

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: P198233

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198233
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-CQ-MS/DIM-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
CONCENTRATED 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: 4719.8 lumens
Efficiency: N/A
Efficacy: 104.0 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

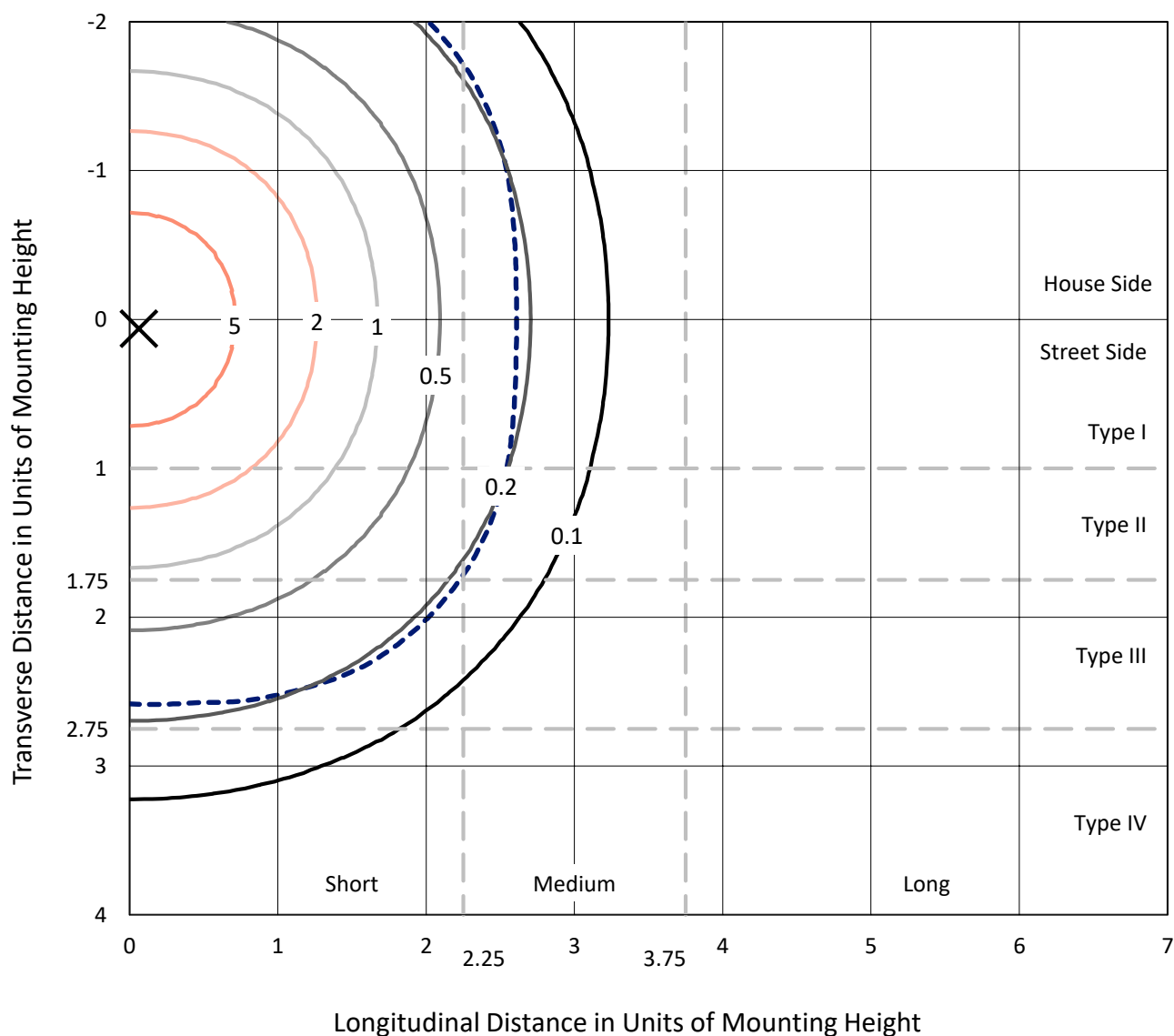


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

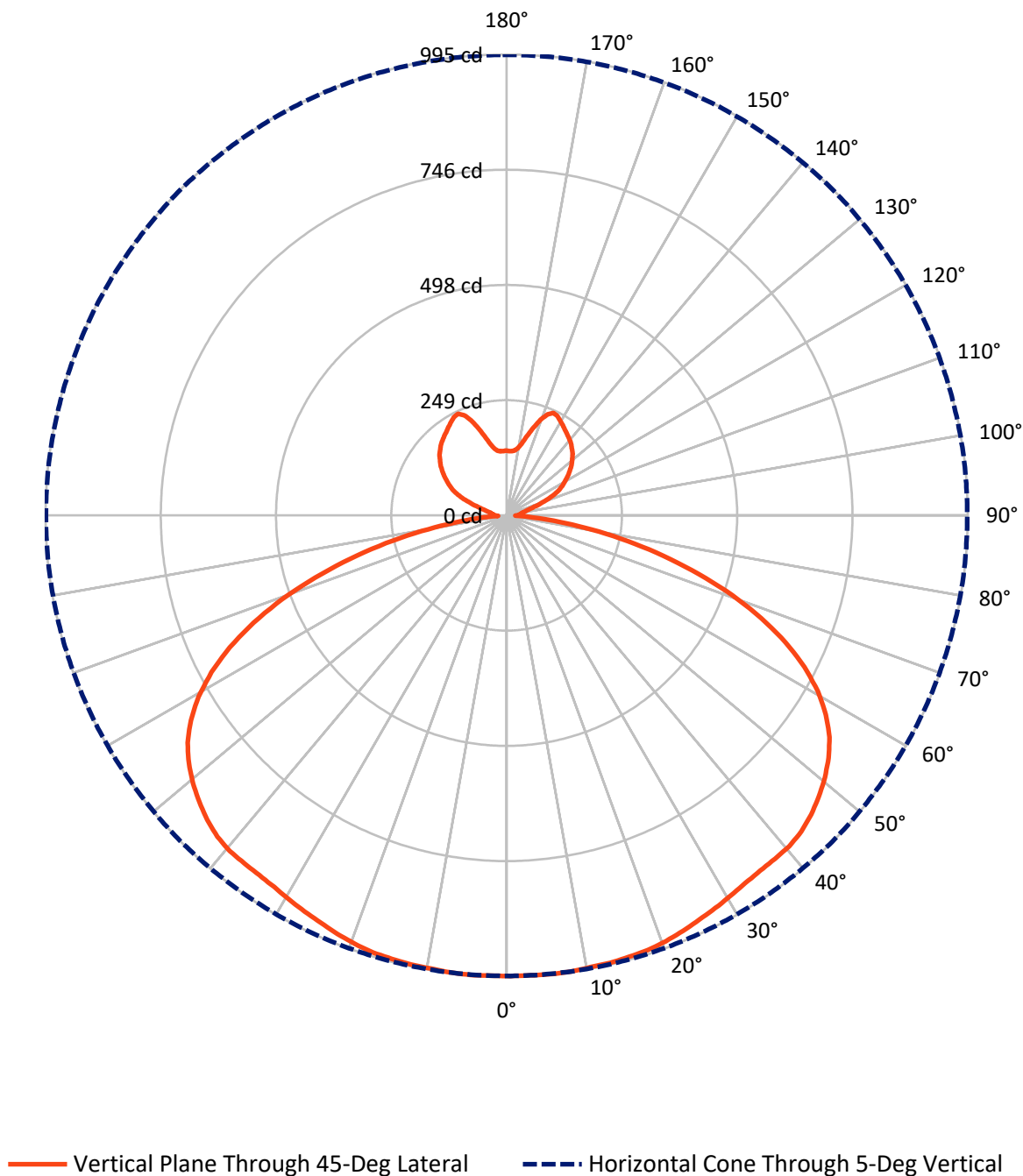


Based on 10 foot mounting height. Maximum calculated value = 9.9 fc
 Type V - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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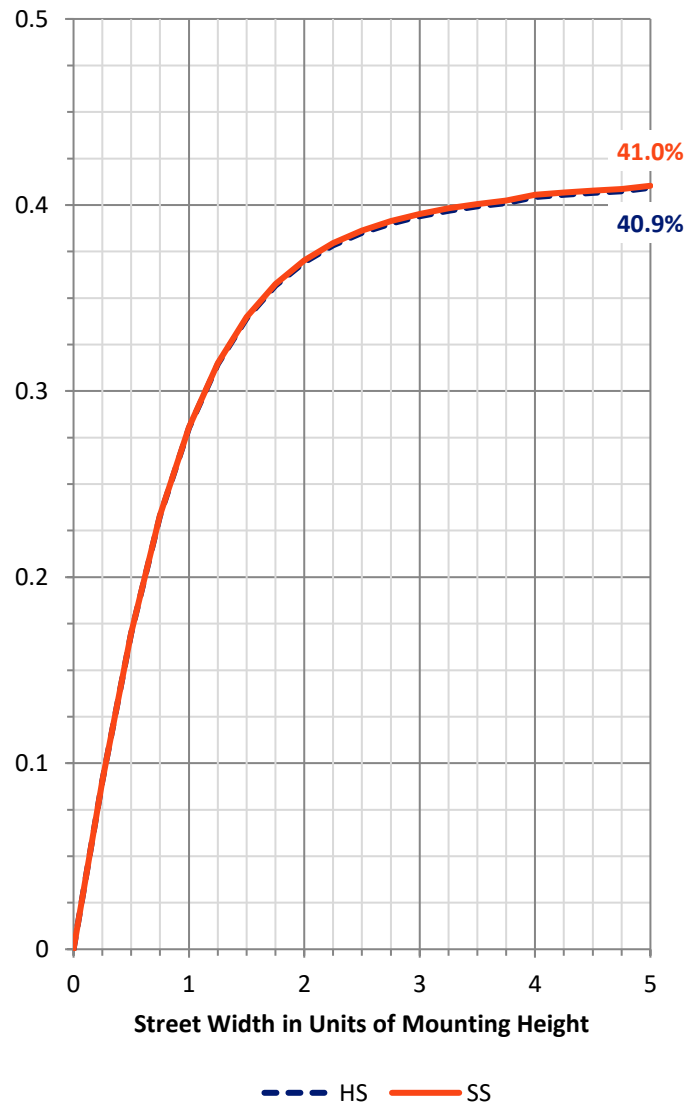
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1947.9	412.0	2359.9
	% Fixture	41.3	8.7	50.0
Street Side	Lumens	1947.9	412.0	2359.9
	% Fixture	41.3	8.7	50.0
Total	Lumens	3895.9	824.0	4719.8
	% Fixture	82.5	17.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.8	2.0
10°-20°	279.7	5.9
20°-30°	446.4	9.5
30°-40°	587.9	12.5
40°-50°	699.4	14.8
50°-60°	731.9	15.5
60°-70°	622.4	13.2
70°-80°	353.7	7.5
80°-90°	79.6	1.7
90°-100°	38.3	0.8
100°-110°	59.4	1.3
110°-120°	119.3	2.5
120°-130°	148.7	3.2
130°-140°	153.2	3.2
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°	3895.9	82.5
0°-180°	4719.8	100.0

Coefficient of Utilization



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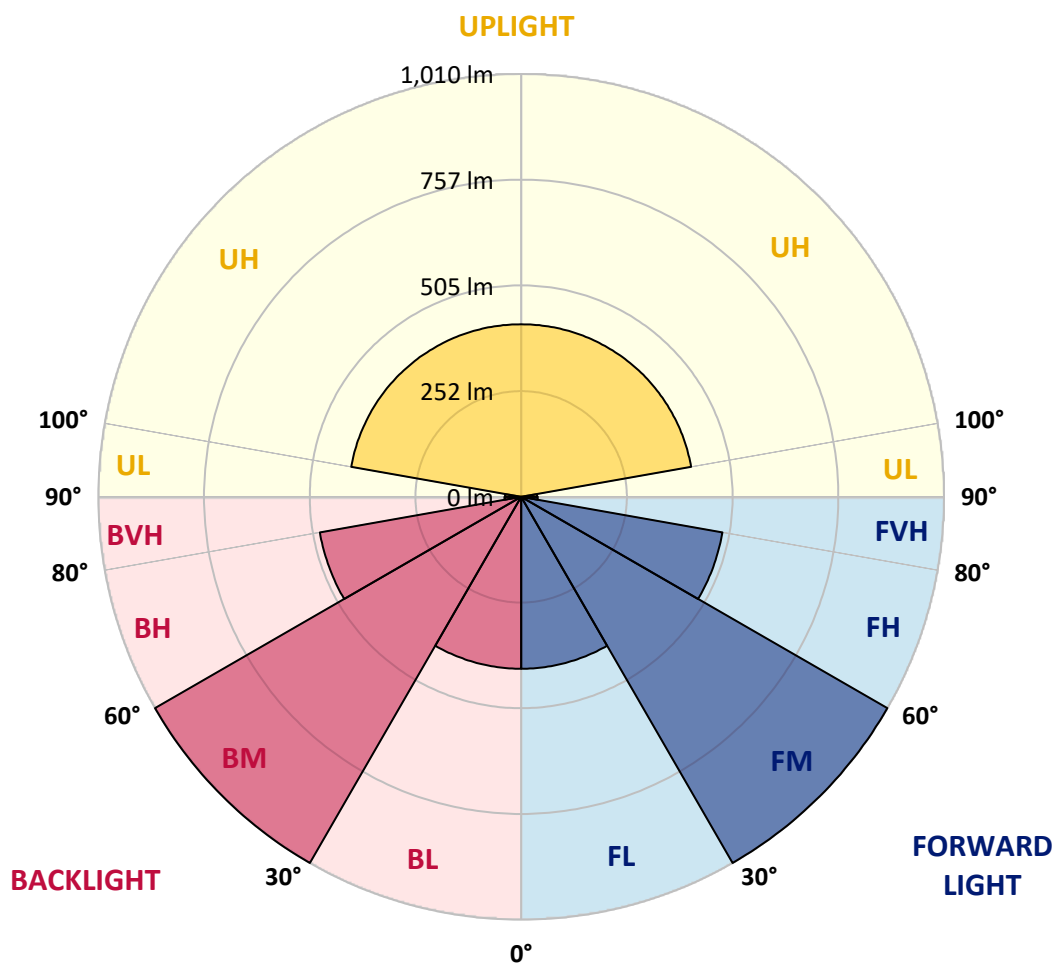
CATALOG NUMBER: TT-C1-LED-E1-CQ-MS/DIM-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	410.4	8.7			
FM	(30°-60°)	1009.6	21.4			
FH	(60°-80°)	488.1	10.3			G0/660
FVH	(80°-90°)	39.8	0.8			G1/100
BL	(0°-30°)	410.4	8.7	B1/500		
BM	(30°-60°)	1009.6	21.4	B2/2500		
BH	(60°-80°)	488.1	10.3	B1/500		G0/660
BVH	(80°-90°)	39.8	0.8			G1/100
UL	(90°-100°)	38.3	0.8		U2/50	
UH	(100°-180°)	412.0	8.7		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°	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2
2.5°	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2
5°	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2	995.0	994.2
7.5°	993.5	993.5	993.5	993.5	994.2	993.5	993.5	994.2	994.2	994.2	994.2
10°	991.9	991.2	991.2	991.9	991.9	991.9	991.9	991.9	992.7	991.9	991.9
12.5°	989.6	988.9	989.6	989.6	989.6	990.4	990.4	990.4	991.2	991.2	990.4
15°	987.3	987.3	987.3	987.3	987.3	988.1	988.1	988.9	988.9	988.9	988.9
17.5°	984.3	984.3	984.3	985.0	985.0	985.8	985.8	985.8	986.6	986.6	986.6
20°	978.9	978.1	978.9	978.9	979.7	980.4	980.4	981.2	981.2	981.2	981.2
22.5°	971.2	971.2	972.0	972.0	972.8	973.5	973.5	974.3	974.3	974.3	974.3
25°	963.6	964.3	964.3	965.1	965.1	965.9	966.6	966.6	966.6	966.6	966.6
27.5°	955.9	956.7	956.7	956.7	957.4	958.2	959.0	959.7	960.5	959.7	959.7
30°	947.5	947.5	948.2	949.0	949.8	950.5	952.1	952.8	953.6	952.8	952.8
32.5°	938.2	939.0	939.8	940.5	942.1	943.6	945.2	945.9	946.7	945.9	945.9
35°	931.3	931.3	932.9	934.4	935.9	938.2	939.8	941.3	942.8	942.1	941.3
37.5°	924.4	924.4	926.0	928.3	931.3	934.4	937.5	939.8	940.5	940.5	939.8
40°	916.0	916.8	918.3	922.1	926.7	930.6	934.4	937.5	939.0	939.0	937.5
42.5°	906.8	907.6	909.9	913.7	919.1	923.7	928.3	930.6	932.9	932.9	931.3
45°	893.7	894.5	897.6	901.4	906.8	911.4	916.8	919.1	922.1	921.4	920.6
47.5°	876.9	877.6	880.7	884.5	889.9	895.3	900.7	904.5	906.8	906.8	906.0
50°	856.2	856.9	860.0	863.8	870.7	876.9	882.2	886.1	889.9	889.9	889.1
52.5°	830.1	831.6	833.9	839.3	847.0	853.9	860.8	866.9	869.2	870.0	869.2
55°	797.9	799.4	802.5	808.6	817.0	825.5	833.1	840.0	843.1	845.4	843.9
57.5°	760.3	761.8	765.6	772.5	781.7	790.2	800.2	807.8	810.1	812.4	811.7
60°	715.8	718.1	721.9	729.6	738.8	748.0	757.2	766.4	768.7	771.8	770.2
62.5°	663.6	665.9	669.7	678.2	688.1	696.6	707.3	715.8	718.1	721.1	720.4
65°	603.8	606.1	609.9	619.1	628.3	637.5	647.5	656.7	659.0	662.1	661.3
67.5°	535.5	537.8	541.6	552.4	561.6	570.8	579.2	588.4	590.0	593.0	592.3
70°	463.4	466.4	469.5	479.5	487.9	495.6	504.8	512.5	515.5	517.1	515.5
72.5°	391.3	393.6	396.6	403.5	409.7	416.6	425.8	431.1	433.4	434.2	434.2
75°	316.8	319.1	319.1	326.8	331.4	335.3	342.9	346.8	348.3	349.8	349.8
77.5°	246.3	244.7	246.3	249.3	252.4	255.5	260.1	262.4	263.9	267.0	265.4
80°	172.6	173.4	174.1	176.4	178.0	178.7	181.8	182.6	183.4	186.4	184.9
82.5°	111.2	109.7	111.2	110.5	112.0	109.7	111.2	113.5	112.0	113.5	114.3
85°	58.3	56.0	56.0	56.8	57.5	56.0	56.8	56.0	56.0	57.5	56.8
87.5°	18.4	17.6	18.4	17.6	18.4	17.6	18.4	19.2	18.4	18.4	19.2
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-CQ-MS/DIM-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-CQ-MS/DIM-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2
2.5°	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2
5°	994.2	994.2	994.2	994.2	994.2	994.2	994.2	994.2
7.5°	993.5	993.5	993.5	993.5	993.5	993.5	992.7	993.5
10°	991.9	991.9	991.9	991.9	991.2	991.2	991.2	991.2
12.5°	990.4	990.4	989.6	989.6	989.6	989.6	988.9	988.9
15°	988.9	988.1	988.1	987.3	987.3	987.3	986.6	987.3
17.5°	986.6	985.8	985.8	985.0	985.0	984.3	984.3	984.3
20°	981.2	980.4	980.4	979.7	979.7	978.9	978.1	978.1
22.5°	973.5	973.5	973.5	972.8	972.0	972.0	971.2	971.2
25°	966.6	965.9	965.9	965.1	964.3	964.3	963.6	963.6
27.5°	959.7	959.0	958.2	956.7	956.7	955.9	955.1	954.4
30°	952.1	950.5	949.0	948.2	947.5	945.9	945.2	944.4
32.5°	944.4	942.8	941.3	939.8	937.5	936.7	935.2	935.2
35°	939.8	937.5	935.2	932.1	929.8	927.5	926.0	925.2
37.5°	937.5	934.4	930.6	926.7	922.9	919.8	917.5	917.5
40°	934.4	930.6	926.0	920.6	916.0	912.2	909.9	909.1
42.5°	928.3	924.4	918.3	913.7	907.6	903.7	900.7	899.9
45°	917.5	913.7	908.3	902.2	896.1	891.4	888.4	887.6
47.5°	903.7	899.1	893.0	886.8	880.7	875.3	872.3	871.5
50°	886.1	881.5	875.3	869.2	862.3	856.9	853.1	853.1
52.5°	866.1	860.8	853.9	847.0	839.3	833.9	830.1	829.3
55°	840.0	833.9	827.0	819.3	810.9	804.8	800.2	799.4
57.5°	807.8	800.9	793.3	784.8	776.4	769.5	764.1	763.3
60°	767.2	759.5	751.8	743.4	734.2	726.5	721.1	719.6
62.5°	717.3	708.9	700.4	692.8	682.8	675.1	669.7	668.2
65°	658.2	651.3	642.9	633.7	622.9	615.3	609.9	609.1
67.5°	589.2	582.3	573.8	565.4	554.7	547.8	542.4	540.9
70°	513.2	507.1	500.2	491.8	482.5	475.6	470.3	469.5
72.5°	432.7	427.3	421.2	415.0	405.8	400.5	395.9	395.1
75°	349.8	344.5	339.9	335.3	328.3	324.5	319.9	319.9
77.5°	265.4	263.9	260.8	255.5	251.6	248.6	246.3	244.7
80°	185.7	184.1	182.6	179.5	177.2	176.4	174.9	173.4
82.5°	113.5	112.8	113.5	112.0	111.2	111.2	110.5	108.9
85°	57.5	58.3	57.5	56.8	56.8	56.8	56.8	56.0
87.5°	18.4	19.2	18.4	17.6	17.6	17.6	17.6	16.9
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
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)