

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: P198257

Luminaire Tested: **TT-C1-LED-E1-MQ-MS/DIM-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198257
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-MS/DIM-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION WITH DIMMING OCCUPANCY SENSOR
Light Source: (168) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4662.8 lumens
Efficiency: N/A
Efficacy: 102.7 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): 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

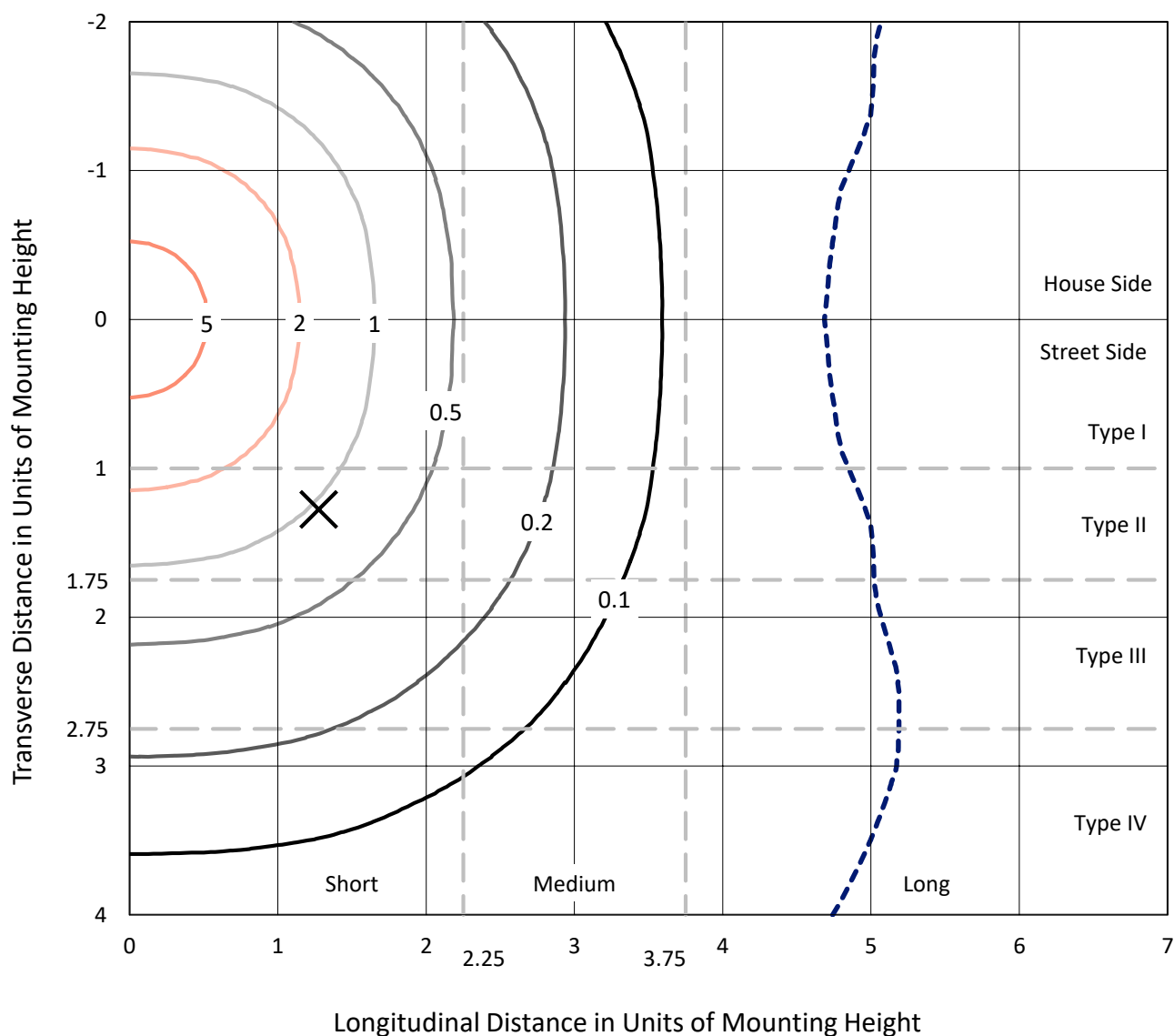


REPORT NUMBER: P198257

CATALOG NUMBER: TT-C1-LED-E1-MQ-MS/DIM-UPL

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

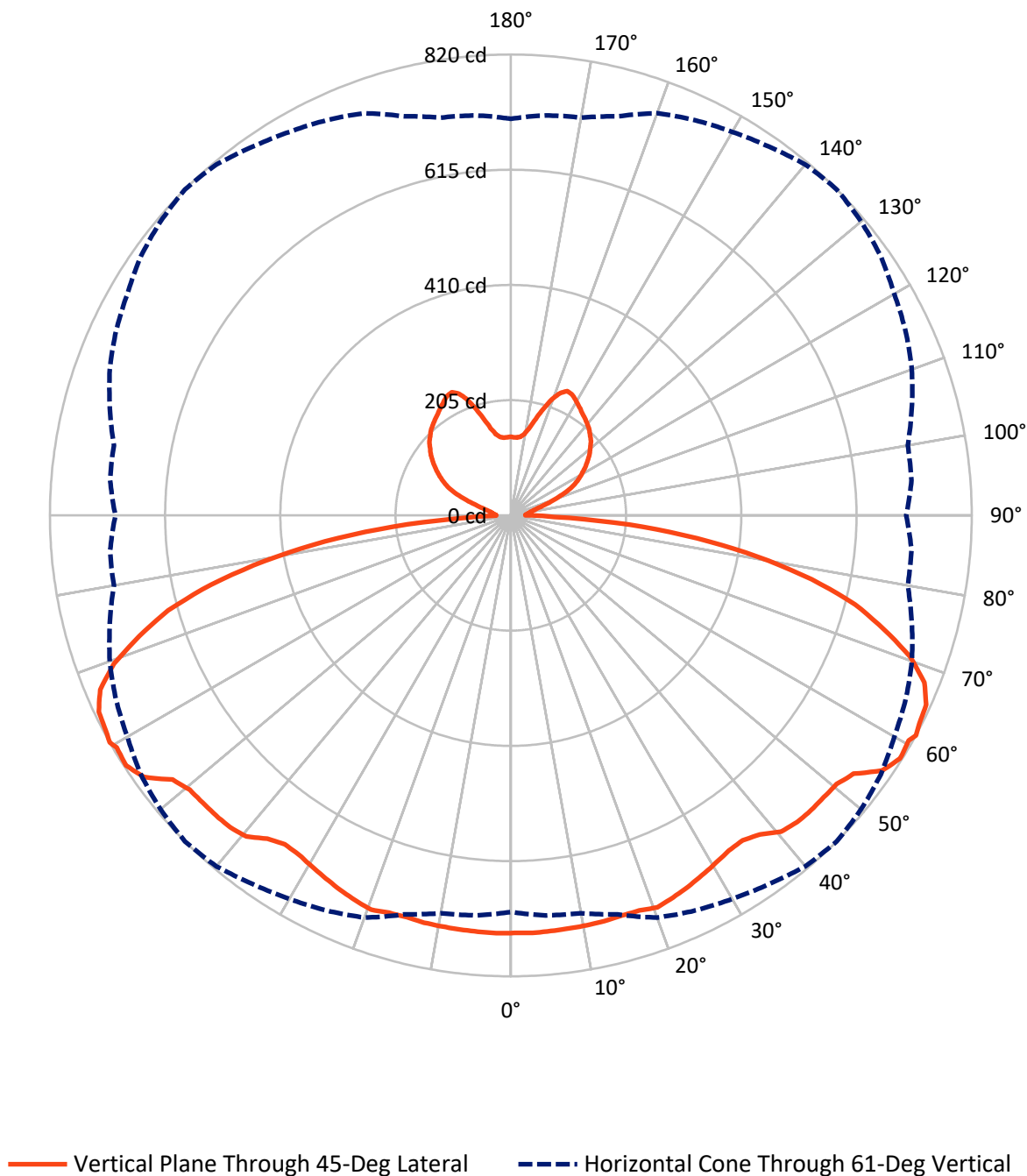


Based on 10 foot mounting height. Maximum calculated value = 7.4 fc
 Type V - Short - Non-Cutoff

REPORT NUMBER: P198257

CATALOG NUMBER: TT-C1-LED-E1-MQ-MS/DIM-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P198257

CATALOG NUMBER: TT-C1-LED-E1-MQ-MS/DIM-UPL

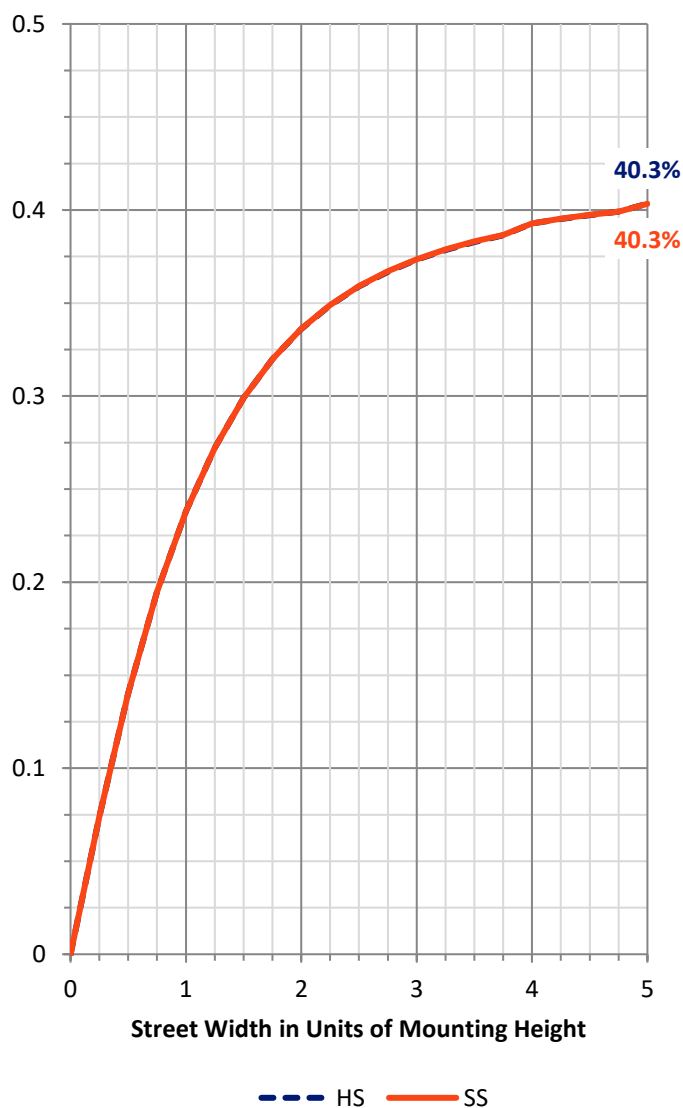
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1919.4	412.0	2331.4
	% Fixture	41.2	8.8	50.0
Street Side	Lumens	1919.4	412.0	2331.4
	% Fixture	41.2	8.8	50.0
Total	Lumens	3838.9	824.0	4662.8
	% Fixture	82.3	17.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	1.5
10°-20°	209.5	4.5
20°-30°	337.1	7.2
30°-40°	446.6	9.6
40°-50°	564.0	12.1
50°-60°	675.8	14.5
60°-70°	738.9	15.8
70°-80°	591.5	12.7
80°-90°	204.5	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	2.9
150°-160°	103.7	2.2
160°-170°	51.8	1.1
170°-180°	13.6	0.3
0°-90°	3838.9	82.3
0°-180°	4662.8	100.0

Coefficient of Utilization



REPORT NUMBER: P198257

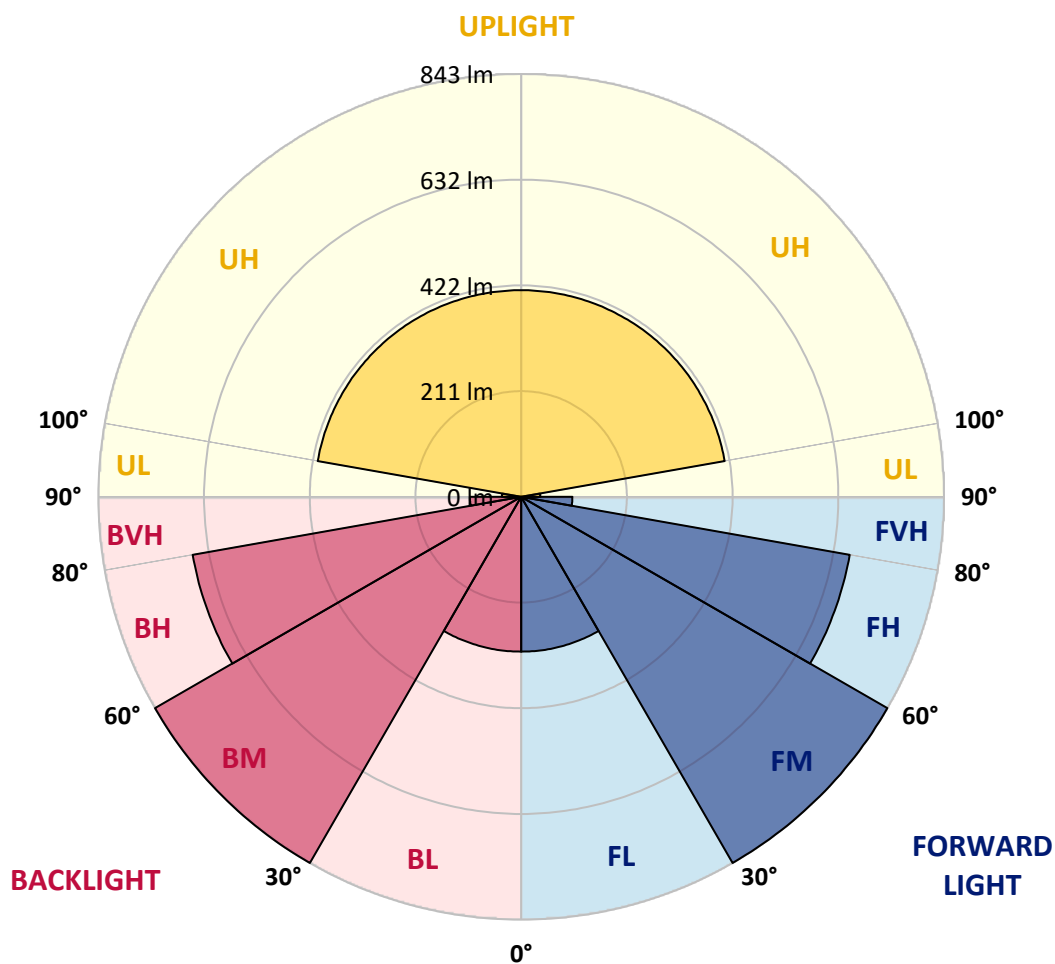
CATALOG NUMBER: TT-C1-LED-E1-MQ-MS/DIM-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	308.8	6.6			
FM	(30°-60°)	843.2	18.1			
FH	(60°-80°)	665.2	14.3			G1/1800
FVH	(80°-90°)	102.3	2.2			G2/225
BL	(0°-30°)	308.8	6.6	B1/500		
BM	(30°-60°)	843.2	18.1	B1/1000		
BH	(60°-80°)	665.2	14.3	B2/1000		G1/1800
BVH	(80°-90°)	102.3	2.2			G2/225
UL	(90°-100°)	38.3	0.8		U2/50	
UH	(100°-180°)	412.0	8.8		U3/500	

BUG Rating: B2-U4-G2

Type V Short



REPORT NUMBER: P198257

CATALOG NUMBER: TT-C1-LED-E1-MQ-MS/DIM-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9
2.5°	743.7	742.9	743.7	743.7	743.7	743.7	743.7	743.7	743.7	743.7	743.7
5°	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9
7.5°	742.2	742.2	742.2	742.2	742.2	742.2	742.2	742.2	742.9	742.2	742.9
10°	740.8	740.8	740.8	740.8	741.5	741.5	741.5	741.5	741.5	741.5	741.5
12.5°	739.3	739.3	739.3	739.3	740.1	740.1	740.1	740.1	740.8	740.8	740.1
15°	737.9	737.2	737.2	737.9	737.9	738.6	738.6	738.6	739.3	738.6	738.6
17.5°	736.5	735.8	736.5	737.2	737.2	737.9	738.6	738.6	739.3	739.3	739.3
20°	738.6	737.9	738.6	739.3	740.1	741.5	742.2	742.9	743.7	744.3	744.3
22.5°	734.4	733.6	734.4	734.4	735.0	735.8	737.2	737.9	738.6	738.6	738.6
25°	727.9	727.9	728.6	728.6	729.3	730.1	730.8	731.5	731.5	732.2	731.5
27.5°	720.8	720.8	721.5	721.5	722.9	722.9	723.6	724.4	725.0	725.0	725.0
30°	712.2	712.2	712.9	713.6	715.1	715.7	716.5	717.2	717.9	717.9	717.9
32.5°	704.3	703.6	704.3	705.7	707.9	709.3	710.8	711.5	711.5	711.5	712.2
35°	697.9	698.6	700.0	701.5	704.3	705.7	707.2	709.3	710.0	710.0	710.0
37.5°	699.3	700.0	702.2	705.1	708.7	712.9	715.7	718.6	720.8	720.1	719.3
40°	708.7	710.0	713.6	717.9	723.6	729.3	733.6	737.2	739.3	740.1	739.3
42.5°	710.0	711.5	714.4	720.8	727.2	733.6	739.3	742.9	745.8	746.5	745.8
45°	709.3	709.3	713.6	720.8	727.2	733.6	740.8	745.8	748.6	748.6	748.6
47.5°	704.3	706.5	709.3	716.5	725.0	731.5	738.6	743.7	747.2	749.4	747.2
50°	704.3	704.3	709.3	714.4	722.2	733.6	743.7	748.6	752.2	751.5	752.2
52.5°	702.9	707.2	710.0	717.2	731.5	742.9	750.7	757.9	762.9	763.6	762.2
55°	715.7	716.5	722.9	736.5	750.1	762.9	777.2	787.9	796.5	801.5	794.4
57.5°	725.8	722.2	735.0	746.5	762.2	781.5	802.9	811.5	817.9	816.5	818.6
60°	712.2	717.2	726.5	738.6	763.6	782.9	794.4	803.6	811.5	813.6	810.8
61°	705.7	714.4	718.6	735.0	761.5	775.8	787.9	800.8	815.0	820.1	813.6
62.5°	695.1	708.7	707.2	733.6	750.1	766.4	789.3	804.4	814.4	815.8	814.4
65°	695.8	693.6	710.0	729.3	745.8	775.1	794.4	803.6	809.3	812.2	810.8
67.5°	672.9	665.8	685.8	699.3	727.2	750.1	768.6	782.2	790.8	793.6	790.0
70°	620.0	625.1	639.3	660.1	682.9	710.8	727.9	745.8	752.9	753.6	753.6
72.5°	569.3	572.2	586.5	605.8	632.2	656.5	673.6	687.9	694.3	695.1	696.5
75°	502.2	505.0	521.5	539.3	565.7	586.5	598.6	615.8	625.1	632.9	626.5
77.5°	424.3	429.3	442.2	461.5	485.7	497.2	518.6	538.6	545.1	547.2	545.1
80°	336.5	342.9	354.3	380.0	390.7	409.3	430.1	438.6	444.3	445.8	446.4
82.5°	242.1	247.2	259.3	277.1	289.3	304.3	318.6	329.3	335.7	334.3	333.6
85°	142.8	144.3	157.2	169.3	178.6	187.8	199.3	207.1	208.6	211.4	210.7
87.5°	42.9	43.5	49.3	55.7	60.0	64.3	71.5	80.7	82.9	77.2	77.9
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: P198257

CATALOG NUMBER: TT-C1-LED-E1-MQ-MS/DIM-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: P198257

CATALOG NUMBER: TT-C1-LED-E1-MQ-MS/DIM-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9
2.5°	743.7	743.7	743.7	743.7	743.7	743.7	742.9	743.7
5°	742.9	742.9	742.9	742.9	742.9	742.9	742.9	742.9
7.5°	742.9	742.2	742.2	742.2	742.2	742.2	742.2	742.2
10°	741.5	741.5	741.5	741.5	740.8	740.8	740.8	740.8
12.5°	740.1	740.1	740.1	740.1	739.3	739.3	739.3	739.3
15°	738.6	738.6	738.6	738.6	737.9	737.9	737.9	737.9
17.5°	739.3	738.6	737.9	737.9	737.2	736.5	736.5	736.5
20°	743.7	742.9	741.5	740.1	739.3	738.6	738.6	738.6
22.5°	737.9	737.2	735.8	735.0	735.0	734.4	733.6	733.6
25°	731.5	730.1	730.1	729.3	729.3	727.9	727.9	727.2
27.5°	724.4	723.6	722.9	722.2	722.2	721.5	720.8	720.1
30°	717.9	716.5	715.1	714.4	713.6	712.9	712.9	712.9
32.5°	711.5	710.0	709.3	707.2	705.7	705.1	704.3	704.3
35°	709.3	707.2	705.7	703.6	701.5	700.0	699.3	697.9
37.5°	717.9	715.1	712.9	709.3	704.3	702.2	700.0	699.3
40°	736.5	733.6	729.3	723.6	717.9	713.6	710.0	708.7
42.5°	742.9	739.3	733.6	727.9	720.8	714.4	711.5	710.0
45°	745.0	741.5	733.6	726.5	720.1	714.4	710.0	708.7
47.5°	742.9	737.9	730.8	725.0	715.7	708.7	705.7	703.6
50°	747.9	743.7	734.4	721.5	713.6	709.3	704.3	703.6
52.5°	757.9	750.1	741.5	732.2	717.2	708.7	705.7	702.2
55°	787.9	777.2	762.2	747.2	737.9	724.4	715.7	715.7
57.5°	810.8	802.2	782.9	762.9	745.8	735.8	722.9	723.6
60°	804.4	792.9	783.6	763.6	739.3	725.8	720.8	711.5
61°	803.6	787.9	775.1	759.4	738.6	717.2	715.7	703.6
62.5°	805.0	790.8	766.4	750.1	734.4	706.5	705.7	694.3
65°	803.6	790.0	777.9	747.2	725.8	714.4	690.0	699.3
67.5°	781.5	769.4	747.2	730.1	697.2	682.9	669.3	669.3
70°	746.5	728.6	707.2	685.8	663.6	639.3	627.2	620.0
72.5°	687.9	672.9	655.8	632.9	605.8	583.6	572.2	567.2
75°	614.3	597.9	582.9	565.7	537.2	518.6	506.5	502.9
77.5°	537.2	522.9	496.5	480.0	460.7	439.3	428.6	424.3
80°	438.6	430.7	412.2	385.7	376.4	350.1	342.9	336.5
82.5°	329.3	320.8	303.6	285.0	273.6	258.6	245.7	244.3
85°	207.1	201.4	190.7	177.2	162.9	154.3	142.8	145.7
87.5°	77.2	73.6	67.1	58.6	52.2	46.4	40.7	42.9
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: P198257

CATALOG NUMBER: TT-C1-LED-E1-MQ-MS/DIM-UPL

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)