

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: INVUE

Report Number: P142025

Luminaire Tested: **ECM-F01-LED-E1-T4**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P142025
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33685)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F01-LED-E1-T4
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (7) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2374 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

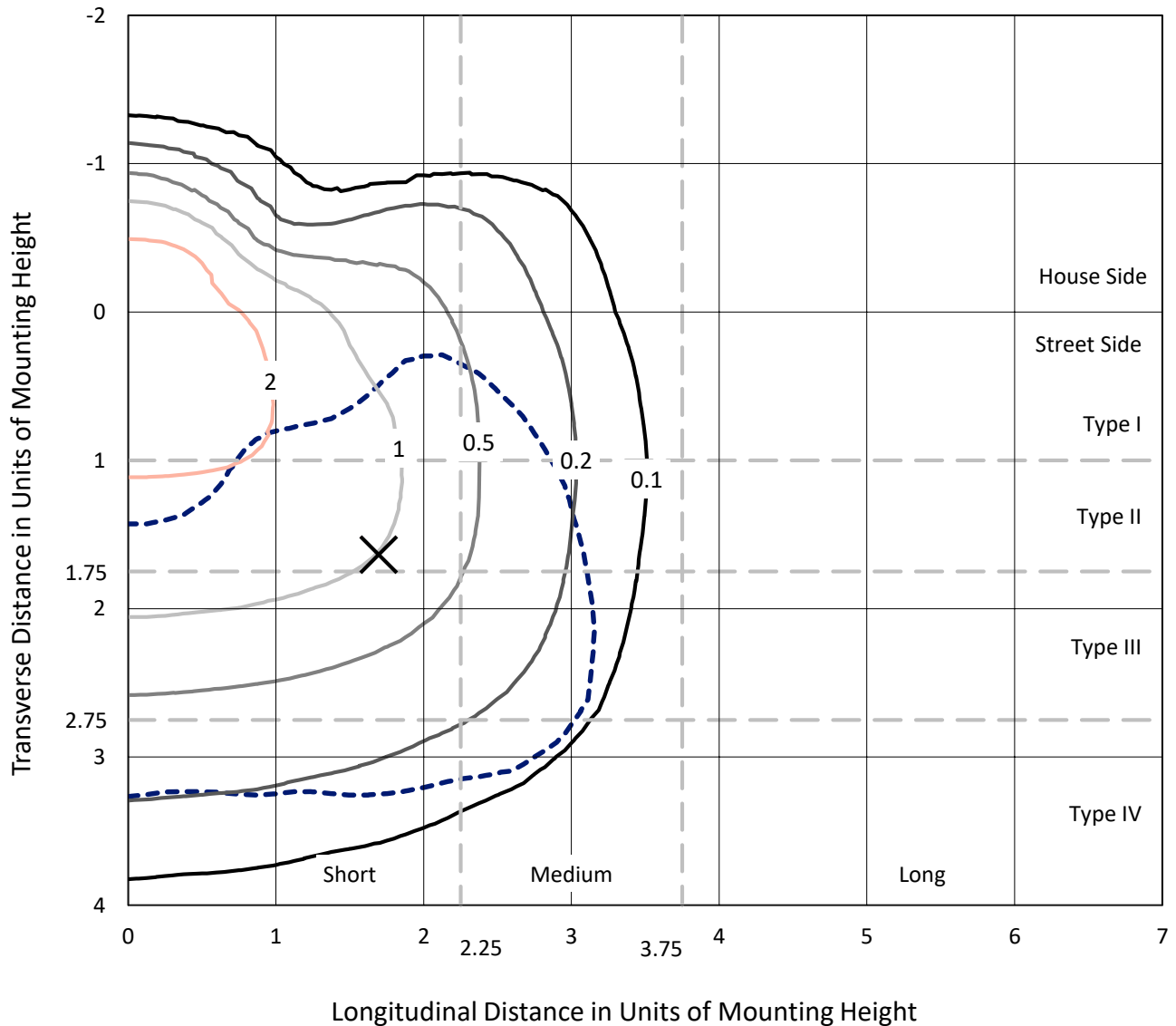
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

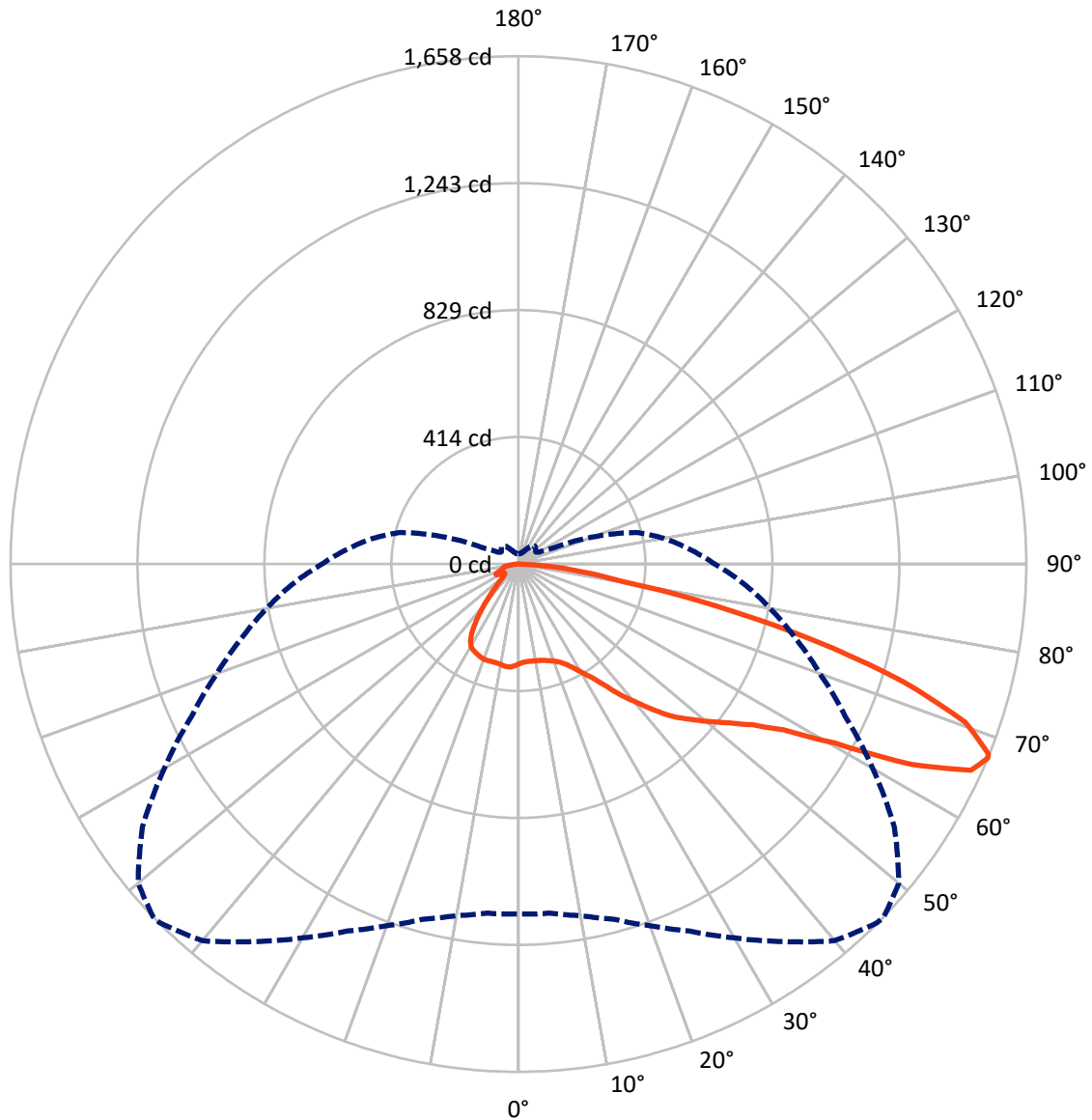
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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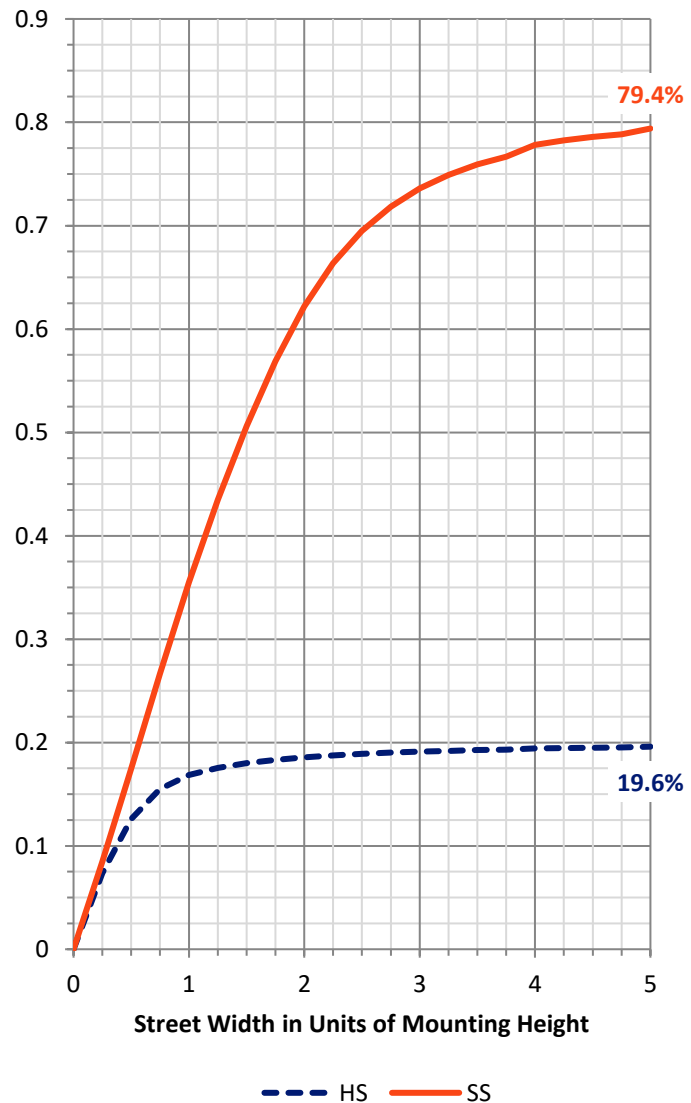
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	471.8	0.0	471.8
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	1902.3	0.0	1902.3
	% Fixture	80.1	0.0	80.1
Total	Lumens	2374.0	0.0	2374.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.3	1.3
10°-20°	93.4	3.9
20°-30°	157.1	6.6
30°-40°	234.9	9.9
40°-50°	306.0	12.9
50°-60°	419.1	17.7
60°-70°	662.6	27.9
70°-80°	411.0	17.3
80°-90°	58.6	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	2374.0	100.0
0°-180°	2374.0	100.0



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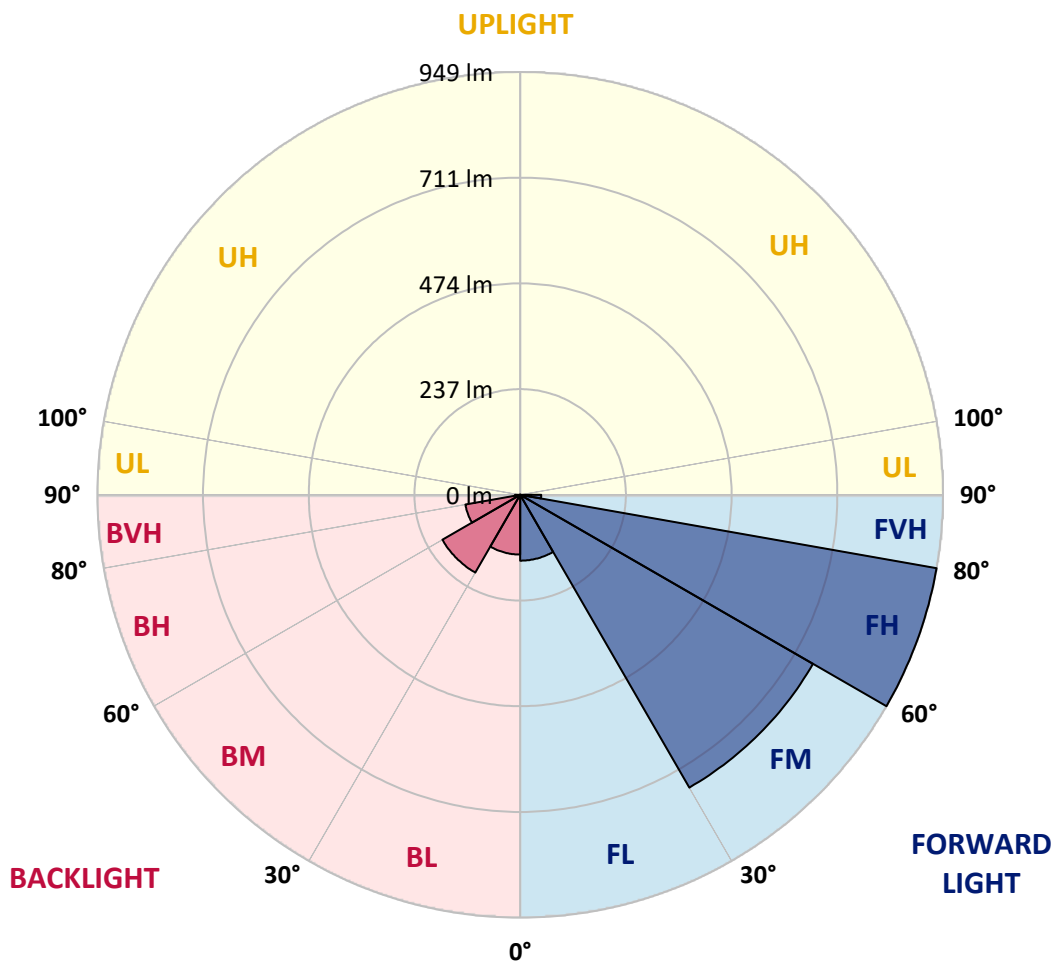
CATALOG NUMBER: ECM-F01-LED-E1-T4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	147.8	6.2			
FM	(30°-60°)	758.6	32.0			
FH	(60°-80°)	948.7	40.0			G1/1800
FVH	(80°-90°)	47.2	2.0			G1/100
BL	(0°-30°)	134.0	5.6	B1/500		
BM	(30°-60°)	201.5	8.5	B0/220		
BH	(60°-80°)	124.9	5.3	B1/500		G1/500
BVH	(80°-90°)	11.4	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	46°
0°	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3
2.5°	318.1	318.9	318.7	318.4	318.7	318.9	319.2	320.0	320.3	320.6	320.9
5°	312.3	313.1	312.9	313.4	313.7	314.8	315.6	317.0	317.8	318.9	319.5
7.5°	310.7	311.2	311.2	311.8	312.0	313.1	314.5	316.2	317.8	319.5	320.0
10°	315.1	315.4	315.4	315.1	315.4	315.9	316.5	317.8	319.2	320.6	321.1
12.5°	325.5	324.7	324.4	323.6	323.9	322.8	322.8	322.5	322.5	322.8	322.8
15°	336.5	336.0	335.4	334.1	334.1	332.4	331.9	330.8	328.0	326.9	326.6
17.5°	346.4	345.9	344.8	343.7	343.1	340.9	340.4	338.5	335.2	332.7	331.9
20°	358.3	356.9	354.4	353.9	352.5	350.0	349.2	346.7	342.3	338.7	338.5
22.5°	376.4	374.2	371.8	369.8	366.3	363.8	361.6	358.3	353.0	348.9	347.8
25°	394.6	393.8	391.6	388.8	386.3	383.6	380.8	375.9	369.0	363.8	362.7
27.5°	420.2	418.3	415.5	411.1	409.7	405.1	402.9	398.7	391.8	385.2	384.1
30°	446.9	445.0	440.6	436.7	435.9	430.9	429.5	425.1	419.1	412.5	411.7
32.5°	477.4	475.5	472.2	470.0	467.0	464.2	460.9	456.8	449.1	443.6	442.5
35°	516.5	514.9	511.0	512.7	509.9	509.1	507.1	500.3	491.7	485.1	486.2
37.5°	547.3	547.0	547.9	547.0	550.6	554.2	554.2	554.8	550.6	543.5	542.1
40°	576.2	575.9	578.1	580.6	590.3	596.0	602.6	605.1	600.7	595.2	593.3
42.5°	603.2	602.6	605.7	614.7	626.6	637.3	648.6	658.2	660.4	654.4	653.0
45°	629.9	630.7	634.6	644.7	660.4	674.5	693.7	705.0	712.2	708.9	711.1
47.5°	662.1	662.9	667.0	679.1	692.9	710.5	733.1	752.3	760.9	760.9	758.1
50°	700.3	704.2	708.6	716.8	732.8	750.1	777.6	796.9	810.7	810.1	807.9
52.5°	751.2	752.1	759.2	765.8	779.6	797.2	821.9	848.4	865.7	864.0	861.6
55°	819.7	816.4	821.1	827.5	842.3	857.7	884.7	915.2	932.8	927.6	926.0
57.5°	906.2	903.4	906.7	914.4	933.1	945.8	967.5	995.6	1020.3	1024.8	1020.9
60°	1030.8	1030.8	1037.4	1053.9	1072.9	1091.9	1119.7	1153.5	1179.1	1185.5	1185.2
62.5°	1178.6	1187.9	1189.3	1210.8	1247.1	1279.8	1323.0	1382.8	1421.0	1448.2	1441.1
65°	1202.2	1205.3	1217.4	1250.7	1299.9	1358.0	1425.1	1503.6	1583.1	1622.4	1623.5
67°	1142.8	1143.9	1165.1	1200.0	1256.4	1321.9	1408.9	1504.4	1605.1	1656.0	1657.7
67.5°	1124.4	1122.2	1141.2	1177.7	1239.4	1313.1	1394.9	1495.3	1599.3	1653.8	1654.6
70°	1000.8	1001.9	1016.8	1057.5	1122.7	1191.8	1283.1	1386.3	1495.9	1545.7	1548.1
72.5°	862.9	855.8	869.3	912.8	943.9	1011.3	1095.2	1173.1	1269.4	1316.4	1315.3
75°	658.2	638.4	662.1	687.4	704.7	771.6	823.9	877.5	966.4	1002.2	1000.3
77.5°	354.7	353.9	379.7	399.6	425.4	485.7	531.6	565.5	640.3	657.9	660.1
80°	192.6	199.8	215.2	237.2	258.1	287.0	313.7	334.9	359.4	348.1	345.6
82.5°	116.1	128.0	151.6	168.4	176.7	189.6	208.6	220.7	230.3	209.4	205.3
85°	18.4	33.3	85.6	102.4	111.2	117.2	121.4	129.3	118.1	110.6	112.5
87.5°	6.1	6.9	13.2	29.2	25.6	17.6	23.1	33.6	16.0	8.5	8.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3
2.5°	321.1	321.4	322.2	323.3	323.9	325.3	325.3	326.4	326.4	327.2	328.0
5°	320.3	321.7	322.8	324.4	325.3	327.2	328.0	329.7	330.5	331.6	332.7
7.5°	321.7	323.6	325.0	326.9	328.3	330.2	331.0	332.4	333.2	334.6	335.2
10°	322.8	324.7	326.4	328.6	329.7	331.0	331.9	333.0	333.2	334.1	334.6
12.5°	324.2	325.0	326.4	328.3	329.4	330.2	331.0	331.9	332.7	332.7	332.7
15°	326.1	325.3	325.5	327.2	328.3	328.8	329.7	330.2	330.5	330.5	329.9
17.5°	330.2	328.0	326.6	326.6	327.2	327.7	327.7	326.9	326.4	325.5	324.4
20°	336.3	332.7	329.9	328.6	327.5	326.1	323.9	321.1	318.7	316.5	315.1
22.5°	344.8	341.2	337.9	334.9	331.3	326.6	322.0	316.2	311.5	307.9	306.5
25°	360.8	355.5	353.0	348.4	342.9	335.4	328.3	320.3	314.8	309.8	307.6
27.5°	382.2	378.1	372.6	370.1	363.0	354.4	346.4	336.8	329.1	323.1	318.9
30°	409.5	406.7	402.0	397.9	391.0	383.3	371.5	360.8	347.3	336.5	330.5
32.5°	440.8	436.7	432.6	427.3	422.4	412.2	401.2	385.0	366.3	347.8	336.5
35°	480.2	476.1	473.3	465.0	456.8	445.8	430.9	411.7	385.5	360.8	341.5
37.5°	534.4	525.6	512.1	500.3	485.4	468.6	451.8	428.7	399.6	367.4	340.9
40°	581.4	568.5	553.4	533.0	512.1	490.1	470.3	445.2	411.1	372.9	337.1
42.5°	642.5	620.2	594.7	567.7	539.1	512.7	488.2	459.5	419.6	373.1	328.0
45°	697.6	670.1	636.2	599.6	564.7	532.5	504.4	472.8	426.8	372.0	317.6
47.5°	746.5	714.4	673.1	629.0	587.8	551.5	520.6	487.3	436.2	375.6	313.7
50°	793.9	757.0	710.5	657.1	611.2	571.5	539.3	503.6	451.8	387.7	319.8
52.5°	844.5	799.7	747.1	686.8	636.8	595.8	559.7	523.1	470.5	404.0	330.8
55°	906.4	855.5	795.5	728.9	671.4	625.7	585.0	546.5	492.8	424.0	343.7
57.5°	989.0	937.5	868.5	791.7	731.4	677.2	628.2	584.7	526.7	451.8	363.0
60°	1148.0	1084.5	992.6	909.2	844.0	780.1	721.0	661.5	591.6	508.0	412.5
62.5°	1403.4	1314.8	1200.9	1084.7	996.7	912.2	834.1	756.7	669.5	575.7	471.4
65°	1580.1	1470.5	1327.4	1181.9	1062.7	959.5	866.3	774.3	677.2	587.8	497.0
67°	1620.5	1498.1	1335.1	1177.2	1047.6	935.6	834.1	738.3	640.6	559.4	481.8
67.5°	1618.9	1496.7	1329.1	1167.3	1037.4	927.1	824.7	724.0	627.9	548.4	474.4
70°	1520.9	1398.2	1229.8	1068.8	943.6	833.8	730.6	642.8	544.8	480.5	424.9
72.5°	1288.6	1181.9	1045.9	901.2	793.9	695.6	613.1	527.0	441.9	399.0	355.3
75°	979.9	885.2	760.6	654.6	572.9	504.7	421.8	365.2	305.4	276.0	260.3
77.5°	647.5	538.8	452.7	351.7	291.7	238.0	187.7	148.9	124.4	130.7	142.8
80°	342.6	271.9	201.2	155.7	120.3	93.6	74.3	55.6	40.5	47.3	59.4
82.5°	186.6	159.1	117.5	93.6	76.5	63.3	48.7	34.1	25.3	28.1	40.5
85°	106.5	93.6	72.6	56.7	49.5	40.5	27.8	18.7	18.2	19.5	25.0
87.5°	17.6	23.7	19.3	13.2	14.9	14.6	12.9	9.9	7.4	10.5	13.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3	325.3
2.5°	328.6	329.4	330.5	330.8	330.5	331.3	332.7	333.8	333.0	332.4	333.8
5°	333.8	334.3	335.7	335.7	336.0	336.5	337.4	338.2	337.1	337.1	337.6
7.5°	336.0	336.0	337.4	336.8	336.8	336.5	337.4	337.6	336.0	335.7	336.0
10°	334.6	334.6	335.2	334.1	333.8	333.5	333.5	333.8	332.1	331.6	332.4
12.5°	332.7	332.7	332.1	331.6	331.0	330.5	331.0	331.3	330.2	330.2	330.5
15°	329.4	328.6	328.3	328.3	328.6	328.8	329.9	330.8	329.9	329.4	329.4
17.5°	323.9	323.3	324.2	325.8	327.7	329.1	330.8	331.3	329.4	327.2	325.5
20°	315.6	317.0	320.0	324.7	328.8	331.0	331.0	329.1	324.7	320.3	318.1
22.5°	307.1	310.9	317.6	324.7	329.7	330.5	327.5	323.3	317.3	312.6	308.5
25°	308.2	312.9	319.5	325.5	328.8	327.5	322.0	316.7	309.6	304.6	298.6
27.5°	319.8	324.2	327.5	329.4	328.3	323.9	317.6	310.4	302.4	295.5	288.4
30°	329.1	331.0	330.8	329.1	325.0	318.1	310.7	302.1	292.5	285.1	275.7
32.5°	330.8	327.2	321.7	315.6	310.1	302.4	293.9	284.0	273.2	263.6	254.3
35°	327.7	314.2	302.1	290.0	281.8	272.1	264.7	253.2	241.3	233.1	226.2
37.5°	316.5	293.1	273.8	256.7	244.6	233.6	222.3	211.1	201.2	197.3	195.4
40°	302.1	266.9	237.5	213.8	200.9	190.1	178.6	169.5	164.8	161.3	159.9
42.5°	281.2	237.2	200.6	175.3	158.8	148.9	137.6	132.6	130.4	131.3	130.2
45°	261.7	206.1	160.2	132.1	120.8	111.4	105.9	103.7	102.6	102.1	102.9
47.5°	247.9	182.2	129.1	100.4	91.1	84.5	82.3	81.5	81.2	80.1	79.8
50°	244.6	168.1	105.7	78.1	71.0	67.4	66.3	65.5	64.9	64.1	62.2
52.5°	248.5	164.3	94.1	67.1	61.1	58.3	57.5	56.1	55.6	53.4	50.9
55°	255.1	165.7	90.5	64.1	58.1	55.0	53.9	53.4	51.5	49.0	46.0
57.5°	268.8	174.2	92.2	64.9	58.6	55.9	55.3	54.8	52.3	48.7	44.9
60°	308.7	199.0	100.7	70.7	63.0	61.1	61.4	60.3	56.7	52.0	46.2
62.5°	370.4	237.5	116.4	77.9	70.2	70.2	71.8	71.0	65.5	57.8	49.5
65°	402.3	260.6	123.0	80.1	72.4	75.9	81.2	80.4	72.4	60.8	49.8
67°	397.4	256.2	119.2	76.8	68.2	72.9	78.1	78.4	69.6	58.1	47.6
67.5°	392.7	253.2	117.2	75.4	67.1	71.8	76.8	75.9	68.5	57.0	47.1
70°	352.8	222.3	104.6	70.4	62.2	63.6	64.9	63.8	58.1	50.4	43.5
72.5°	304.6	184.6	92.2	67.4	59.4	57.2	57.2	55.3	51.5	46.2	41.3
75°	232.2	143.6	80.9	64.1	56.1	52.8	52.3	50.9	47.6	43.8	39.4
77.5°	141.7	102.9	70.2	59.2	52.0	49.3	49.5	48.7	45.4	41.8	37.7
80°	71.0	66.6	58.9	51.5	47.1	44.3	44.6	42.9	40.2	37.4	34.1
82.5°	43.5	46.0	41.3	39.1	36.3	33.3	25.9	30.3	29.4	27.0	25.6
85°	28.9	28.6	25.9	22.8	20.9	18.2	16.2	16.5	18.2	18.7	18.7
87.5°	14.0	13.5	12.4	11.6	11.0	9.1	8.5	9.6	9.6	10.2	9.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: ECM-F01-LED-E1-T4

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	325.3	325.3	325.3	325.3	325.3
2.5°	334.1	334.6	334.3	335.2	334.3
5°	337.9	337.9	338.2	338.5	338.2
7.5°	336.0	335.7	336.3	336.8	336.5
10°	332.4	332.7	333.2	334.1	334.1
12.5°	331.0	331.3	332.4	333.2	333.2
15°	329.9	330.2	330.8	331.9	331.0
17.5°	325.0	323.9	323.9	324.7	323.9
20°	316.2	314.5	314.5	314.2	314.0
22.5°	305.7	301.6	300.5	299.1	299.4
25°	292.8	287.3	284.3	282.6	282.1
27.5°	282.3	276.0	273.0	270.5	269.7
30°	269.1	262.0	259.5	258.1	257.6
32.5°	249.9	243.5	240.2	239.4	237.8
35°	220.7	217.9	216.6	214.6	214.9
37.5°	191.5	190.7	187.4	188.5	187.4
40°	160.2	159.9	160.4	159.6	161.5
42.5°	130.7	129.9	131.3	130.4	131.3
45°	101.3	102.9	104.8	104.0	105.1
47.5°	77.6	77.9	77.3	77.9	78.4
50°	59.7	59.2	58.6	57.5	58.1
52.5°	49.3	47.3	46.0	45.1	44.9
55°	43.5	41.6	40.5	39.4	39.4
57.5°	41.8	39.4	37.7	36.9	36.6
60°	42.1	38.8	36.6	35.2	34.9
62.5°	43.2	38.8	35.8	34.4	33.8
65°	42.9	38.2	35.2	33.8	33.3
67°	41.6	37.4	34.9	33.6	33.3
67.5°	41.0	37.1	34.9	33.6	33.0
70°	39.1	36.3	34.4	33.0	32.5
72.5°	37.4	35.2	33.0	31.9	31.4
75°	35.8	33.6	31.6	30.5	30.3
77.5°	34.1	31.6	30.3	28.9	27.8
80°	31.1	28.3	26.4	24.2	23.7
82.5°	25.6	23.4	21.5	19.5	19.3
85°	19.0	18.2	16.5	14.9	14.9
87.5°	10.5	11.6	10.2	9.4	8.8
90°	0.0	0.0	0.0	0.0	0.0

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