

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: P198319

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198319
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-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: (168) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5053.3 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Semi-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



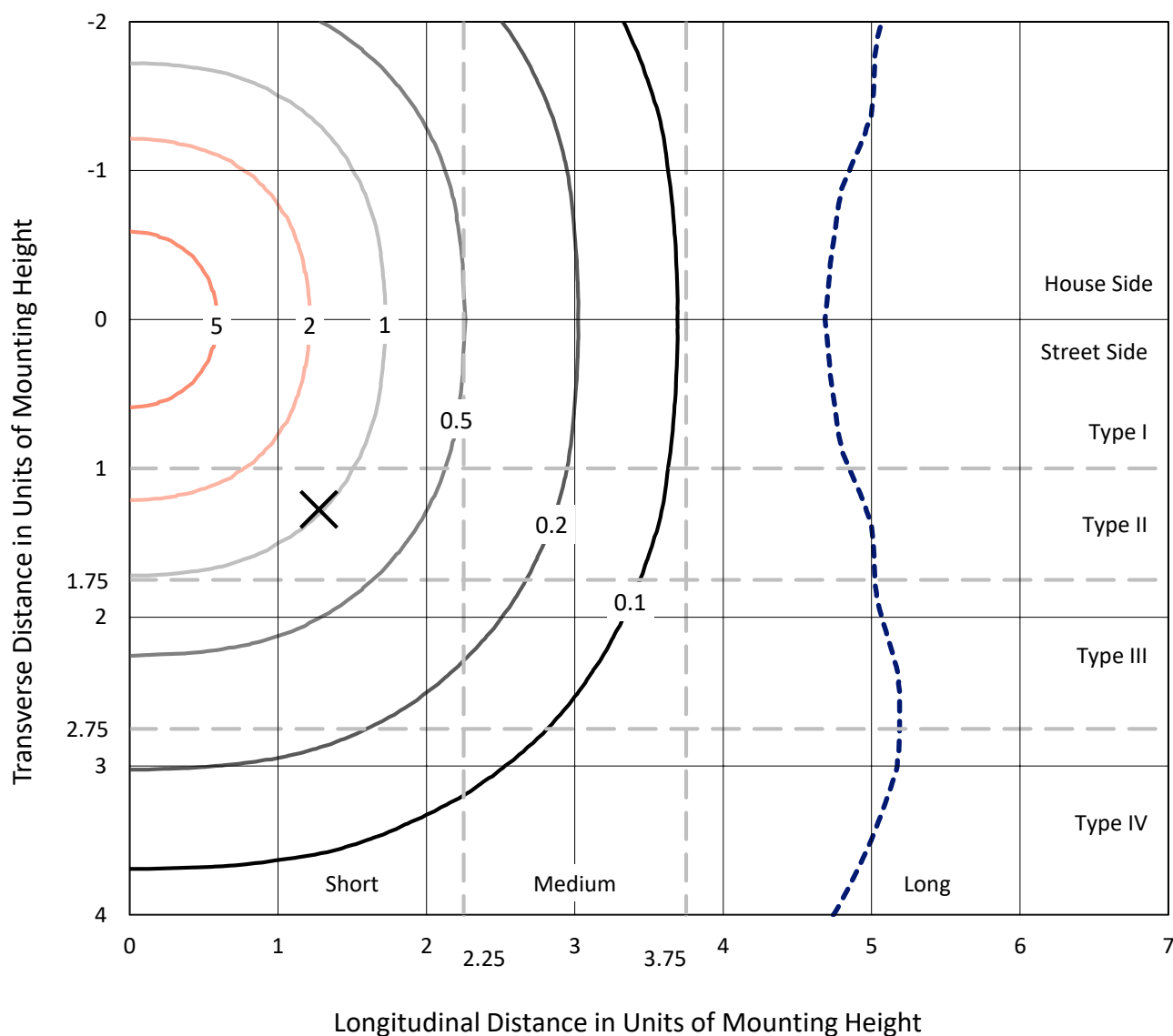
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

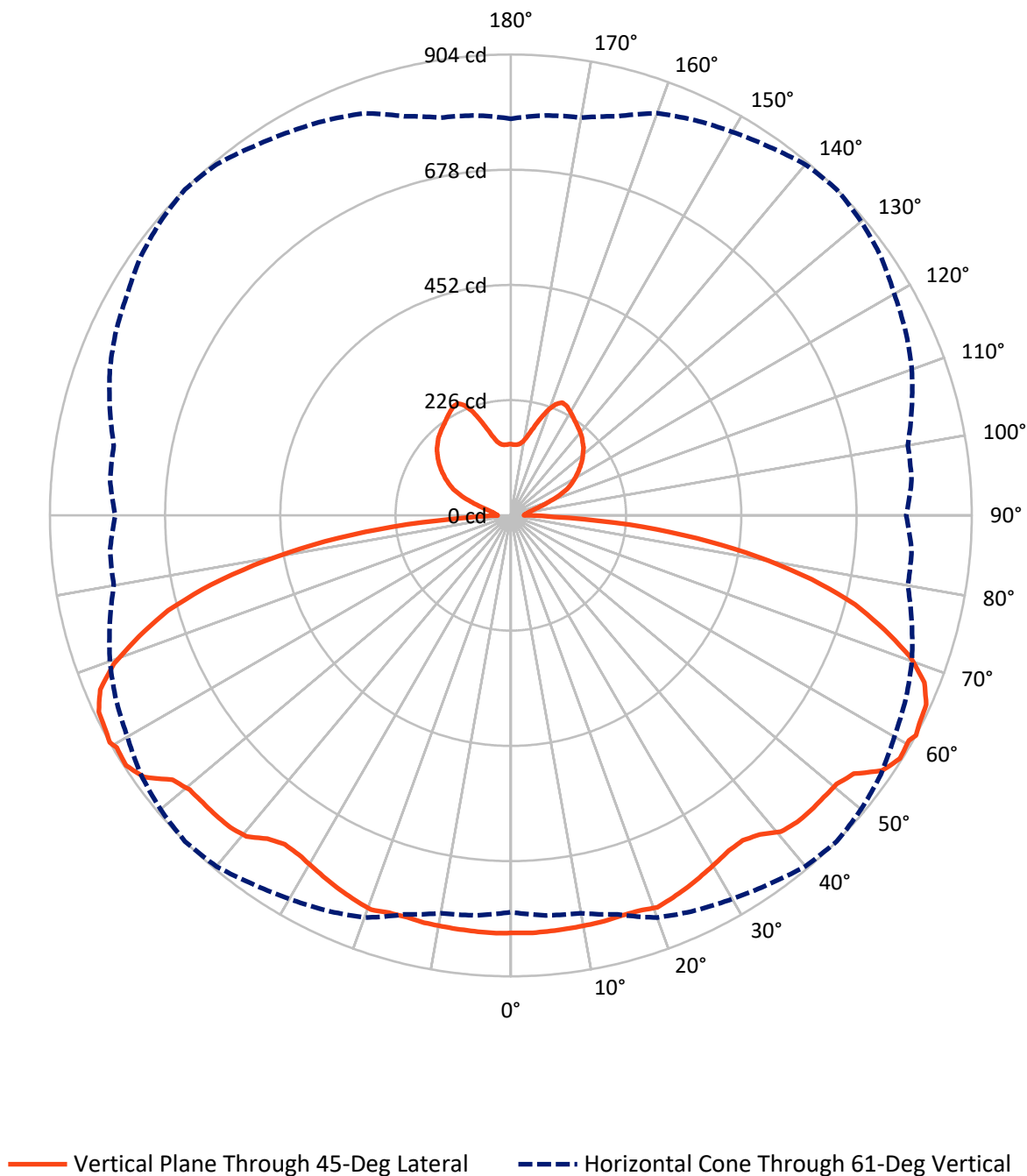


Based on 10 foot mounting height. Maximum calculated value = 8.2 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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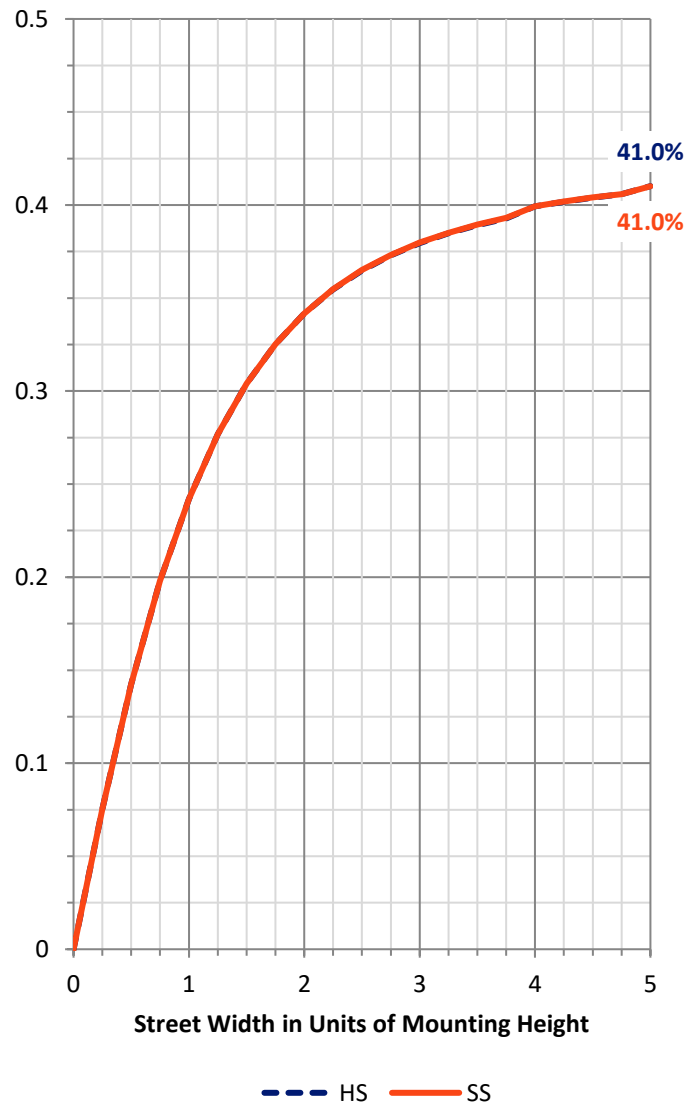
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2114.7	412.0	2526.7
	% Fixture	41.8	8.2	50.0
Street Side	Lumens	2114.7	412.0	2526.7
	% Fixture	41.8	8.2	50.0
Total	Lumens	4229.4	824.0	5053.3
	% Fixture	83.7	16.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.1	1.5
10°-20°	230.9	4.6
20°-30°	371.5	7.4
30°-40°	492.1	9.7
40°-50°	621.4	12.3
50°-60°	744.6	14.7
60°-70°	814.2	16.1
70°-80°	651.8	12.9
80°-90°	224.9	4.5
90°-100°	38.3	0.8
100°-110°	59.4	1.2
110°-120°	119.3	2.4
120°-130°	148.7	2.9
130°-140°	153.2	3.0
140°-150°	136.0	2.7
150°-160°	103.7	2.1
160°-170°	51.8	1.0
170°-180°	13.6	0.3
0°-90°	4229.4	83.7
0°-180°	5053.3	100.0

Coefficient of Utilization



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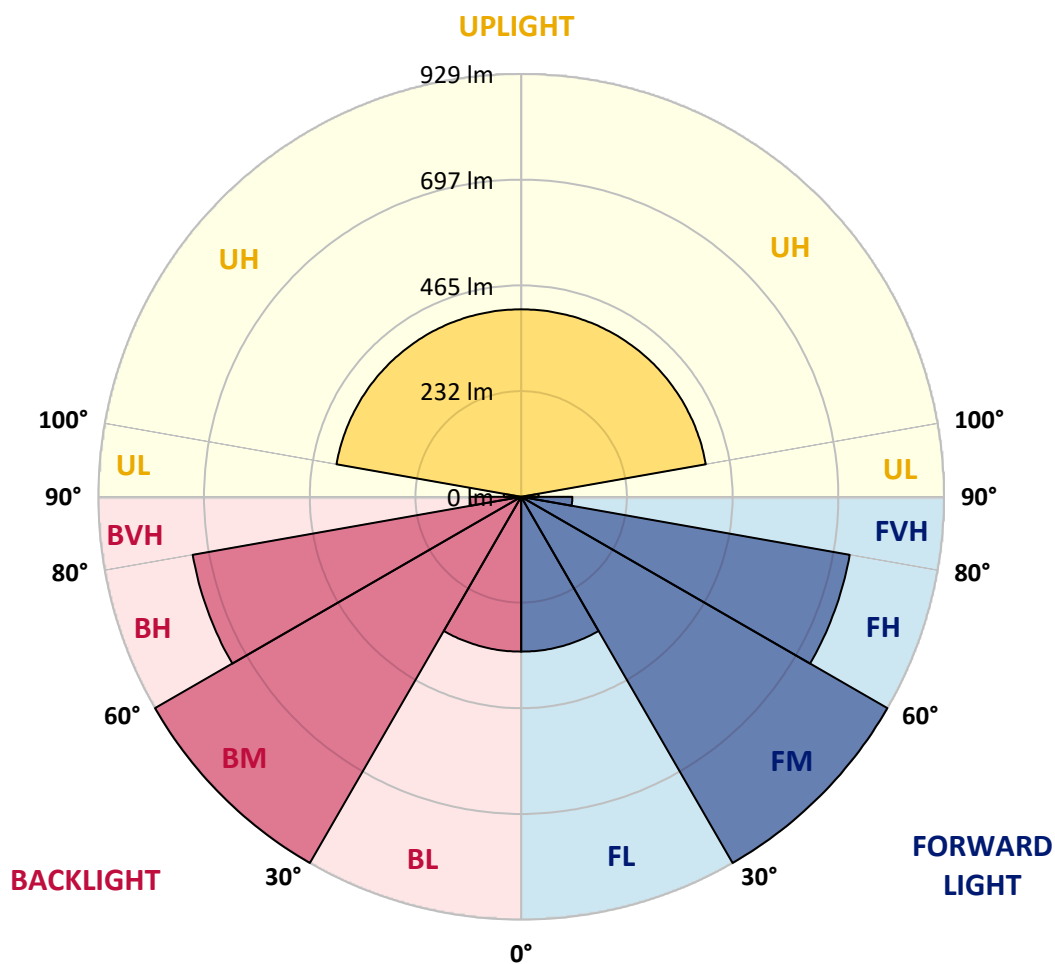
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	340.2	6.7			
FM	(30°-60°)	929.1	18.4			
FH	(60°-80°)	733.0	14.5			G1/1800
FVH	(80°-90°)	112.4	2.2			G2/225
BL	(0°-30°)	340.2	6.7	B1/500		
BM	(30°-60°)	929.1	18.4	B1/1000		
BH	(60°-80°)	733.0	14.5	B2/1000		G1/1800
BVH	(80°-90°)	112.4	2.2			G2/225
UL	(90°-100°)	38.3	0.8		U2/50	
UH	(100°-180°)	412.0	8.2		U3/500	

BUG Rating: B2-U4-G2

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5
2.5°	819.3	818.5	819.3	819.3	819.3	819.3	819.3	819.3	819.3	819.3	819.3
5°	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5
7.5°	817.7	817.7	817.7	817.7	817.7	817.7	817.7	817.7	818.5	817.7	818.5
10°	816.2	816.2	816.2	816.2	816.9	816.9	816.9	816.9	816.9	816.9	816.9
12.5°	814.6	814.6	814.6	814.6	815.4	815.4	815.4	815.4	816.2	816.2	815.4
15°	813.0	812.2	812.2	813.0	813.0	813.8	813.8	813.8	814.6	813.8	813.8
17.5°	811.5	810.7	811.5	812.2	812.2	813.0	813.8	813.8	814.6	814.6	814.6
20°	813.8	813.0	813.8	814.6	815.4	816.9	817.7	818.5	819.3	820.1	820.1
22.5°	809.1	808.3	809.1	809.1	809.9	810.7	812.2	813.0	813.8	813.8	813.8
25°	802.1	802.1	802.8	802.8	803.6	804.4	805.2	806.0	806.0	806.8	806.0
27.5°	794.2	794.2	795.0	795.0	796.6	796.6	797.4	798.1	798.9	798.9	798.9
30°	784.8	784.8	785.5	786.3	787.9	788.7	789.5	790.3	791.1	791.1	791.1
32.5°	776.1	775.3	776.1	777.7	780.0	781.6	783.2	784.0	784.0	784.0	784.8
35°	769.0	769.8	771.4	772.9	776.1	777.7	779.2	781.6	782.4	782.4	782.4
37.5°	770.6	771.4	773.7	776.9	780.8	785.5	788.7	791.8	794.2	793.4	792.6
40°	780.8	782.4	786.3	791.1	797.4	803.6	808.3	812.2	814.6	815.4	814.6
42.5°	782.4	784.0	787.1	794.2	801.3	808.3	814.6	818.5	821.7	822.5	821.7
45°	781.6	781.6	786.3	794.2	801.3	808.3	816.2	821.7	824.8	824.8	824.8
47.5°	776.1	778.5	781.6	789.5	798.9	806.0	813.8	819.3	823.2	825.6	823.2
50°	776.1	776.1	781.6	787.1	795.8	808.3	819.3	824.8	828.8	828.0	828.8
52.5°	774.5	779.2	782.4	790.3	806.0	818.5	827.2	835.1	840.6	841.4	839.8
55°	788.7	789.5	796.6	811.5	826.4	840.6	856.3	868.1	877.6	883.1	875.2
57.5°	799.7	795.8	809.9	822.5	839.8	861.1	884.7	894.1	901.2	899.6	902.0
60°	784.8	790.3	800.5	813.8	841.4	862.6	875.2	885.5	894.1	896.5	893.3
61°	777.7	787.1	791.8	809.9	839.0	854.8	868.1	882.3	898.1	903.6	896.5
62.5°	765.9	780.8	779.2	808.3	826.4	844.5	869.7	886.3	897.3	898.9	897.3
65°	766.6	764.3	782.4	803.6	821.7	854.0	875.2	885.5	891.8	894.9	893.3
67.5°	741.4	733.6	755.6	770.6	801.3	826.4	846.9	861.8	871.3	874.4	870.5
70°	683.2	688.7	704.4	727.3	752.5	783.2	802.1	821.7	829.5	830.3	830.3
72.5°	627.3	630.5	646.2	667.4	696.5	723.3	742.2	758.0	765.1	765.9	767.4
75°	553.3	556.4	574.6	594.3	623.4	646.2	659.6	678.4	688.7	697.3	690.2
77.5°	467.5	473.1	487.2	508.5	535.2	547.8	571.4	593.5	600.6	602.9	600.6
80°	370.7	377.8	390.4	418.7	430.5	451.0	473.8	483.3	489.6	491.2	492.0
82.5°	266.8	272.3	285.7	305.4	318.8	335.3	351.1	362.9	369.9	368.3	367.6
85°	157.4	159.0	173.2	186.6	196.8	207.0	219.6	228.2	229.8	232.9	232.1
87.5°	47.3	48.0	54.3	61.4	66.2	70.9	78.7	88.9	91.3	85.0	85.8
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

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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

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5
2.5°	819.3	819.3	819.3	819.3	819.3	819.3	818.5	819.3
5°	818.5	818.5	818.5	818.5	818.5	818.5	818.5	818.5
7.5°	818.5	817.7	817.7	817.7	817.7	817.7	817.7	817.7
10°	816.9	816.9	816.9	816.9	816.2	816.2	816.2	816.2
12.5°	815.4	815.4	815.4	815.4	814.6	814.6	814.6	814.6
15°	813.8	813.8	813.8	813.8	813.0	813.0	813.0	813.0
17.5°	814.6	813.8	813.0	813.0	812.2	811.5	811.5	811.5
20°	819.3	818.5	816.9	815.4	814.6	813.8	813.8	813.8
22.5°	813.0	812.2	810.7	809.9	809.9	809.1	808.3	808.3
25°	806.0	804.4	804.4	803.6	803.6	802.1	802.1	801.3
27.5°	798.1	797.4	796.6	795.8	795.8	795.0	794.2	793.4
30°	791.1	789.5	787.9	787.1	786.3	785.5	785.5	785.5
32.5°	784.0	782.4	781.6	779.2	777.7	776.9	776.1	776.1
35°	781.6	779.2	777.7	775.3	772.9	771.4	770.6	769.0
37.5°	791.1	787.9	785.5	781.6	776.1	773.7	771.4	770.6
40°	811.5	808.3	803.6	797.4	791.1	786.3	782.4	780.8
42.5°	818.5	814.6	808.3	802.1	794.2	787.1	784.0	782.4
45°	820.9	816.9	808.3	800.5	793.4	787.1	782.4	780.8
47.5°	818.5	813.0	805.2	798.9	788.7	780.8	777.7	775.3
50°	824.0	819.3	809.1	795.0	786.3	781.6	776.1	775.3
52.5°	835.1	826.4	816.9	806.8	790.3	780.8	777.7	773.7
55°	868.1	856.3	839.8	823.2	813.0	798.1	788.7	788.7
57.5°	893.3	883.9	862.6	840.6	821.7	810.7	796.6	797.4
60°	886.3	873.7	863.4	841.4	814.6	799.7	794.2	784.0
61°	885.5	868.1	854.0	836.6	813.8	790.3	788.7	775.3
62.5°	887.0	871.3	844.5	826.4	809.1	778.5	777.7	765.1
65°	885.5	870.5	857.1	823.2	799.7	787.1	760.3	770.6
67.5°	861.1	847.7	823.2	804.4	768.2	752.5	737.5	737.5
70°	822.5	802.8	779.2	755.6	731.2	704.4	691.0	683.2
72.5°	758.0	741.4	722.5	697.3	667.4	643.1	630.5	625.0
75°	676.9	658.8	642.3	623.4	591.9	571.4	558.0	554.1
77.5°	591.9	576.1	547.0	528.9	507.7	484.1	472.3	467.5
80°	483.3	474.6	454.2	425.0	414.8	385.6	377.8	370.7
82.5°	362.9	353.4	334.5	314.1	301.5	284.9	270.7	269.2
85°	228.2	221.9	210.2	195.2	179.5	170.0	157.4	160.6
87.5°	85.0	81.0	74.0	64.6	57.5	51.2	44.9	47.3
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

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CATALOG NUMBER: TT-C2-LED-E1-MQ-CG-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)