

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: P198255

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198255
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND SCALED
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C1-LED-E1-MQ-LWR-LW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION WITH LumaWatt WIRELESS SENSOR
Light Source: (168) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4317.3 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B2 - U4 - G1

Input Watts (W): 45.4
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



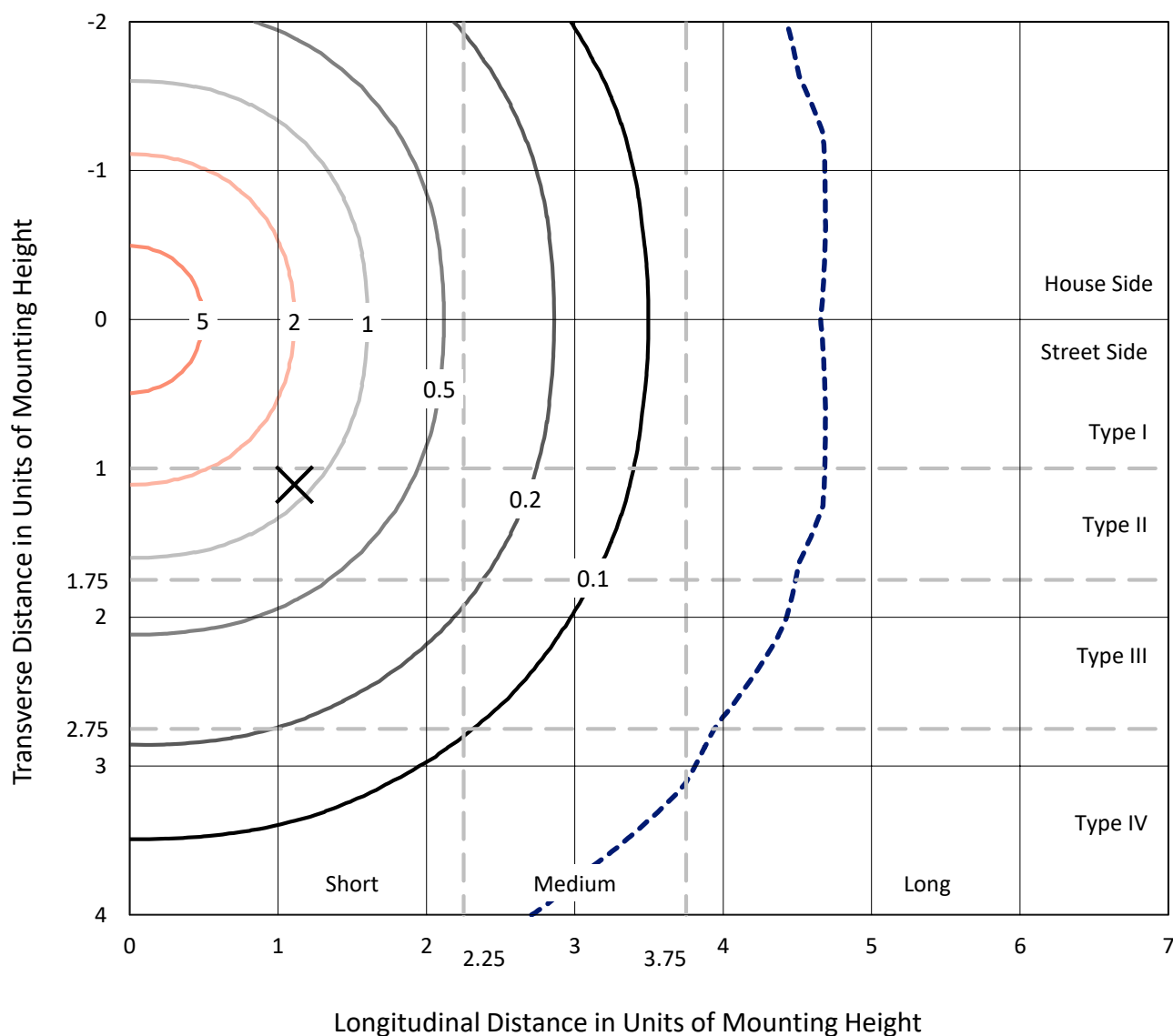
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

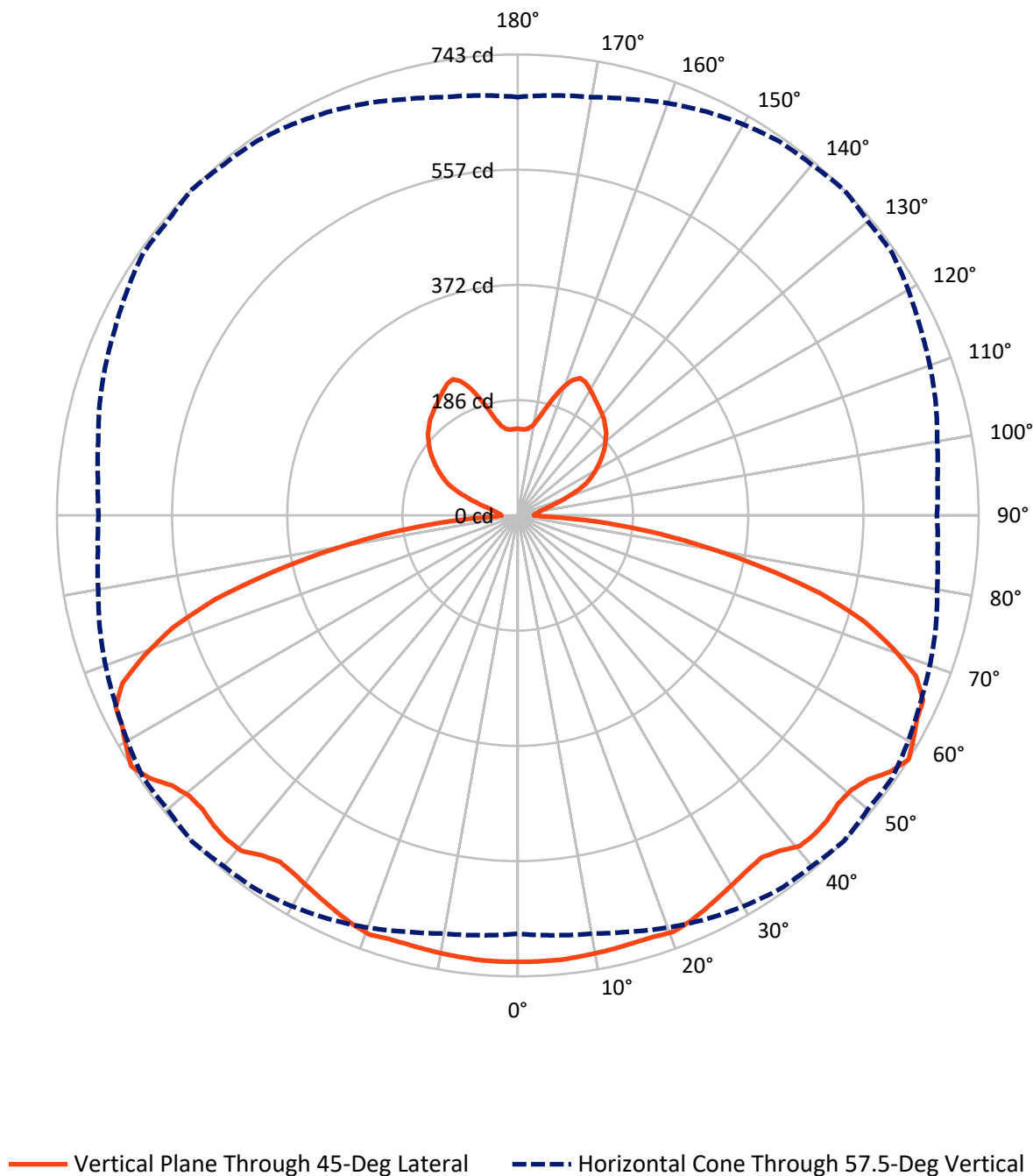


Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type V - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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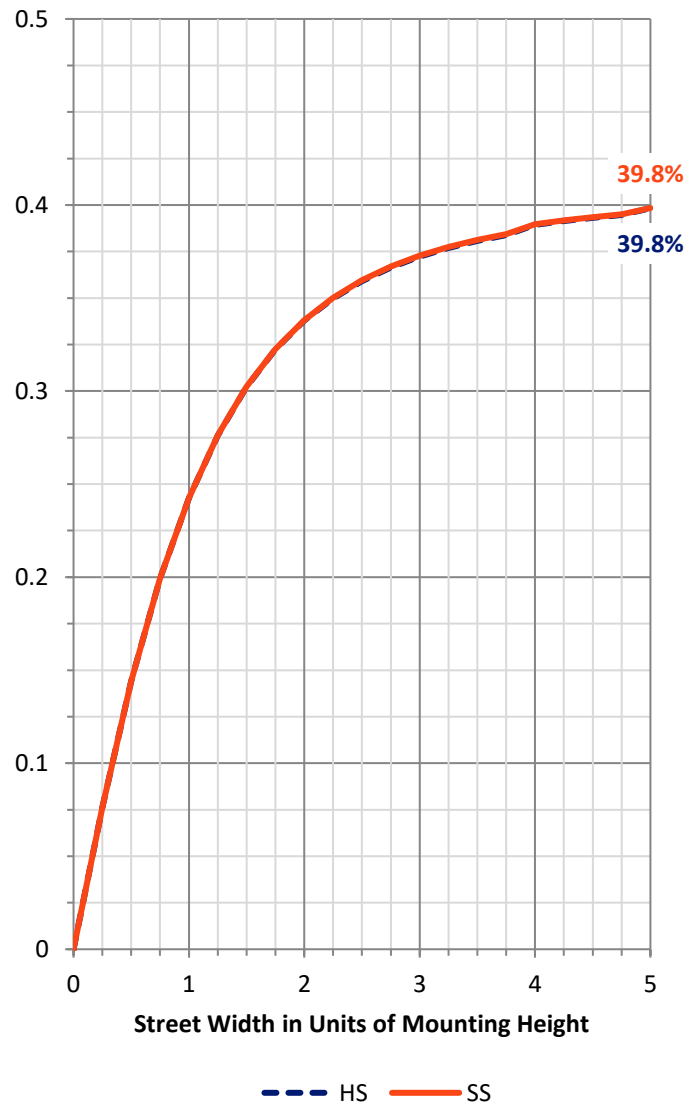
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1746.7	412.0	2158.7
	% Fixture	40.5	9.5	50.0
Street Side	Lumens	1746.7	412.0	2158.7
	% Fixture	40.5	9.5	50.0
Total	Lumens	3493.4	824.0	4317.3
	% Fixture	80.9	19.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.6	1.6
10°-20°	202.3	4.7
20°-30°	324.0	7.5
30°-40°	426.5	9.9
40°-50°	531.2	12.3
50°-60°	625.8	14.5
60°-70°	665.3	15.4
70°-80°	498.9	11.6
80°-90°	150.9	3.5
90°-100°	38.3	0.9
100°-110°	59.4	1.4
110°-120°	119.3	2.8
120°-130°	148.7	3.4
130°-140°	153.2	3.5
140°-150°	136.0	3.2
150°-160°	103.7	2.4
160°-170°	51.8	1.2
170°-180°	13.6	0.3
0°-90°	3493.4	80.9
0°-180°	4317.3	100.0

Coefficient of Utilization



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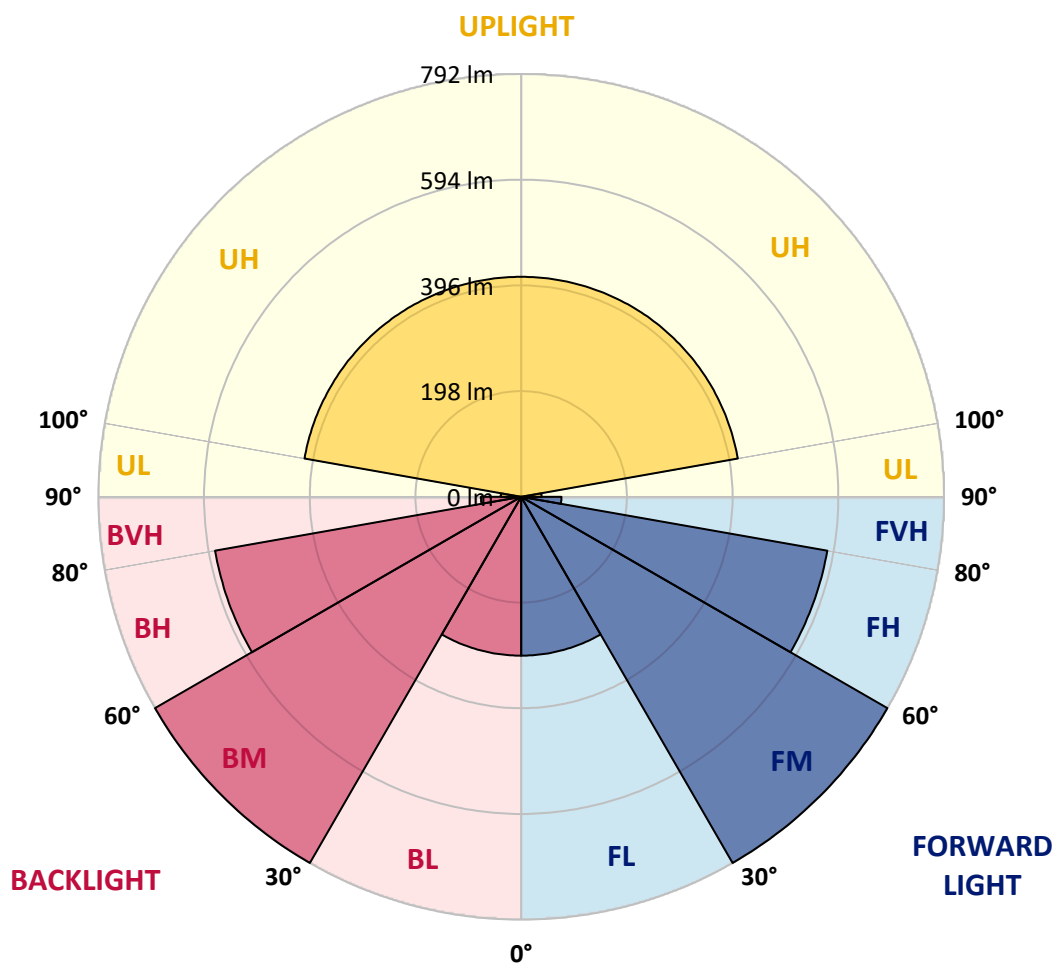
CATALOG NUMBER: TT-C1-LED-E1-MQ-LWR-LW-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	297.4	6.9			
FM	(30°-60°)	791.7	18.3			
FH	(60°-80°)	582.1	13.5			G0/660
FVH	(80°-90°)	75.4	1.7			G1/100
BL	(0°-30°)	297.4	6.9	B1/500		
BM	(30°-60°)	791.7	18.3	B1/1000		
BH	(60°-80°)	582.1	13.5	B2/1000		G0/660
BVH	(80°-90°)	75.4	1.7			G1/100
UL	(90°-100°)	38.3	0.9		U2/50	
UH	(100°-180°)	412.0	9.5		U3/500	

BUG Rating: B2-U4-G1

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7
2.5°	719.0	719.0	719.0	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7
5°	719.0	719.0	719.0	719.0	719.0	719.0	719.7	719.7	719.7	719.7	719.7
7.5°	717.5	717.5	717.5	717.5	717.5	718.2	718.2	718.2	718.2	718.2	718.2
10°	716.0	716.0	716.0	716.0	716.8	716.8	716.8	716.8	716.8	716.8	716.8
12.5°	714.6	714.6	713.8	714.6	714.6	714.6	715.3	715.3	715.3	715.3	715.3
15°	711.7	711.7	712.4	712.4	713.1	713.1	713.1	713.1	713.8	713.8	713.8
17.5°	710.2	710.2	710.9	711.7	711.7	712.4	713.1	713.1	713.8	713.8	713.8
20°	712.4	712.4	712.4	713.1	713.8	714.6	715.3	716.0	716.0	716.8	716.0
22.5°	708.0	708.0	708.0	708.7	708.7	708.7	709.5	710.2	710.2	710.9	710.2
25°	700.0	700.0	700.7	700.7	701.4	701.4	702.2	702.2	702.2	702.9	702.9
27.5°	691.9	691.2	692.7	692.7	693.4	693.4	694.1	694.8	694.8	694.8	695.6
30°	683.2	683.2	683.9	683.9	684.6	685.3	686.1	686.8	686.8	687.5	687.5
32.5°	673.7	674.4	675.1	675.9	676.6	678.0	678.8	679.5	680.2	681.0	680.2
35°	667.1	667.8	668.5	670.0	672.2	673.7	675.1	676.6	677.3	677.3	677.3
37.5°	668.5	669.3	670.7	673.7	677.3	679.5	682.4	684.6	685.3	686.1	686.1
40°	676.6	678.0	680.2	683.9	688.3	691.9	696.3	698.5	700.0	700.7	700.0
42.5°	675.9	678.0	680.2	684.6	689.7	693.4	697.8	700.0	701.4	702.2	701.4
45°	673.7	675.1	677.3	681.7	685.3	690.5	694.8	697.0	699.2	700.0	699.2
47.5°	668.5	668.5	669.3	673.7	678.8	685.3	689.0	692.7	694.8	694.8	694.8
50°	662.0	664.9	666.4	672.2	677.3	683.2	689.7	694.8	695.6	696.3	695.6
52.5°	662.0	662.7	667.8	671.5	681.7	690.5	697.0	702.2	706.5	707.3	707.3
55°	673.7	675.1	678.0	686.8	694.8	708.0	719.0	723.3	726.3	729.2	726.3
57.5°	674.4	679.5	684.6	694.8	707.3	718.2	727.7	735.8	738.0	743.1	737.2
60°	665.6	667.1	672.2	684.6	700.7	712.4	721.2	728.5	735.8	732.8	735.8
62.5°	651.7	655.4	662.7	672.2	685.3	699.2	712.4	714.6	725.5	722.6	727.0
65°	640.8	643.7	651.0	664.9	681.0	689.7	704.3	713.1	712.4	718.2	711.7
67.5°	613.7	615.9	622.5	636.4	651.7	664.9	669.3	683.2	684.6	692.7	685.3
70°	569.2	574.3	583.8	596.9	609.4	620.3	628.4	635.7	640.0	641.5	640.0
72.5°	513.6	521.7	529.0	541.4	553.8	561.1	566.3	576.5	579.4	583.8	582.3
75°	456.7	456.7	464.0	473.5	483.0	487.3	490.3	496.8	500.5	505.6	501.2
77.5°	378.5	382.9	389.4	397.5	396.0	398.2	398.2	401.9	400.4	404.0	407.0
80°	296.6	301.0	306.9	312.7	312.0	306.9	310.5	306.1	304.7	305.4	307.6
82.5°	211.9	214.8	219.9	223.6	223.6	219.9	221.4	217.0	218.5	214.8	217.7
85°	121.3	124.9	128.6	132.2	132.2	130.1	132.2	126.4	127.1	127.1	127.1
87.5°	30.0	32.9	34.3	36.5	35.1	38.7	40.9	37.3	38.0	36.5	38.7
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
110°	86.0	86.0	87.0	89.0	86.0	85.0	85.0	86.0	86.0	87.0	86.0

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
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

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7
2.5°	719.7	719.0	719.7	719.7	719.7	719.7	719.0	719.0
5°	719.7	719.7	719.7	719.0	719.0	719.0	719.0	719.0
7.5°	718.2	718.2	718.2	717.5	717.5	717.5	717.5	717.5
10°	716.8	716.8	716.0	716.0	716.0	716.0	716.0	716.0
12.5°	715.3	715.3	714.6	714.6	714.6	714.6	714.6	713.8
15°	713.8	713.8	713.1	713.1	712.4	712.4	711.7	711.7
17.5°	713.8	713.1	712.4	711.7	711.7	710.9	710.2	710.2
20°	716.0	715.3	714.6	713.8	713.1	712.4	712.4	711.7
22.5°	710.2	709.5	708.7	708.7	708.0	708.0	708.0	707.3
25°	702.9	702.2	702.2	700.7	700.7	700.0	700.0	699.2
27.5°	694.8	694.1	694.1	693.4	692.7	691.9	691.2	691.2
30°	686.8	686.1	686.1	685.3	683.9	683.9	683.2	682.4
32.5°	679.5	679.5	678.8	677.3	675.9	675.1	673.7	673.7
35°	677.3	675.9	674.4	672.2	670.0	668.5	667.8	667.1
37.5°	685.3	683.2	679.5	677.3	674.4	671.5	670.0	668.5
40°	699.2	695.6	691.9	688.3	683.9	680.2	677.3	676.6
42.5°	700.0	697.8	694.1	689.7	684.6	680.2	677.3	676.6
45°	697.8	694.8	690.5	685.3	681.7	676.6	674.4	673.7
47.5°	692.7	689.7	685.3	678.0	672.9	669.3	668.5	668.5
50°	695.6	689.7	682.4	678.0	672.9	667.1	664.9	663.4
52.5°	702.2	696.3	691.9	682.4	671.5	666.4	663.4	661.2
55°	723.3	720.4	707.3	694.1	686.1	679.5	676.6	675.1
57.5°	737.2	727.0	716.0	707.3	697.8	686.8	679.5	675.9
60°	729.9	719.0	713.8	702.2	682.4	670.7	666.4	664.2
62.5°	713.8	713.8	700.0	681.7	674.4	664.2	656.1	653.2
65°	713.1	703.6	689.7	683.2	665.6	650.3	642.2	640.8
67.5°	682.4	669.3	665.6	651.0	636.4	622.5	616.7	613.7
70°	635.7	631.3	620.3	610.8	597.7	583.1	575.0	572.1
72.5°	576.5	569.2	564.1	556.0	543.6	525.3	518.8	515.1
75°	496.1	492.5	492.5	483.7	472.0	461.0	460.3	458.8
77.5°	398.9	400.4	404.0	394.6	398.2	392.4	387.2	383.6
80°	303.2	309.8	310.5	312.7	314.9	306.9	303.2	298.8
82.5°	215.5	219.2	223.6	224.3	225.8	219.9	217.0	212.6
85°	127.1	129.3	133.0	133.0	133.0	127.9	126.4	122.7
87.5°	37.3	37.3	39.5	37.3	37.3	37.3	33.6	35.8
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
110°	84.0	83.0	84.0	81.0	78.0	76.0	74.0	75.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
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)