

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: P198316

Luminaire Tested: **TT-C2-LED-E1-MQ-CG-LWR-LW-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198316
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-C2-LED-E1-MQ-CG-LWR-LW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS AND LumaWatt WIRELESS SENSOR
Light Source: (168) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4601.3 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B2 - U4 - G2

Input Watts (W): 51.4
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



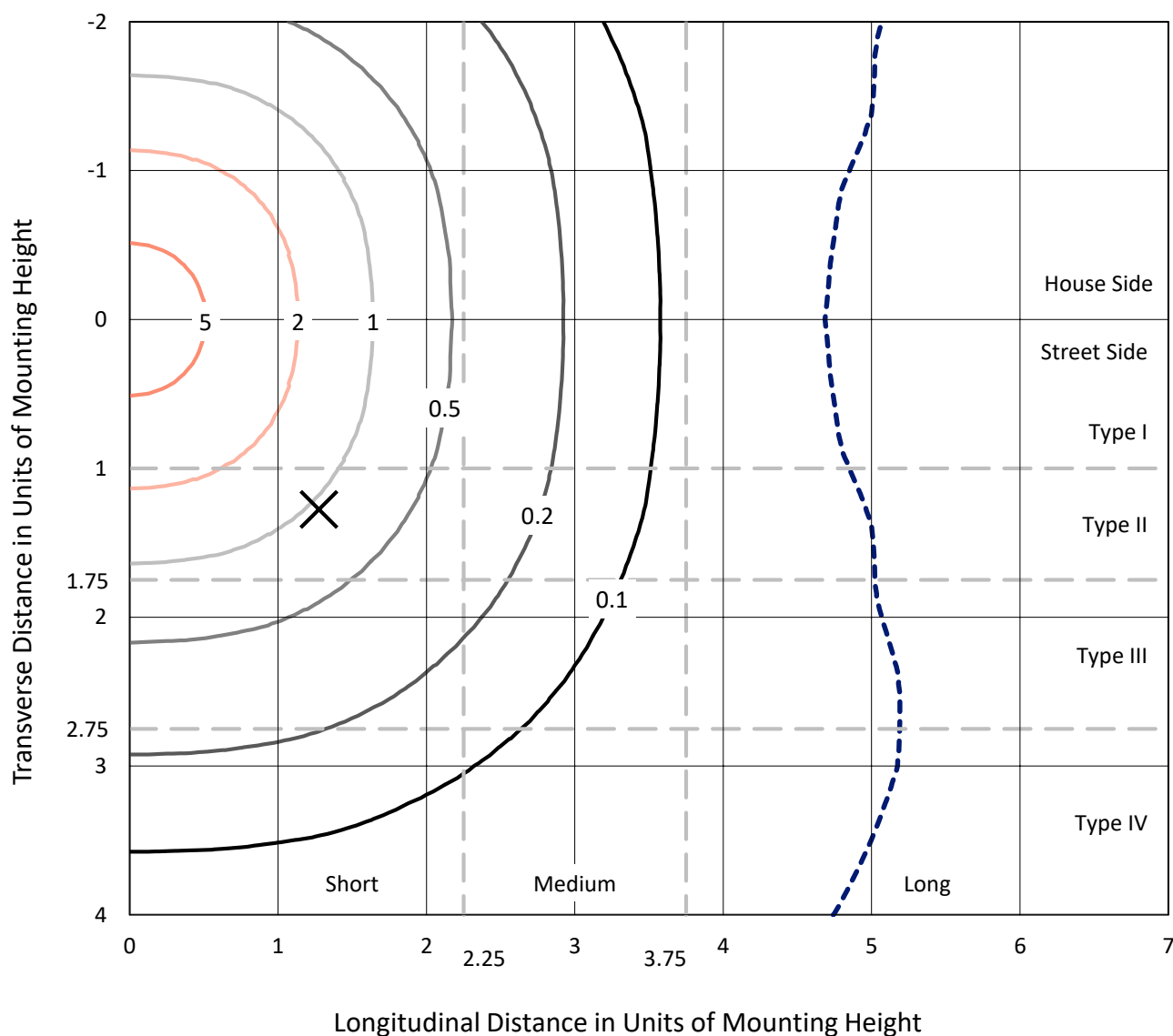
REPORT NUMBER: P198316

CATALOG NUMBER: TT-C2-LED-E1-MQ-CG-LWR-LW-UPL

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

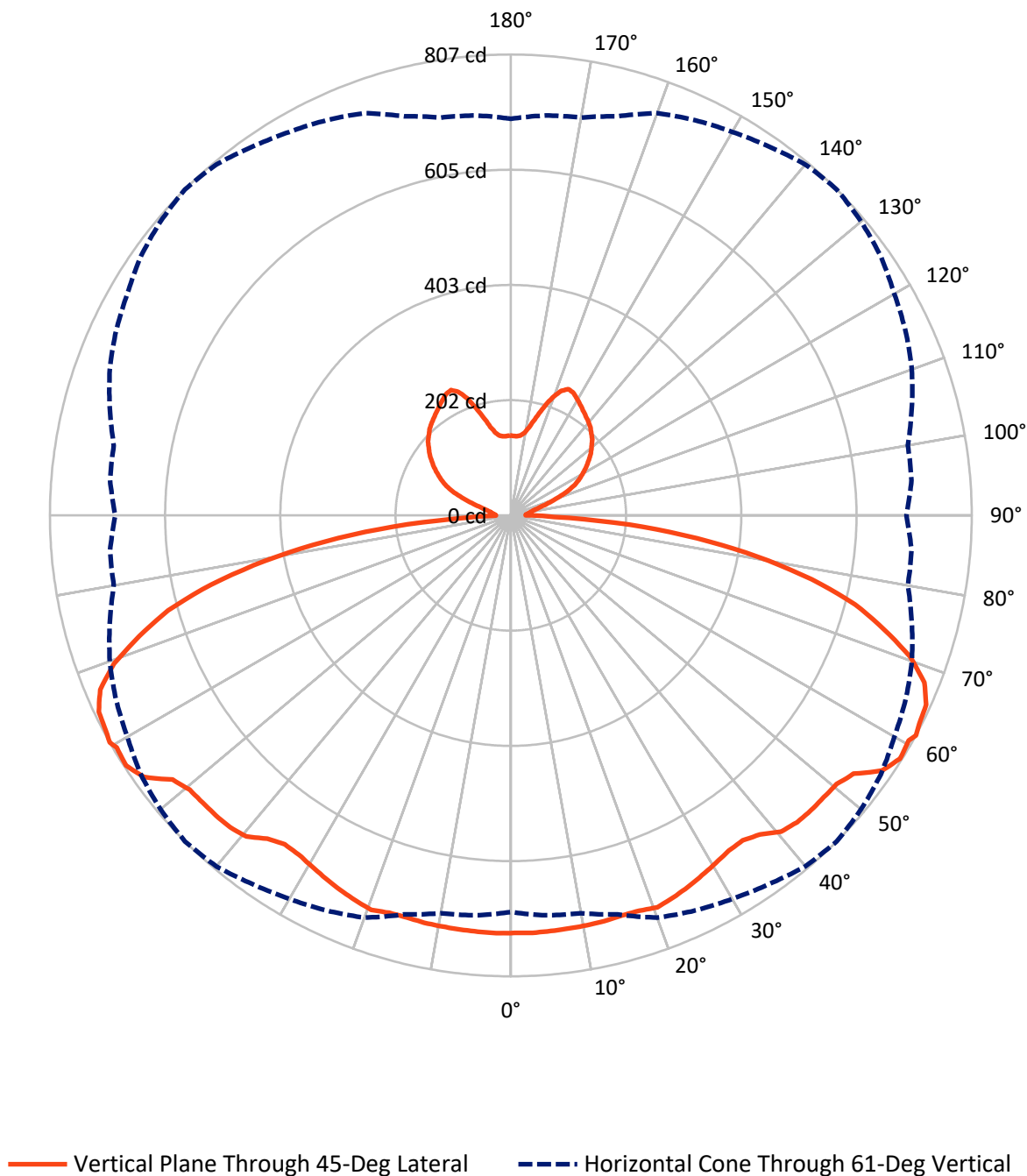


Based on 10 foot mounting height. Maximum calculated value = 7.3 fc
 Type V - Short - Non-Cutoff

REPORT NUMBER: P198316

CATALOG NUMBER: TT-C2-LED-E1-MQ-CG-LWR-LW-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P198316

CATALOG NUMBER: TT-C2-LED-E1-MQ-CG-LWR-LW-UPL

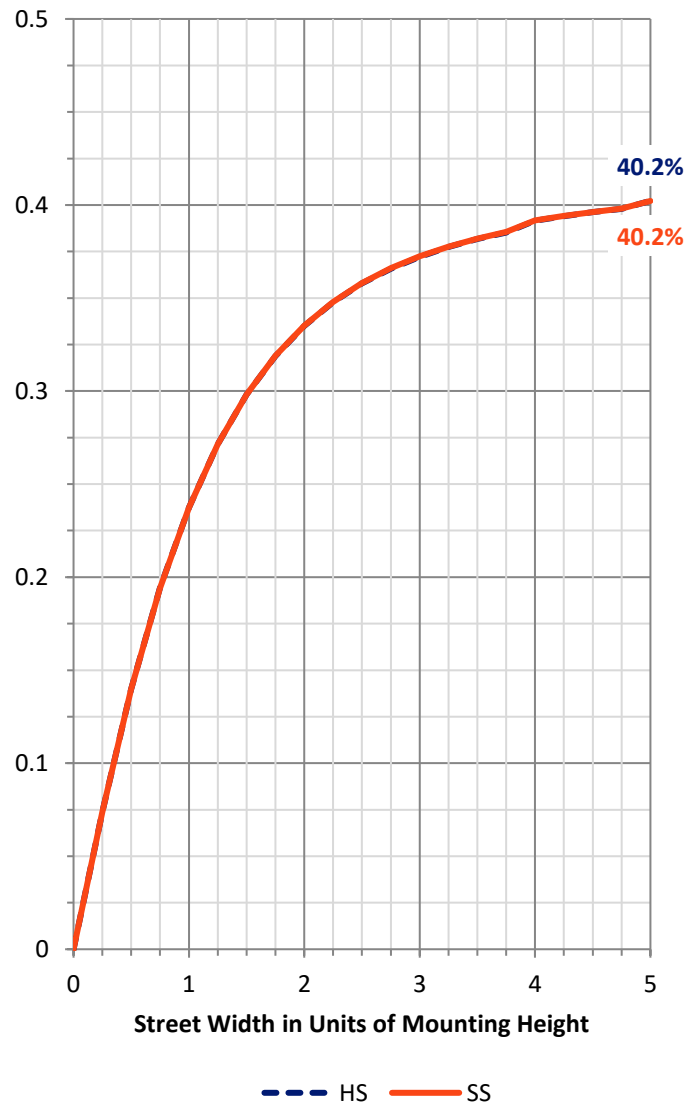
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1888.7	412.0	2300.6
	% Fixture	41.0	9.0	50.0
Street Side	Lumens	1888.7	412.0	2300.6
	% Fixture	41.0	9.0	50.0
Total	Lumens	3777.3	824.0	4601.3
	% Fixture	82.1	17.9	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.7	1.5
10°-20°	206.2	4.5
20°-30°	331.7	7.2
30°-40°	439.4	9.6
40°-50°	554.9	12.1
50°-60°	664.9	14.5
60°-70°	727.1	15.8
70°-80°	582.0	12.6
80°-90°	201.3	4.4
90°-100°	38.3	0.8
100°-110°	59.4	1.3
110°-120°	119.3	2.6
120°-130°	148.7	3.2
130°-140°	153.2	3.3
140°-150°	136.0	3.0
150°-160°	103.7	2.3
160°-170°	51.8	1.1
170°-180°	13.6	0.3
0°-90°	3777.3	82.1
0°-180°	4601.3	100.0

Coefficient of Utilization



REPORT NUMBER: P198316

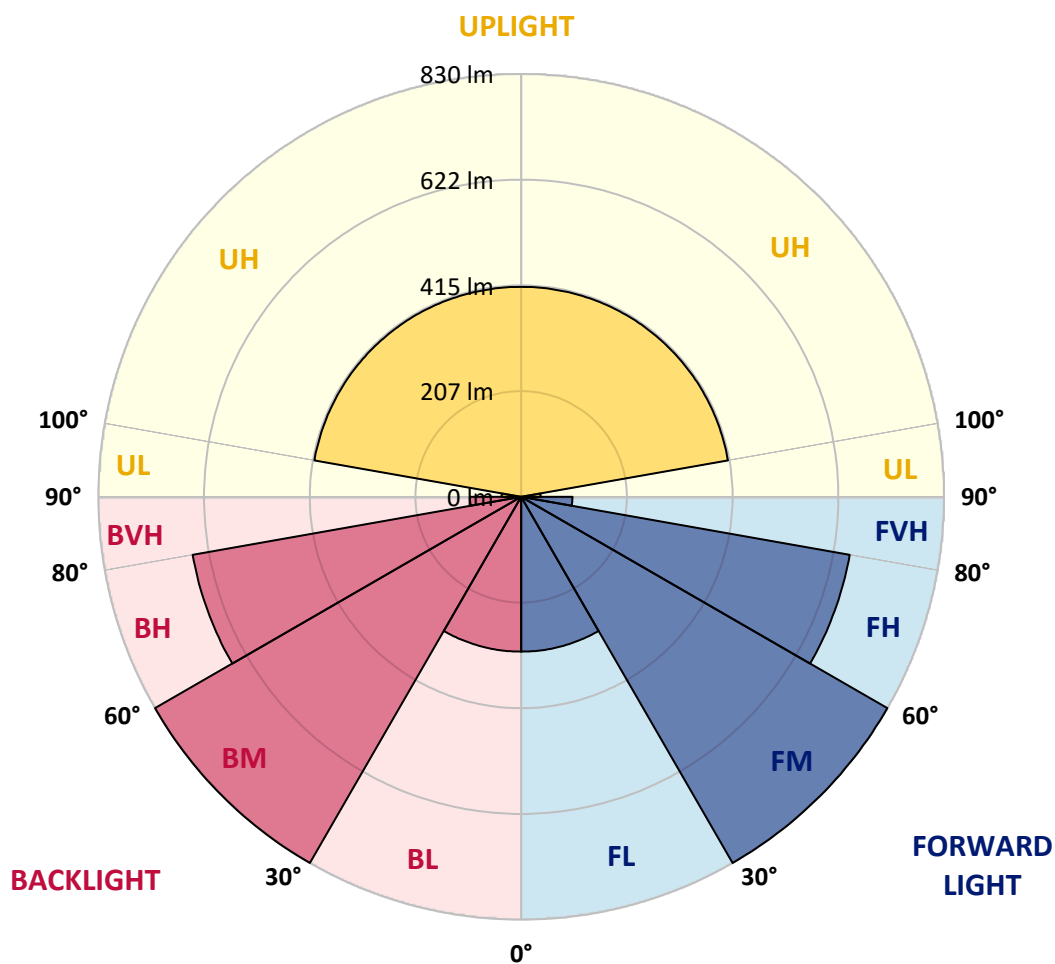
CATALOG NUMBER: TT-C2-LED-E1-MQ-CG-LWR-LW-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	303.8	6.6			
FM	(30°-60°)	829.7	18.0			
FH	(60°-80°)	654.5	14.2			G0/660
FVH	(80°-90°)	100.7	2.2			G2/225
BL	(0°-30°)	303.8	6.6	B1/500		
BM	(30°-60°)	829.7	18.0	B1/1000		
BH	(60°-80°)	654.5	14.2	B2/1000		G0/660
BVH	(80°-90°)	100.7	2.2			G2/225
UL	(90°-100°)	38.3	0.8		U2/50	
UH	(100°-180°)	412.0	9.0		U3/500	

BUG Rating: B2-U4-G2

Type V Short



REPORT NUMBER: P198316

CATALOG NUMBER: TT-C2-LED-E1-MQ-CG-LWR-LW-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0
2.5°	731.6	731.0	731.6	731.6	731.6	731.6	731.6	731.6	731.6	731.6	731.6
5°	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0
7.5°	730.3	730.3	730.3	730.3	730.3	730.3	730.3	730.3	731.0	730.3	731.0
10°	728.9	728.9	728.9	728.9	729.6	729.6	729.6	729.6	729.6	729.6	729.6
12.5°	727.5	727.5	727.5	727.5	728.2	728.2	728.2	728.2	728.9	728.9	728.2
15°	726.1	725.3	725.3	726.1	726.1	726.8	726.8	726.8	727.5	726.8	726.8
17.5°	724.6	723.9	724.6	725.3	725.3	726.1	726.8	726.8	727.5	727.5	727.5
20°	726.8	726.1	726.8	727.5	728.2	729.6	730.3	731.0	731.6	732.4	732.4
22.5°	722.5	721.8	722.5	722.5	723.2	723.9	725.3	726.1	726.8	726.8	726.8
25°	716.2	716.2	716.9	716.9	717.6	718.3	719.1	719.8	719.8	720.5	719.8
27.5°	709.2	709.2	709.9	709.9	711.3	711.3	712.0	712.7	713.4	713.4	713.4
30°	700.8	700.8	701.5	702.2	703.5	704.2	705.0	705.7	706.4	706.4	706.4
32.5°	693.1	692.4	693.1	694.4	696.5	697.9	699.4	700.1	700.1	700.1	700.8
35°	686.7	687.4	688.8	690.2	693.1	694.4	695.8	697.9	698.7	698.7	698.7
37.5°	688.1	688.8	690.9	693.7	697.2	701.5	704.2	707.1	709.2	708.5	707.8
40°	697.2	698.7	702.2	706.4	712.0	717.6	721.8	725.3	727.5	728.2	727.5
42.5°	698.7	700.1	702.8	709.2	715.5	721.8	727.5	731.0	733.8	734.5	733.8
45°	697.9	697.9	702.2	709.2	715.5	721.8	728.9	733.8	736.6	736.6	736.6
47.5°	693.1	695.1	697.9	705.0	713.4	719.8	726.8	731.6	735.2	737.3	735.2
50°	693.1	693.1	697.9	702.8	710.6	721.8	731.6	736.6	740.2	739.4	740.2
52.5°	691.7	695.8	698.7	705.7	719.8	731.0	738.7	745.7	750.6	751.3	750.0
55°	704.2	705.0	711.3	724.6	738.0	750.6	764.7	775.3	783.7	788.7	781.6
57.5°	714.1	710.6	723.2	734.5	750.0	769.0	790.0	798.4	804.8	803.4	805.5
60°	700.8	705.7	714.8	726.8	751.3	770.3	781.6	790.7	798.4	800.5	797.8
61°	694.4	702.8	707.1	723.2	749.3	763.3	775.3	788.0	802.0	806.9	800.5
62.5°	683.8	697.2	695.8	721.8	738.0	754.2	776.7	791.4	801.3	802.7	801.3
65°	684.6	682.5	698.7	717.6	733.8	762.6	781.6	790.7	796.4	799.1	797.8
67.5°	662.1	655.0	674.7	688.1	715.5	738.0	756.3	769.6	778.1	780.9	777.4
70°	610.1	615.0	629.0	649.4	672.0	699.4	716.2	733.8	740.9	741.5	741.5
72.5°	560.1	563.0	577.1	596.1	622.0	645.9	662.8	676.8	683.2	683.8	685.3
75°	494.1	496.9	513.1	530.6	556.7	577.1	589.0	605.9	615.0	622.8	616.5
77.5°	417.5	422.4	435.0	454.1	477.9	489.2	510.3	530.0	536.3	538.4	536.3
80°	331.0	337.4	348.7	373.9	384.5	402.8	423.1	431.6	437.2	438.6	439.3
82.5°	238.3	243.2	255.1	272.7	284.6	299.5	313.5	324.0	330.3	329.0	328.3
85°	140.5	142.0	154.6	166.6	175.8	184.9	196.1	203.9	205.3	208.0	207.3
87.5°	42.2	42.9	48.5	54.8	59.1	63.2	70.3	79.5	81.5	75.9	76.6
90°	36.0	36.0	36.0	36.0	35.0	34.0	31.0	29.0	27.0	26.0	26.0
92.5°	40.0	39.0	39.0	38.0	36.0	34.0	32.0	29.0	27.0	27.0	27.0
95°	44.0	43.0	42.0	41.0	38.0	36.0	34.0	32.0	31.0	30.0	30.0
97.5°	42.0	42.0	41.0	40.0	38.0	37.0	36.0	35.0	34.0	33.0	32.0
100°	45.0	45.0	45.0	44.0	42.0	40.0	39.0	38.0	36.0	36.0	35.0
102.5°	51.0	51.0	50.0	49.0	47.0	46.0	45.0	44.0	42.0	42.0	42.0
105°	60.0	60.0	59.0	57.0	55.0	54.0	53.0	53.0	51.0	52.0	52.0
107.5°	72.0	72.0	72.0	70.0	68.0	67.0	66.0	66.0	66.0	68.0	68.0

REPORT NUMBER: P198316

CATALOG NUMBER: TT-C2-LED-E1-MQ-CG-LWR-LW-UPL

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
110°	86.0	86.0	87.0	89.0	86.0	85.0	85.0	86.0	86.0	87.0	86.0
112.5°	101.0	102.0	104.0	108.0	106.0	107.0	107.0	110.0	108.0	107.0	103.0
115°	121.0	122.0	123.0	128.0	126.0	128.0	127.0	129.0	126.0	124.0	120.0
117.5°	140.0	141.0	141.0	144.0	141.0	141.0	140.0	141.0	138.0	136.0	135.0
120°	152.0	153.0	154.0	155.0	151.0	149.0	147.0	149.0	147.0	147.0	148.0
122.5°	161.0	162.0	163.0	164.0	159.0	154.0	153.0	155.0	156.0	158.0	158.0
125°	169.0	169.0	170.0	172.0	168.0	163.0	160.0	165.0	166.0	168.0	167.0
127.5°	177.0	177.0	179.0	181.0	177.0	171.0	170.0	176.0	177.0	178.0	175.0
130°	187.0	188.0	190.0	191.0	185.0	179.0	179.0	186.0	187.0	186.0	183.0
132.5°	198.0	199.0	200.0	201.0	193.0	186.0	187.0	193.0	195.0	195.0	191.0
135°	210.0	210.0	211.0	209.0	199.0	192.0	193.0	199.0	202.0	201.0	197.0
137.5°	221.0	219.0	217.0	213.0	203.0	197.0	198.0	205.0	207.0	208.0	203.0
140°	229.0	226.0	222.0	216.0	205.0	200.0	201.0	207.0	210.0	213.0	212.0
142.5°	235.0	231.0	225.0	218.0	206.0	201.0	202.0	208.0	212.0	218.0	218.0
145°	235.0	230.0	225.0	218.0	207.0	202.0	204.0	211.0	215.0	223.0	225.0
147.5°	230.0	227.0	223.0	219.0	210.0	207.0	209.0	216.0	220.0	229.0	233.0
150°	224.0	221.0	219.0	220.0	215.0	214.0	216.0	222.0	227.0	235.0	239.0
152.5°	216.0	214.0	216.0	221.0	220.0	220.0	224.0	230.0	234.0	241.0	241.0
155°	208.0	207.0	211.0	219.0	222.0	224.0	229.0	237.0	239.0	243.0	239.0
157.5°	203.0	203.0	207.0	216.0	220.0	224.0	229.0	234.0	232.0	235.0	230.0
160°	199.0	198.0	203.0	210.0	212.0	213.0	216.0	219.0	216.0	219.0	216.0
162.5°	185.0	184.0	188.0	193.0	194.0	193.0	196.0	198.0	195.0	198.0	196.0
165°	169.0	167.0	169.0	173.0	173.0	173.0	175.0	176.0	174.0	177.0	175.0
167.5°	154.0	152.0	153.0	156.0	156.0	155.0	157.0	159.0	157.0	159.0	158.0
170°	142.0	141.0	142.0	145.0	144.0	144.0	146.0	147.0	146.0	147.0	147.0
172.5°	137.0	135.0	136.0	139.0	139.0	138.0	140.0	141.0	140.0	141.0	140.0
175°	136.0	134.0	135.0	137.0	137.0	137.0	138.0	139.0	138.0	139.0	138.0
177.5°	137.0	136.0	136.0	139.0	138.0	138.0	139.0	140.0	139.0	139.0	138.0
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: P198316

CATALOG NUMBER: TT-C2-LED-E1-MQ-CG-LWR-LW-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0
2.5°	731.6	731.6	731.6	731.6	731.6	731.6	731.0	731.6
5°	731.0	731.0	731.0	731.0	731.0	731.0	731.0	731.0
7.5°	731.0	730.3	730.3	730.3	730.3	730.3	730.3	730.3
10°	729.6	729.6	729.6	729.6	728.9	728.9	728.9	728.9
12.5°	728.2	728.2	728.2	728.2	727.5	727.5	727.5	727.5
15°	726.8	726.8	726.8	726.8	726.1	726.1	726.1	726.1
17.5°	727.5	726.8	726.1	726.1	725.3	724.6	724.6	724.6
20°	731.6	731.0	729.6	728.2	727.5	726.8	726.8	726.8
22.5°	726.1	725.3	723.9	723.2	723.2	722.5	721.8	721.8
25°	719.8	718.3	718.3	717.6	717.6	716.2	716.2	715.5
27.5°	712.7	712.0	711.3	710.6	710.6	709.9	709.2	708.5
30°	706.4	705.0	703.5	702.8	702.2	701.5	701.5	701.5
32.5°	700.1	698.7	697.9	695.8	694.4	693.7	693.1	693.1
35°	697.9	695.8	694.4	692.4	690.2	688.8	688.1	686.7
37.5°	706.4	703.5	701.5	697.9	693.1	690.9	688.8	688.1
40°	724.6	721.8	717.6	712.0	706.4	702.2	698.7	697.2
42.5°	731.0	727.5	721.8	716.2	709.2	702.8	700.1	698.7
45°	733.1	729.6	721.8	714.8	708.5	702.8	698.7	697.2
47.5°	731.0	726.1	719.1	713.4	704.2	697.2	694.4	692.4
50°	735.9	731.6	722.5	709.9	702.2	697.9	693.1	692.4
52.5°	745.7	738.0	729.6	720.5	705.7	697.2	694.4	690.9
55°	775.3	764.7	750.0	735.2	726.1	712.7	704.2	704.2
57.5°	797.8	789.3	770.3	750.6	733.8	723.9	711.3	712.0
60°	791.4	780.1	771.0	751.3	727.5	714.1	709.2	700.1
61°	790.7	775.3	762.6	747.2	726.8	705.7	704.2	692.4
62.5°	792.1	778.1	754.2	738.0	722.5	695.1	694.4	683.2
65°	790.7	777.4	765.4	735.2	714.1	702.8	679.0	688.1
67.5°	769.0	757.0	735.2	718.3	686.0	672.0	658.6	658.6
70°	734.5	716.9	695.8	674.7	653.0	629.0	617.1	610.1
72.5°	676.8	662.1	645.3	622.8	596.1	574.2	563.0	558.1
75°	604.5	588.3	573.5	556.7	528.6	510.3	498.3	494.8
77.5°	528.6	514.5	488.5	472.4	453.4	432.3	421.7	417.5
80°	431.6	423.9	405.6	379.5	370.4	344.4	337.4	331.0
82.5°	324.0	315.6	298.7	280.5	269.2	254.4	241.8	240.4
85°	203.9	198.2	187.6	174.3	160.2	151.8	140.5	143.4
87.5°	75.9	72.4	66.1	57.6	51.3	45.7	40.1	42.2
90°	28.0	30.0	32.0	33.0	34.0	34.0	34.0	34.0
92.5°	28.0	30.0	32.0	33.0	35.0	36.0	36.0	36.0
95°	30.0	32.0	34.0	35.0	37.0	38.0	39.0	38.0
97.5°	33.0	34.0	34.0	35.0	36.0	36.0	36.0	36.0
100°	36.0	37.0	38.0	38.0	38.0	38.0	37.0	37.0
102.5°	43.0	44.0	44.0	42.0	42.0	41.0	41.0	41.0
105°	54.0	54.0	53.0	51.0	49.0	48.0	48.0	49.0
107.5°	68.0	68.0	66.0	63.0	60.0	59.0	59.0	60.0

REPORT NUMBER: P198316

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
110°	84.0	83.0	84.0	81.0	78.0	76.0	74.0	75.0
112.5°	102.0	102.0	105.0	103.0	100.0	98.0	95.0	94.0
115°	121.0	123.0	125.0	124.0	123.0	121.0	116.0	113.0
117.5°	138.0	140.0	141.0	139.0	139.0	139.0	133.0	129.0
120°	150.0	151.0	153.0	148.0	148.0	148.0	145.0	142.0
122.5°	159.0	160.0	162.0	156.0	155.0	156.0	153.0	150.0
125°	167.0	167.0	168.0	164.0	163.0	164.0	160.0	158.0
127.5°	176.0	175.0	175.0	173.0	173.0	173.0	166.0	163.0
130°	183.0	182.0	183.0	181.0	184.0	181.0	171.0	169.0
132.5°	190.0	189.0	192.0	189.0	192.0	190.0	179.0	176.0
135°	196.0	197.0	201.0	199.0	199.0	195.0	185.0	184.0
137.5°	203.0	205.0	210.0	207.0	204.0	198.0	191.0	190.0
140°	212.0	214.0	217.0	214.0	209.0	202.0	195.0	195.0
142.5°	220.0	222.0	223.0	217.0	211.0	204.0	198.0	198.0
145°	230.0	230.0	227.0	217.0	211.0	205.0	201.0	202.0
147.5°	239.0	236.0	229.0	218.0	212.0	207.0	204.0	206.0
150°	242.0	240.0	232.0	220.0	214.0	211.0	210.0	211.0
152.5°	242.0	241.0	235.0	223.0	219.0	217.0	215.0	216.0
155°	238.0	237.0	234.0	227.0	224.0	223.0	220.0	219.0
157.5°	228.0	229.0	229.0	226.0	226.0	225.0	222.0	219.0
160°	215.0	217.0	219.0	219.0	221.0	222.0	218.0	215.0
162.5°	196.0	199.0	200.0	201.0	204.0	208.0	207.0	207.0
165°	176.0	179.0	181.0	181.0	185.0	189.0	190.0	192.0
167.5°	160.0	163.0	165.0	164.0	168.0	171.0	172.0	174.0
170°	148.0	150.0	152.0	152.0	155.0	158.0	159.0	160.0
172.5°	141.0	144.0	145.0	144.0	146.0	149.0	149.0	151.0
175°	138.0	140.0	141.0	140.0	141.0	143.0	143.0	144.0
177.5°	138.0	140.0	140.0	138.0	140.0	141.0	141.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

(END OF REPORT)