

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: P198308

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198308
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-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: 3441.7 lumens
Efficiency: N/A
Efficacy: 58.5 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): 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

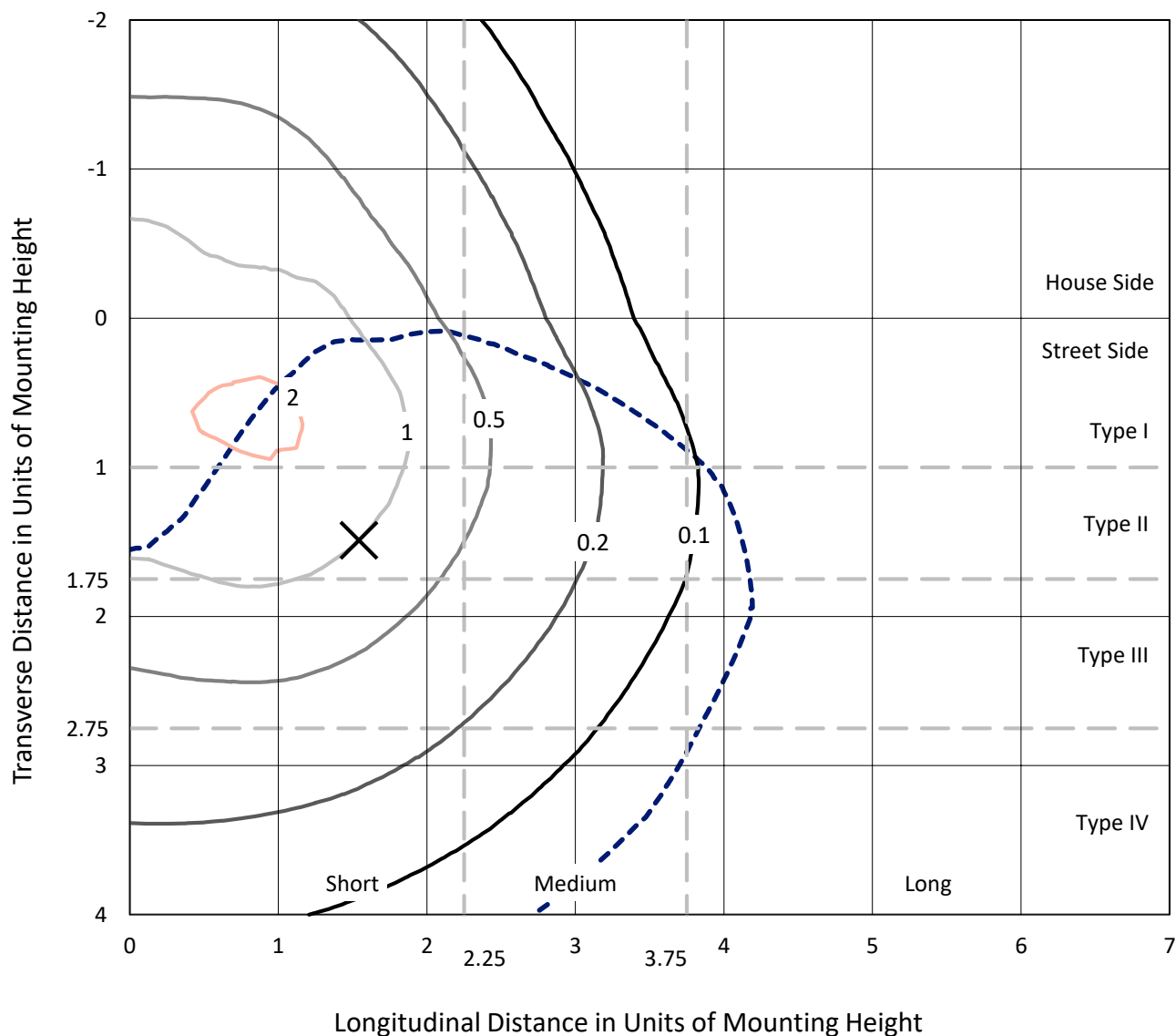


REPORT NUMBER: P198308

CATALOG NUMBER: TT-C2-LED-E1-DL-LWR-LW-8030-UPL

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

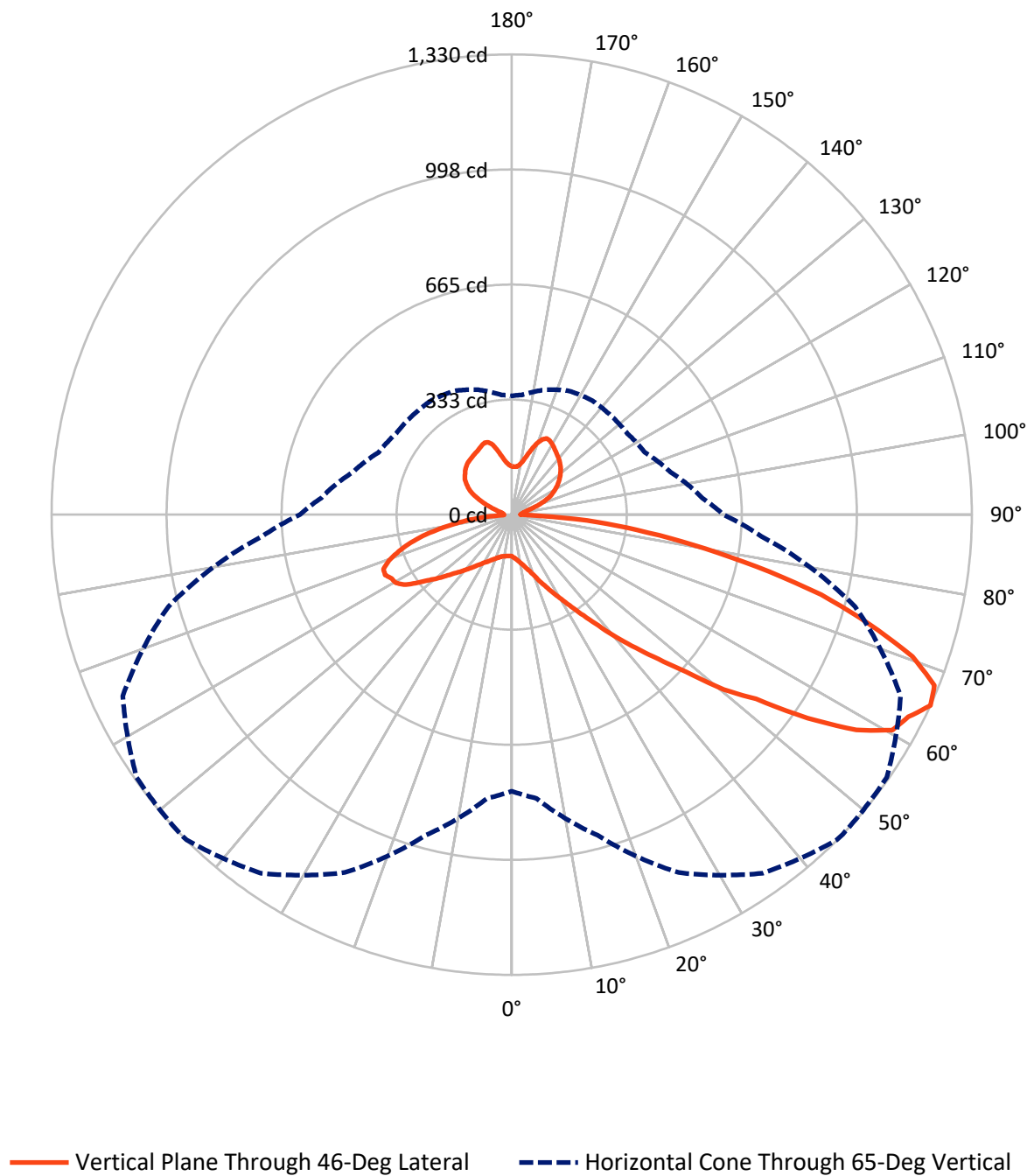


Based on 10 foot mounting height. Maximum calculated value = 2.1 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P198308

CATALOG NUMBER: TT-C2-LED-E1-DL-LWR-LW-8030-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P198308

CATALOG NUMBER: TT-C2-LED-E1-DL-LWR-LW-8030-UPL

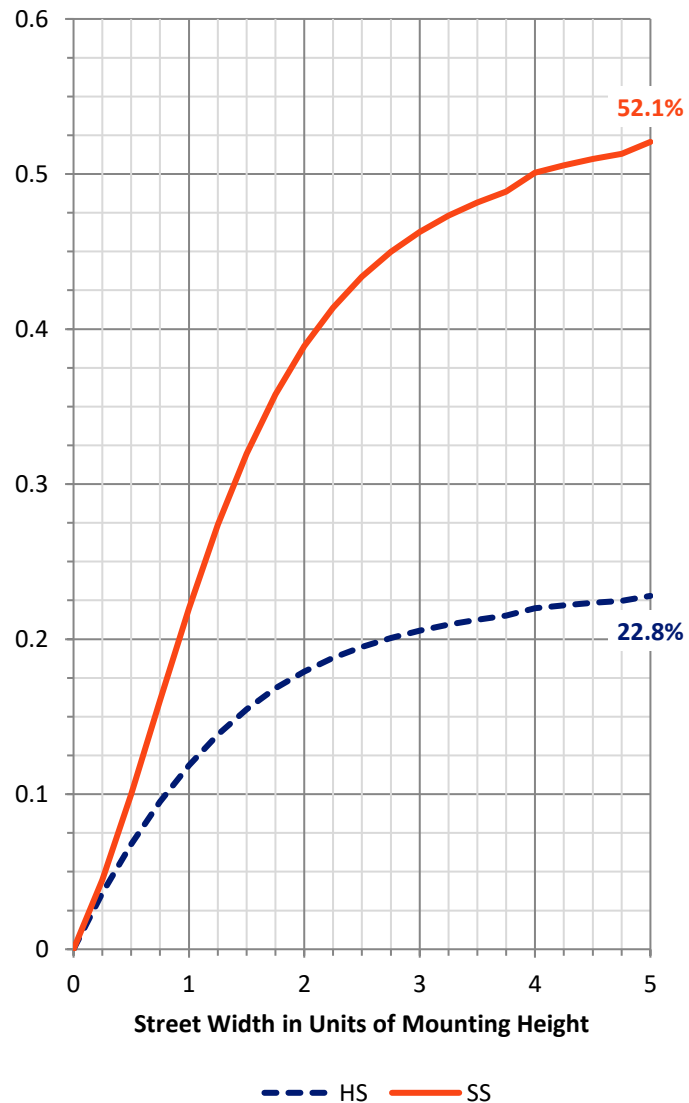
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	803.0	387.3	1190.3
	% Fixture	23.3	11.3	34.6
Street Side	Lumens	1838.8	412.6	2251.4
	% Fixture	53.4	12.0	65.4
Total	Lumens	2641.7	799.9	3441.7
	% Fixture	76.8	23.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.1	0.4
10°-20°	41.4	1.2
20°-30°	87.3	2.5
30°-40°	165.9	4.8
40°-50°	306.4	8.9
50°-60°	537.1	15.6
60°-70°	728.8	21.2
70°-80°	592.5	17.2
80°-90°	170.2	4.9
90°-100°	36.3	1.1
100°-110°	55.2	1.6
110°-120°	110.8	3.2
120°-130°	144.2	4.2
130°-140°	147.9	4.3
140°-150°	133.4	3.9
150°-160°	102.6	3.0
160°-170°	55.1	1.6
170°-180°	14.3	0.4
0°-90°	2641.7	76.8
0°-180°	3441.7	100.0

Coefficient of Utilization



REPORT NUMBER: P198308

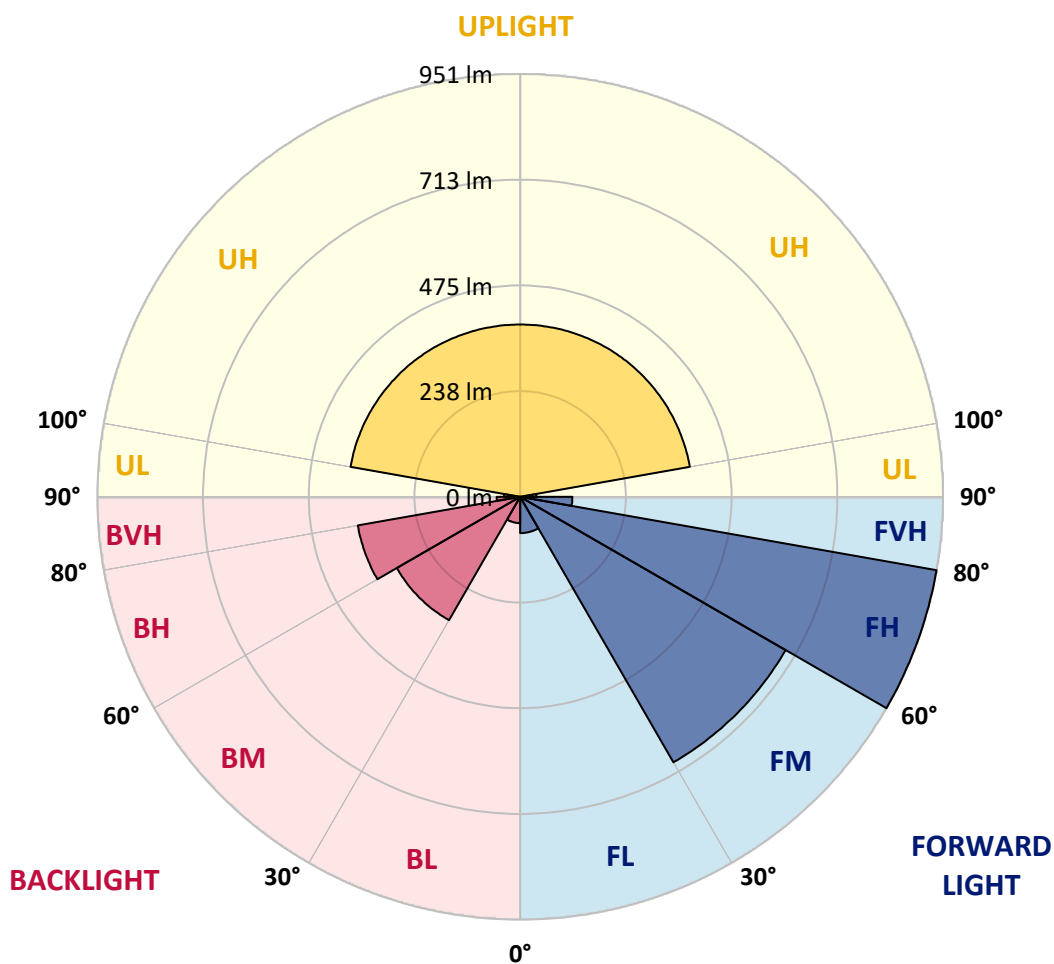
CATALOG NUMBER: TT-C2-LED-E1-DL-LWR-LW-8030-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	81.6	2.4			
FM	(30°-60°)	689.1	20.0			
FH	(60°-80°)	950.7	27.6			G1/1800
FVH	(80°-90°)	117.4	3.4			G2/225
BL	(0°-30°)	59.2	1.7	B0/110		
BM	(30°-60°)	320.3	9.3	B1/1000		
BH	(60°-80°)	370.7	10.8	B1/500		G1/500
BVH	(80°-90°)	52.8	1.5			G1/100
UL	(90°-100°)	36.3	1.1		U2/50	
UH	(100°-180°)	387.3	11.3		U3/500	

BUG Rating: B1-U4-G2

Type IV Short



REPORT NUMBER: P198308

CATALOG NUMBER: TT-C2-LED-E1-DL-LWR-LW-8030-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1
2.5°	124.9	125.4	125.4	125.4	124.9	124.3	124.3	123.8	123.3	123.3	122.7
5°	130.7	130.7	130.7	130.2	129.7	129.1	128.6	128.1	126.5	125.4	124.9
7.5°	137.7	137.7	137.7	137.1	136.1	134.5	135.0	133.4	131.8	129.7	127.5
10°	145.7	146.2	146.7	145.1	144.1	142.5	141.9	139.8	137.7	135.0	132.3
12.5°	155.3	154.7	155.8	154.2	153.1	150.5	149.9	147.3	143.5	140.3	137.1
15°	167.0	167.5	167.0	165.9	163.8	161.1	161.1	157.4	153.1	148.3	143.0
17.5°	183.5	183.5	181.4	180.9	177.1	173.9	172.9	169.7	162.7	156.9	150.5
20°	201.7	200.6	198.0	198.5	195.3	190.5	189.4	184.1	176.6	167.5	159.0
22.5°	222.5	221.4	218.2	217.7	213.4	209.7	209.7	202.2	192.1	180.3	168.6
25°	239.0	239.6	240.1	240.6	237.4	231.6	231.0	223.0	209.7	194.7	179.3
27.5°	259.3	262.0	261.4	264.1	262.5	257.2	256.1	247.6	231.0	213.4	194.2
30°	282.3	286.0	283.9	289.2	289.2	285.5	283.3	274.8	258.2	233.2	210.2
32.5°	307.9	308.4	311.6	318.5	321.7	319.6	318.0	310.0	288.7	260.9	231.0
35°	337.2	334.5	339.9	353.2	358.0	358.6	358.0	348.4	329.2	295.1	257.2
37.5°	366.6	365.5	375.6	389.0	403.4	409.2	406.6	403.4	375.6	332.9	284.4
40°	394.3	399.1	412.4	429.0	451.9	465.8	466.3	459.9	431.1	379.4	316.9
42.5°	421.5	431.1	448.2	477.0	506.3	528.8	526.1	520.8	495.7	433.8	358.6
45°	458.9	468.5	485.5	520.2	567.2	594.9	595.5	605.1	583.7	506.9	415.1
47.5°	493.0	501.5	526.6	573.0	630.7	681.4	679.2	693.1	665.9	574.1	459.4
50°	540.0	537.3	574.1	638.7	717.1	781.1	795.0	801.9	750.7	658.4	506.9
52.5°	581.6	578.9	624.8	711.2	808.9	891.6	884.1	901.2	879.8	772.6	608.3
55°	623.2	623.2	680.8	794.5	923.1	1031.4	1037.8	1066.6	1009.0	858.0	644.0
57.5°	669.1	673.9	755.5	897.4	1054.8	1173.3	1174.4	1177.0	1084.2	892.1	653.6
60°	713.4	726.2	832.4	998.8	1158.9	1256.0	1264.5	1227.7	1113.0	914.0	657.3
62.5°	762.5	775.3	905.4	1083.1	1235.7	1289.6	1286.9	1250.7	1160.5	975.3	704.8
65°	799.3	823.3	959.3	1141.3	1265.1	1329.1	1330.2	1323.8	1240.5	1027.6	724.6
67.5°	836.6	872.9	987.1	1163.7	1285.9	1319.5	1317.9	1293.3	1208.0	998.3	685.1
70°	876.6	903.3	1006.3	1143.4	1223.4	1227.7	1229.3	1194.1	1124.7	938.0	635.5
72.5°	890.5	909.7	976.9	1059.1	1096.5	1095.4	1080.5	1067.1	1008.4	845.7	564.5
75°	866.0	867.6	877.7	913.5	930.5	916.1	924.1	904.4	870.8	726.7	481.3
77.5°	769.9	767.3	738.4	725.6	726.2	723.0	723.5	699.5	685.1	598.7	390.6
80°	600.8	600.3	577.3	541.6	530.4	527.2	530.4	518.6	505.3	451.9	297.2
82.5°	416.7	410.3	400.2	371.9	370.3	363.9	365.5	363.4	357.0	321.2	210.8
85°	202.2	210.8	219.8	217.7	210.8	211.8	218.8	218.2	210.8	184.1	122.7
87.5°	27.7	40.0	41.6	40.0	50.7	63.5	50.7	51.8	41.6	42.7	27.2
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

REPORT NUMBER: P198308

CATALOG NUMBER: TT-C2-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

REPORT NUMBER: P198308

CATALOG NUMBER: TT-C2-LED-E1-DL-LWR-LW-8030-UPL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1
2.5°	122.2	121.7	121.1	120.6	120.1	119.5	119.0	119.0	118.5	118.5	118.5
5°	124.3	123.8	122.7	121.7	121.1	120.1	119.5	119.0	117.9	117.9	117.4
7.5°	126.5	125.9	124.3	122.7	121.7	120.6	120.1	119.5	119.0	117.9	117.9
10°	130.7	129.1	127.0	124.9	122.7	121.7	120.6	120.1	120.1	119.5	119.5
12.5°	135.0	133.4	129.7	127.0	124.3	122.7	121.7	121.7	121.1	121.1	120.6
15°	140.3	138.2	133.9	130.2	127.0	125.4	123.8	123.8	123.8	123.8	123.8
17.5°	146.7	143.5	138.7	134.5	131.3	129.1	127.5	127.5	127.0	127.5	128.1
20°	155.3	151.0	144.6	139.3	135.5	133.9	132.9	132.3	132.3	132.9	133.4
22.5°	163.3	158.5	149.9	144.6	141.4	138.7	138.2	138.2	137.7	138.7	138.7
25°	172.9	167.0	157.9	151.0	146.7	144.6	144.6	144.6	145.1	145.7	144.6
27.5°	185.7	178.7	166.5	157.9	154.2	152.1	151.0	152.1	152.6	153.1	152.1
30°	198.5	191.0	175.5	165.9	160.6	158.5	158.5	159.5	160.1	160.6	159.5
32.5°	216.1	204.9	188.3	176.1	170.2	168.1	168.1	168.6	168.6	169.7	169.1
35°	240.6	225.2	204.4	189.9	181.4	178.2	177.7	178.2	179.3	178.7	180.9
37.5°	264.1	246.5	220.4	204.9	196.3	191.5	189.4	188.9	189.9	190.5	191.0
40°	291.9	270.5	240.1	220.9	210.2	204.9	201.7	201.7	201.2	201.7	199.6
42.5°	327.6	303.6	265.2	240.6	225.7	220.9	215.0	213.4	211.8	212.4	209.2
45°	376.2	345.7	299.9	267.3	247.6	237.4	231.6	226.8	224.6	223.6	220.4
47.5°	409.8	377.2	327.6	292.4	271.6	258.2	249.2	242.8	237.4	234.8	235.3
50°	454.6	412.4	361.2	318.5	297.2	282.3	271.6	260.4	252.4	249.2	250.8
52.5°	539.4	488.7	409.2	359.1	323.3	306.8	295.6	281.7	270.0	264.1	265.7
55°	567.7	516.0	442.9	391.6	359.6	339.3	321.7	305.2	289.7	280.1	280.7
57.5°	570.4	519.2	448.7	406.0	384.2	370.3	353.7	331.9	310.5	297.2	296.1
60°	567.7	515.4	447.7	404.4	389.0	388.4	378.3	359.1	334.0	314.3	312.7
62.5°	605.1	549.0	466.9	413.5	391.6	393.2	395.4	382.0	356.4	332.4	327.1
65°	612.0	552.8	474.9	424.7	408.2	405.0	403.4	394.3	373.5	347.3	343.1
67.5°	577.8	521.8	450.9	407.6	396.4	403.4	409.2	401.2	381.5	361.8	355.9
70°	532.5	481.8	415.6	375.6	369.2	379.9	392.7	395.4	384.2	368.2	366.0
72.5°	471.7	429.0	370.8	338.8	336.1	344.1	359.1	371.4	369.8	366.0	365.0
75°	401.8	368.7	318.0	293.5	293.5	303.6	314.8	328.1	338.3	344.7	346.3
77.5°	330.8	297.7	260.4	239.6	242.2	255.6	263.6	276.9	288.1	296.7	297.2
80°	248.6	230.5	198.0	186.7	187.8	196.9	208.1	216.1	225.2	232.6	230.5
82.5°	179.8	163.3	140.9	134.5	138.7	143.0	152.1	159.0	161.7	163.8	168.1
85°	103.5	98.7	86.4	82.7	83.8	88.0	93.4	95.0	97.6	96.6	98.7
87.5°	25.1	26.7	25.1	24.5	25.1	24.0	22.9	27.7	28.3	28.8	27.7
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

REPORT NUMBER: P198308

CATALOG NUMBER: TT-C2-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)