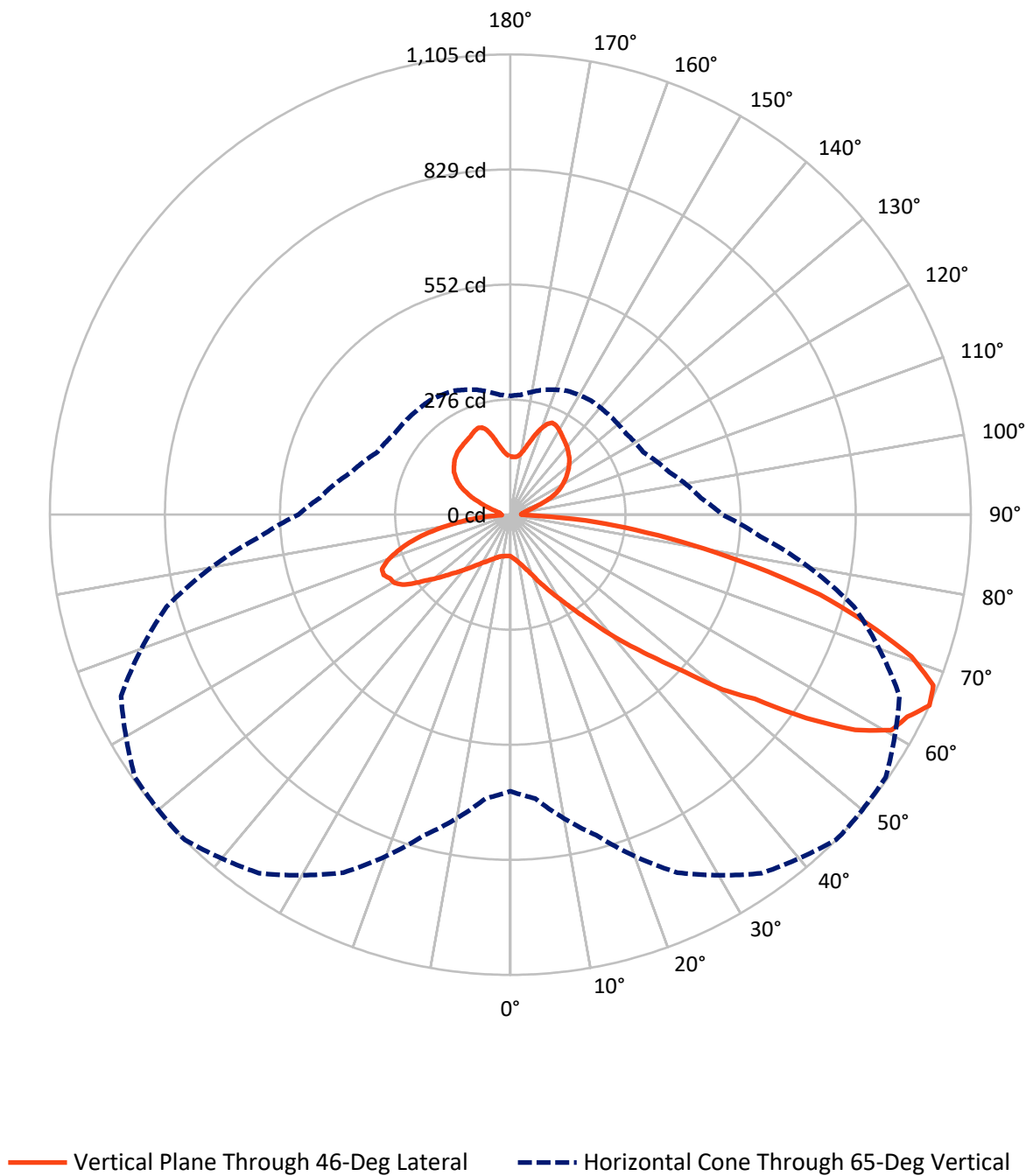


Based on 10 foot mounting height. Maximum calculated value = 1.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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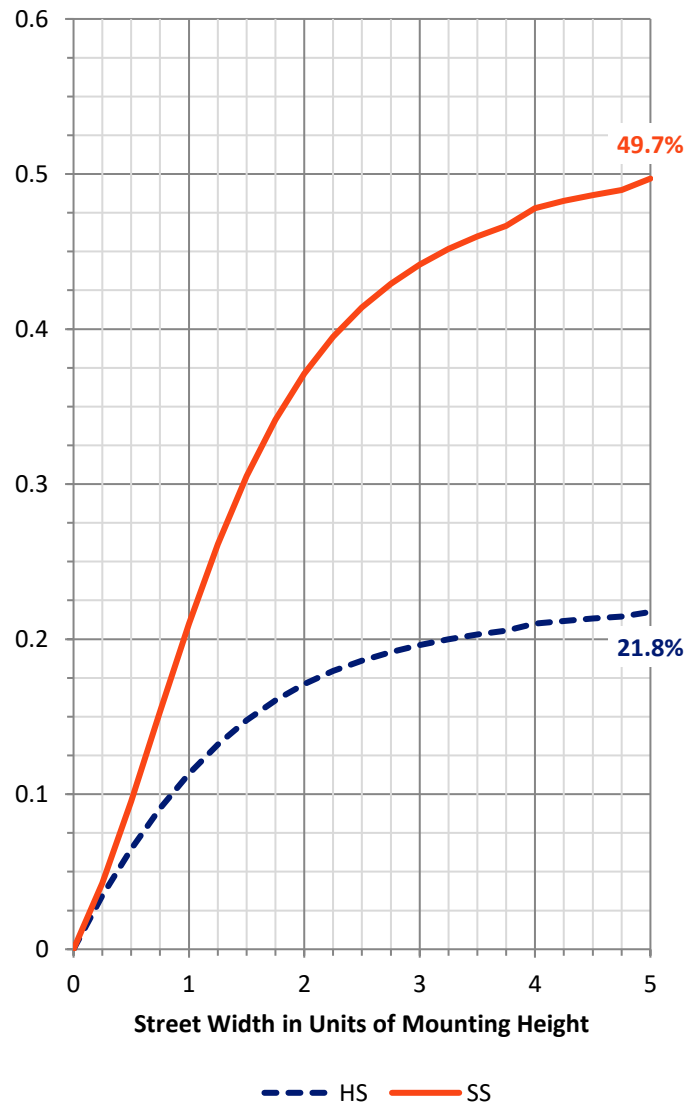
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	667.3	387.3	1054.6
	% Fixture	22.3	12.9	35.2
Street Side	Lumens	1527.7	412.6	1940.3
	% Fixture	51.0	13.8	64.8
Total	Lumens	2195.0	799.9	2994.9
	% Fixture	73.3	26.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.1	0.3
10°-20°	34.4	1.1
20°-30°	72.5	2.4
30°-40°	137.8	4.6
40°-50°	254.5	8.5
50°-60°	446.1	14.9
60°-70°	605.3	20.2
70°-80°	492.2	16.4
80°-90°	142.1	4.7
90°-100°	36.3	1.2
100°-110°	55.2	1.8
110°-120°	110.8	3.7
120°-130°	144.2	4.8
130°-140°	147.9	4.9
140°-150°	133.4	4.5
150°-160°	102.6	3.4
160°-170°	55.1	1.8
170°-180°	14.3	0.5
0°-90°	2195.0	73.3
0°-180°	2994.9	100.0

Coefficient of Utilization



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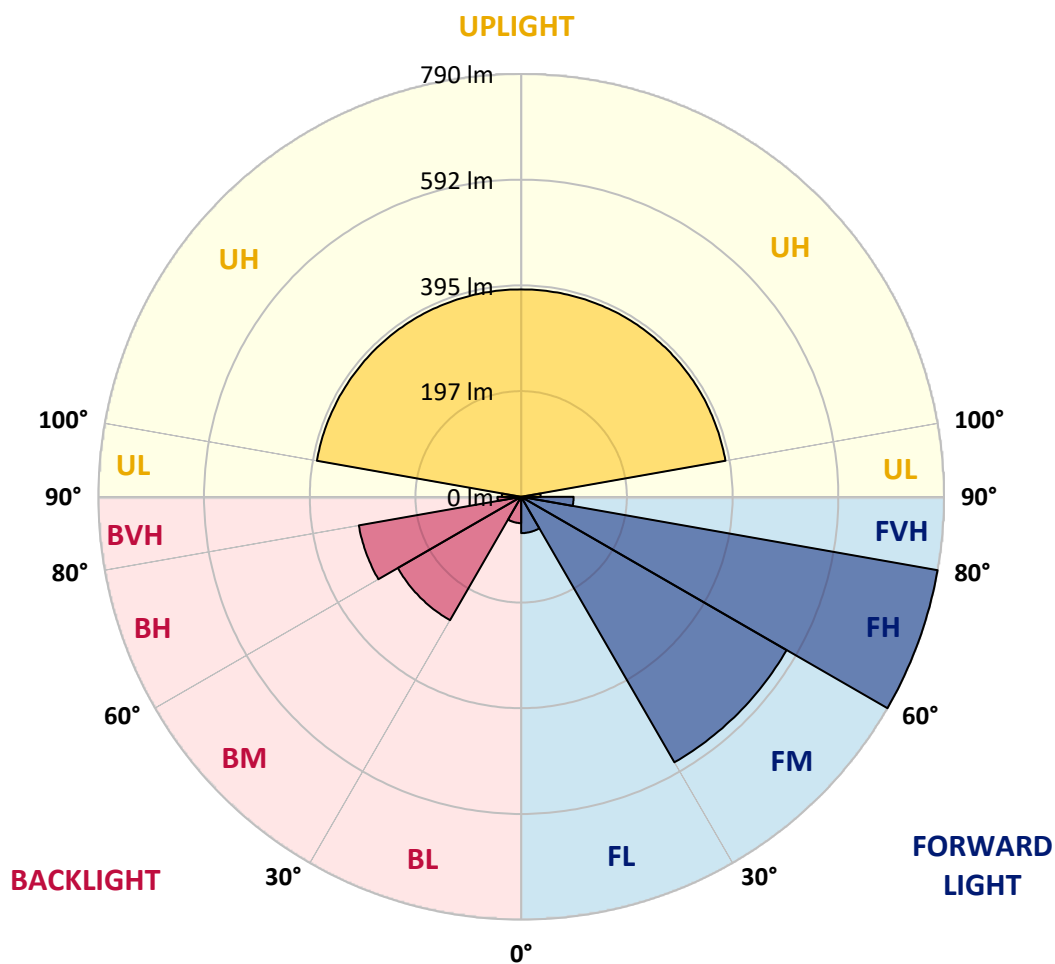
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	67.8	2.3			
FM	(30°-60°)	572.4	19.1			
FH	(60°-80°)	789.6	26.4			G1/1800
FVH	(80°-90°)	97.9	3.3			G1/100
BL	(0°-30°)	49.1	1.6	B0/110		
BM	(30°-60°)	266.0	8.9	B1/1000		
BH	(60°-80°)	307.9	10.3	B1/500		G1/500
BVH	(80°-90°)	44.2	1.5			G1/100
UL	(90°-100°)	36.3	1.2		U2/50	
UH	(100°-180°)	387.3	12.9		U3/500	

BUG Rating: B1-U4-G1

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7
2.5°	103.7	104.1	104.1	104.1	103.7	103.3	103.3	102.8	102.4	102.4	101.9
5°	108.6	108.6	108.6	108.1	107.7	107.2	106.8	106.4	105.0	104.1	103.7
7.5°	114.3	114.3	114.3	113.9	113.0	111.7	112.1	110.8	109.5	107.7	105.9
10°	121.0	121.4	121.9	120.5	119.7	118.3	117.9	116.1	114.3	112.1	109.9
12.5°	129.0	128.5	129.4	128.1	127.2	125.0	124.5	122.3	119.2	116.6	113.9
15°	138.7	139.2	138.7	137.8	136.1	133.8	133.8	130.7	127.2	123.2	118.8
17.5°	152.5	152.5	150.7	150.2	147.1	144.5	143.6	140.9	135.2	130.3	125.0
20°	167.5	166.6	164.4	164.9	162.2	158.2	157.3	152.9	146.7	139.2	132.1
22.5°	184.8	183.9	181.3	180.8	177.3	174.2	174.2	168.0	159.5	149.8	140.0
25°	198.5	199.0	199.4	199.9	197.2	192.3	191.9	185.2	174.2	161.8	148.9
27.5°	215.4	217.6	217.2	219.4	218.0	213.6	212.7	205.6	191.9	177.3	161.3
30°	234.4	237.5	235.8	240.2	240.2	237.1	235.3	228.2	214.5	193.7	174.6
32.5°	255.7	256.2	258.8	264.6	267.2	265.5	264.1	257.5	239.8	216.7	191.9
35°	280.1	277.9	282.3	293.4	297.4	297.8	297.4	289.4	273.4	245.1	213.6
37.5°	304.5	303.6	312.0	323.1	335.0	339.9	337.7	335.0	312.0	276.5	236.2
40°	327.5	331.5	342.6	356.3	375.4	386.9	387.3	382.0	358.1	315.1	263.2
42.5°	350.1	358.1	372.3	396.2	420.6	439.2	437.0	432.5	411.7	360.3	297.8
45°	381.1	389.1	403.3	432.1	471.1	494.1	494.6	502.6	484.8	421.0	344.8
47.5°	409.5	416.6	437.4	476.0	523.8	565.9	564.2	575.7	553.1	476.9	381.6
50°	448.5	446.3	476.9	530.5	595.6	648.8	660.3	666.1	623.6	546.9	421.0
52.5°	483.1	480.8	519.0	590.8	671.9	740.5	734.3	748.5	730.8	641.7	505.2
55°	517.6	517.6	565.5	659.9	766.7	856.7	862.0	885.9	838.0	712.6	534.9
57.5°	555.7	559.7	627.5	745.4	876.2	974.5	975.4	977.7	900.5	741.0	542.9
60°	592.5	603.2	691.4	829.6	962.6	1043.2	1050.3	1019.8	924.5	759.2	546.0
62.5°	633.3	643.9	752.1	899.7	1026.4	1071.2	1068.9	1038.8	963.9	810.1	585.4
65°	663.9	683.8	796.8	948.0	1050.8	1104.0	1104.8	1099.5	1030.4	853.6	601.8
67.5°	694.9	725.0	819.9	966.6	1068.1	1096.0	1094.6	1074.3	1003.4	829.2	569.0
70°	728.1	750.3	835.8	949.7	1016.2	1019.8	1021.1	991.8	934.2	779.1	527.8
72.5°	739.7	755.6	811.5	879.7	910.7	909.8	897.4	886.4	837.6	702.4	468.9
75°	719.3	720.6	729.0	758.7	772.9	760.9	767.6	751.2	723.3	603.6	399.7
77.5°	639.5	637.3	613.4	602.7	603.2	600.5	600.9	581.0	569.0	497.2	324.4
80°	499.0	498.6	479.5	449.8	440.5	437.9	440.5	430.8	419.7	375.4	246.8
82.5°	346.1	340.8	332.4	308.9	307.6	302.2	303.6	301.8	296.5	266.8	175.1
85°	168.0	175.1	182.6	180.8	175.1	175.9	181.7	181.3	175.1	152.9	101.9
87.5°	23.0	33.2	34.6	33.2	42.1	52.7	42.1	43.0	34.6	35.5	22.6
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-8030-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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7
2.5°	101.5	101.0	100.6	100.2	99.7	99.3	98.8	98.8	98.4	98.4	98.4
5°	103.3	102.8	101.9	101.0	100.6	99.7	99.3	98.8	97.9	97.9	97.5
7.5°	105.0	104.6	103.3	101.9	101.0	100.2	99.7	99.3	98.8	97.9	97.9
10°	108.6	107.2	105.5	103.7	101.9	101.0	100.2	99.7	99.7	99.3	99.3
12.5°	112.1	110.8	107.7	105.5	103.3	101.9	101.0	101.0	100.6	100.6	100.2
15°	116.6	114.8	111.2	108.1	105.5	104.1	102.8	102.8	102.8	102.8	102.8
17.5°	121.9	119.2	115.2	111.7	109.0	107.2	105.9	105.9	105.5	105.9	106.4
20°	129.0	125.4	120.1	115.7	112.6	111.2	110.4	109.9	109.9	110.4	110.8
22.5°	135.6	131.6	124.5	120.1	117.4	115.2	114.8	114.8	114.3	115.2	115.2
25°	143.6	138.7	131.2	125.4	121.9	120.1	120.1	120.1	120.5	121.0	120.1
27.5°	154.2	148.5	138.3	131.2	128.1	126.3	125.4	126.3	126.7	127.2	126.3
30°	164.9	158.7	145.8	137.8	133.4	131.6	131.6	132.5	133.0	133.4	132.5
32.5°	179.5	170.2	156.4	146.2	141.4	139.6	139.6	140.0	140.0	140.9	140.5
35°	199.9	187.0	169.7	157.8	150.7	148.0	147.6	148.0	148.9	148.5	150.2
37.5°	219.4	204.7	183.0	170.2	163.1	159.1	157.3	156.9	157.8	158.2	158.7
40°	242.4	224.7	199.4	183.5	174.6	170.2	167.5	167.5	167.1	167.5	165.7
42.5°	272.1	252.2	220.3	199.9	187.5	183.5	178.6	177.3	175.9	176.4	173.7
45°	312.4	287.2	249.1	222.0	205.6	197.2	192.3	188.4	186.6	185.7	183.0
47.5°	340.4	313.3	272.1	242.9	225.6	214.5	207.0	201.6	197.2	195.0	195.4
50°	377.6	342.6	300.0	264.6	246.8	234.4	225.6	216.3	209.6	207.0	208.3
52.5°	448.1	406.0	339.9	298.3	268.6	254.8	245.5	234.0	224.2	219.4	220.7
55°	471.5	428.6	367.8	325.3	298.7	281.9	267.2	253.5	240.6	232.7	233.1
57.5°	473.8	431.2	372.7	337.3	319.1	307.6	293.8	275.7	257.9	246.8	246.0
60°	471.5	428.1	371.8	335.9	323.1	322.6	314.2	298.3	277.4	261.0	259.7
62.5°	502.6	456.0	387.8	343.5	325.3	326.6	328.4	317.3	296.0	276.1	271.7
65°	508.3	459.1	394.4	352.8	339.0	336.4	335.0	327.5	310.2	288.5	285.0
67.5°	480.0	433.4	374.5	338.6	329.3	335.0	339.9	333.3	316.9	300.5	295.6
70°	442.3	400.2	345.2	312.0	306.7	315.5	326.2	328.4	319.1	305.8	304.0
72.5°	391.8	356.3	308.0	281.4	279.2	285.8	298.3	308.5	307.1	304.0	303.1
75°	333.7	306.2	264.1	243.7	243.7	252.2	261.5	272.6	281.0	286.3	287.6
77.5°	274.8	247.3	216.3	199.0	201.2	212.3	218.9	230.0	239.3	246.4	246.8
80°	206.5	191.5	164.4	155.1	156.0	163.5	172.8	179.5	187.0	193.2	191.5
82.5°	149.4	135.6	117.0	111.7	115.2	118.8	126.3	132.1	134.3	136.1	139.6
85°	86.0	82.0	71.8	68.7	69.6	73.1	77.6	78.9	81.1	80.2	82.0
87.5°	20.8	22.2	20.8	20.4	20.8	19.9	19.1	23.0	23.5	23.9	23.0
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-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)