

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: P162602

Luminaire Tested: **ECM-F02-LED-E1-SL4-HSS**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162602
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F02-LED-E1-SL4-HSS
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3194.2 lumens
Efficiency: N/A
Efficacy: 58.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

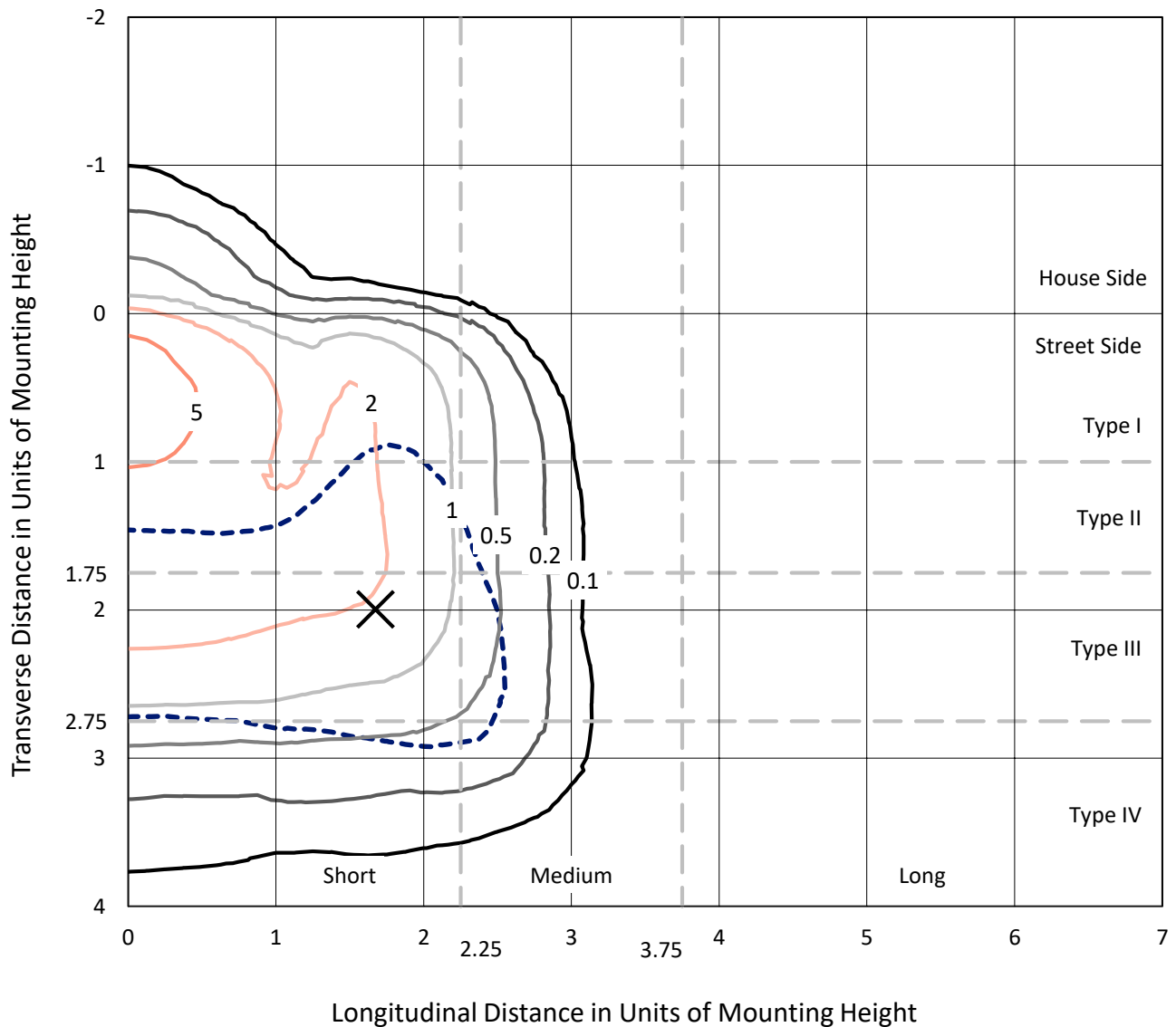
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

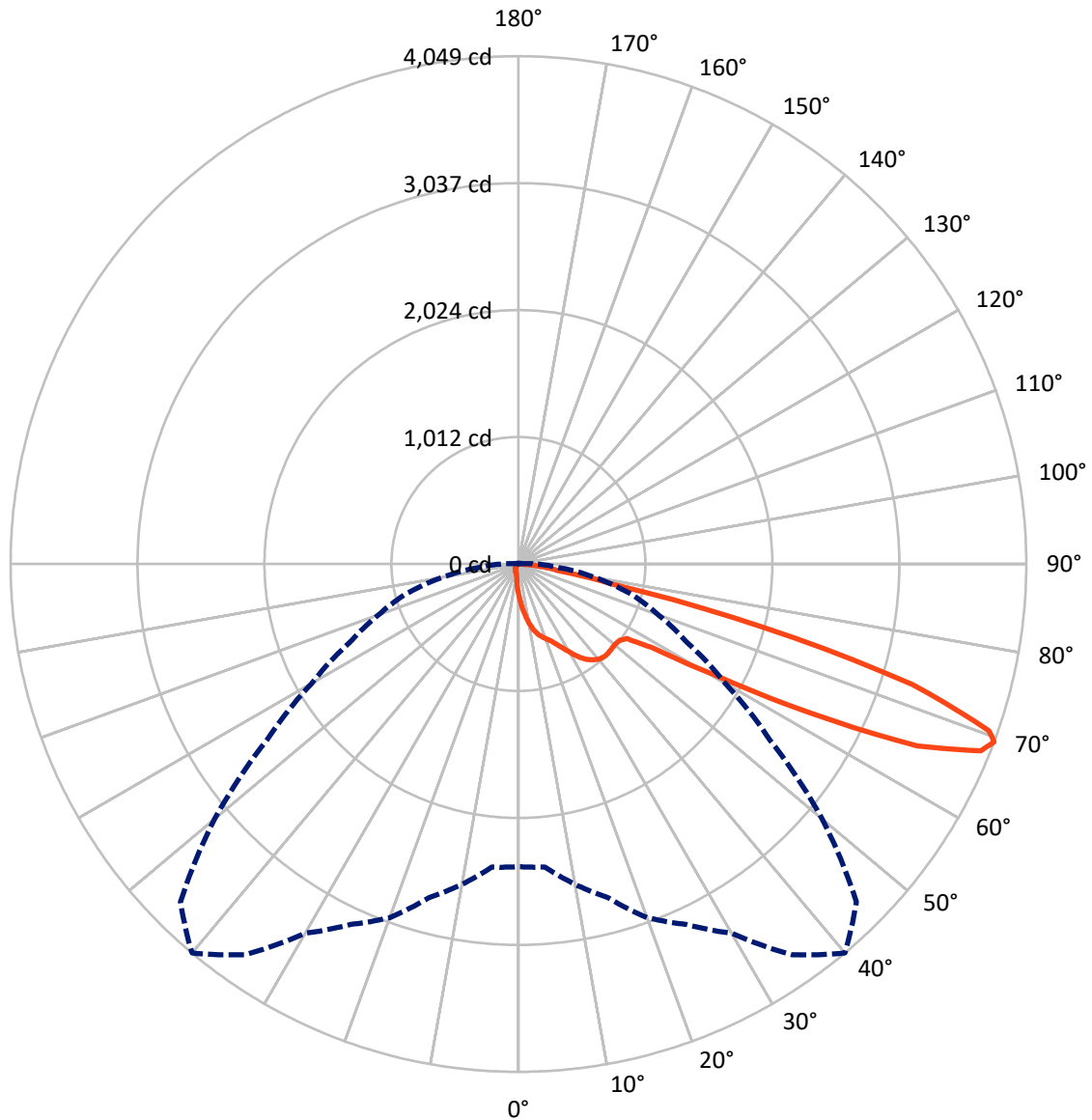


Based on 10 foot mounting height. Maximum calculated value = 7.1 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	95.1	0.0	95.1
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	3099.0	0.0	3099.0
	% Fixture	97.0	0.0	97.0
Total	Lumens	3194.2	0.0	3194.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.8	0.8
10°-20°	85.5	2.7
20°-30°	163.6	5.1
30°-40°	272.1	8.5
40°-50°	368.2	11.5
50°-60°	575.8	18.0
60°-70°	1183.8	37.1
70°-80°	476.3	14.9
80°-90°	44.1	1.4
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°	3194.2	100.0
0°-180°	3194.2	100.0



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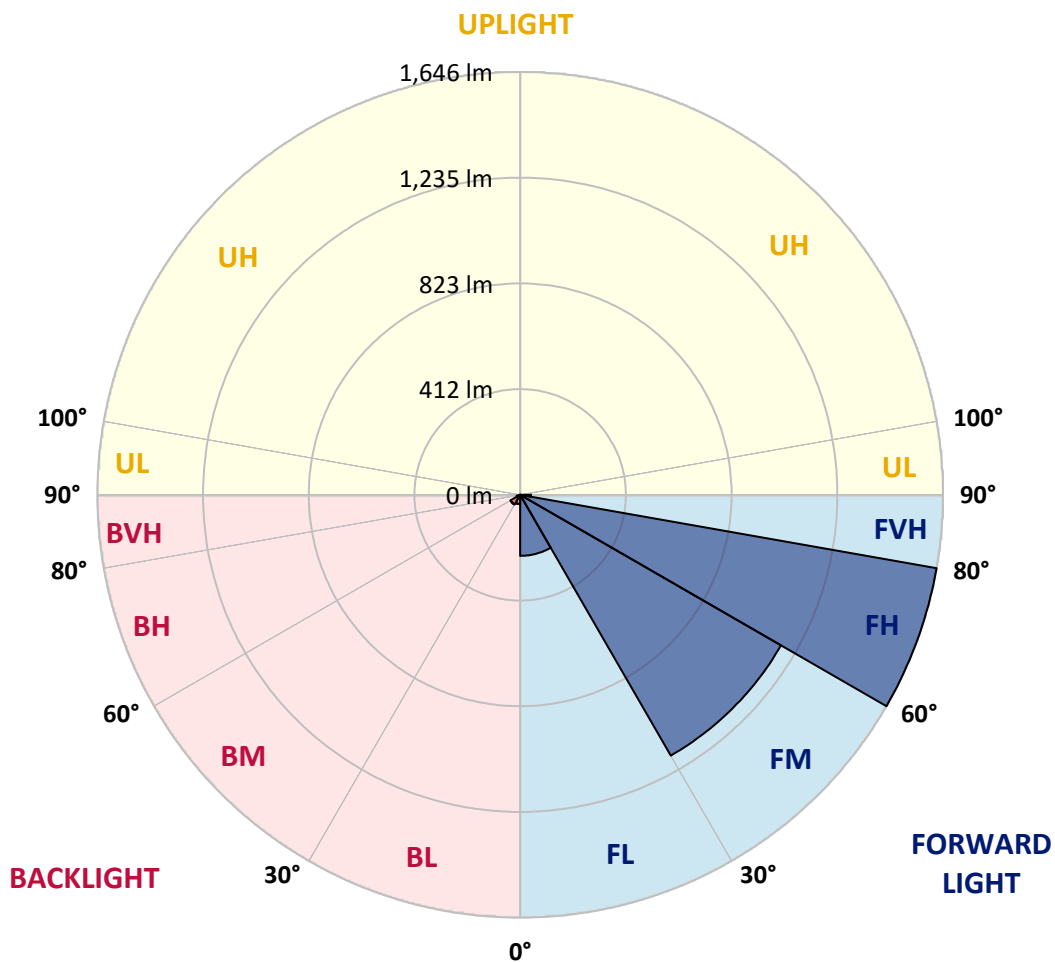
CATALOG NUMBER: ECM-F02-LED-E1-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	237.7	7.4			
FM	(30°-60°)	1172.6	36.7			
FH	(60°-80°)	1646.3	51.5			G1/1800
FVH	(80°-90°)	42.4	1.3			G1/100
BL	(0°-30°)	36.2	1.1	B0/110		
BM	(30°-60°)	43.4	1.4	B0/220		
BH	(60°-80°)	13.9	0.4	B0/110		G0/110
BVH	(80°-90°)	1.6	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2
2.5°	321.8	318.2	314.0	314.0	308.7	308.7	305.6	297.2	296.1	291.5	286.7
5°	410.7	407.6	402.4	397.7	393.5	386.2	381.0	371.0	360.0	349.5	340.1
7.5°	497.6	496.0	486.6	485.1	478.3	466.2	455.7	441.1	422.3	407.6	390.4
10°	578.2	574.5	572.4	563.6	553.6	540.5	524.3	506.5	484.5	461.5	436.9
12.5°	642.0	639.9	630.5	626.8	616.4	603.3	582.9	559.9	537.9	508.1	479.3
15°	689.6	686.0	679.7	674.0	661.4	649.9	631.0	605.9	579.2	546.8	512.3
17.5°	729.4	722.6	721.0	712.2	699.1	685.5	664.5	641.5	610.1	577.6	540.0
20°	782.8	773.4	770.2	757.1	742.0	723.2	699.1	670.3	637.3	601.8	563.0
22.5°	845.6	838.8	832.0	820.5	801.1	774.4	739.3	708.0	666.1	626.8	585.0
25°	934.5	928.8	917.8	902.1	878.0	846.1	803.7	757.7	708.5	658.3	609.1
27.5°	1020.8	1015.6	1007.8	995.7	968.6	933.5	881.2	822.6	760.3	699.6	645.2
30°	1102.0	1097.2	1089.4	1077.4	1053.3	1018.8	959.6	896.9	819.4	748.8	683.4
32.5°	1189.4	1187.8	1178.9	1161.6	1140.7	1094.1	1029.8	962.2	883.8	802.1	725.7
35°	1288.3	1276.2	1267.8	1250.6	1215.0	1165.3	1089.9	1016.2	933.5	849.7	764.5
37.5°	1372.0	1360.5	1350.0	1328.0	1284.6	1221.3	1136.0	1054.9	969.6	884.3	797.5
40°	1433.2	1427.4	1414.9	1386.1	1337.4	1262.1	1170.0	1081.5	995.7	909.9	824.1
42.5°	1478.7	1469.8	1455.7	1425.8	1368.3	1282.5	1183.6	1092.6	1007.8	925.6	841.4
45°	1495.5	1488.1	1475.0	1442.6	1380.3	1288.3	1183.1	1089.4	1008.3	930.4	852.9
47.5°	1485.5	1478.2	1466.7	1436.3	1375.1	1281.4	1173.7	1080.5	1003.1	931.9	863.4
50°	1452.5	1448.4	1439.4	1413.8	1358.9	1268.3	1165.3	1075.8	1002.0	939.8	878.0
52.5°	1449.4	1446.8	1435.8	1410.2	1354.2	1264.2	1164.2	1078.4	1010.9	949.7	888.5
55°	1771.2	1734.0	1650.8	1580.2	1464.0	1325.9	1217.1	1120.8	1048.6	988.9	946.1
57.5°	2517.4	2461.9	2352.5	2218.1	1951.2	1689.1	1479.2	1327.5	1252.7	1225.5	1241.7
60°	2866.9	2856.9	2839.7	2775.9	2639.3	2413.8	2162.6	1891.0	1782.2	1772.8	1805.8
62.5°	3032.8	3026.5	3031.7	3023.8	2981.5	2915.5	2843.3	2726.2	2618.3	2548.8	2401.2
65°	3109.1	3113.3	3143.2	3166.7	3171.9	3189.2	3242.1	3388.1	3494.8	3315.3	2905.6
67.5°	2915.0	2939.6	3008.2	3094.0	3194.5	3291.8	3448.8	3756.4	3975.7	3764.8	3182.9
69°	2413.2	2425.3	2592.7	2754.4	2999.8	3171.4	3399.0	3802.5	4048.9	3810.8	3160.9
70°	1899.9	1910.9	2090.4	2310.1	2725.1	2945.9	3243.7	3724.5	3980.4	3749.6	3047.9
72.5°	857.1	841.4	904.7	1022.4	1473.5	1824.0	2344.7	3017.6	3283.9	3004.0	2280.3
75°	598.6	591.8	598.6	599.1	669.2	863.4	1089.4	1635.7	2022.9	1745.5	1089.4
77.5°	463.6	458.9	454.2	449.0	457.3	512.3	534.2	580.3	753.5	712.6	415.5
80°	366.8	362.6	374.1	370.4	370.4	376.7	372.5	355.3	322.8	299.3	267.9
82.5°	170.6	171.6	171.6	186.3	224.5	262.1	274.2	256.9	228.1	194.1	156.5
85°	16.2	18.3	30.9	47.6	94.7	106.8	107.3	88.9	88.9	70.1	56.5
87.5°	0.0	0.6	0.6	0.6	4.7	13.1	11.0	3.1	1.6	1.6	2.6
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2
2.5°	278.4	276.8	270.5	264.2	258.5	252.2	246.4	240.7	234.4	229.7	223.9
5°	325.5	314.0	300.9	288.3	275.8	262.7	249.1	237.0	224.5	213.0	202.0
7.5°	373.1	350.6	332.8	310.3	289.9	269.5	250.6	231.3	213.5	196.8	181.1
10°	413.4	386.2	358.4	329.7	300.3	273.1	247.0	223.9	200.4	180.0	160.6
12.5°	446.3	411.8	377.8	341.7	308.7	274.2	241.8	214.0	186.3	163.2	143.4
15°	476.2	436.4	395.6	353.7	311.9	272.6	236.5	202.0	173.7	147.5	125.0
17.5°	500.2	454.7	408.6	361.6	316.6	270.5	229.7	193.6	160.6	133.4	111.4
20°	521.2	473.5	423.8	371.0	319.7	270.0	223.9	183.2	149.1	120.4	98.9
22.5°	540.5	492.9	439.5	383.0	324.4	269.5	218.7	175.3	139.2	110.4	88.9
25°	562.5	512.3	456.3	395.6	332.8	271.5	215.6	169.0	130.3	101.0	81.1
27.5°	587.1	534.2	476.2	411.3	343.7	275.8	214.5	162.2	122.5	92.1	74.8
30°	621.6	560.4	496.0	427.0	353.7	280.5	213.5	158.0	114.6	85.3	68.5
32.5°	651.9	586.1	518.0	443.2	364.7	285.2	213.0	152.3	107.3	78.5	63.8
35°	683.9	609.6	536.9	458.9	374.1	290.4	212.4	148.1	100.4	71.7	59.1
37.5°	711.6	629.5	551.5	472.5	384.6	295.1	213.0	144.4	94.2	65.9	54.9
40°	735.2	649.9	567.7	485.1	395.6	302.4	213.5	140.8	87.9	60.7	51.3
42.5°	756.1	669.2	585.0	499.2	408.1	310.8	216.6	137.6	82.7	56.0	47.6
45°	772.3	687.0	603.8	519.1	428.6	324.4	222.4	135.5	77.4	51.8	44.5
47.5°	789.0	713.2	635.8	550.5	458.4	345.9	232.3	135.0	73.3	48.7	41.9
50°	812.1	739.3	664.0	582.4	485.6	367.9	244.4	135.5	68.0	45.5	39.2
52.5°	828.8	766.0	700.7	637.9	550.5	434.8	290.9	145.0	65.4	42.9	36.1
55°	927.7	916.7	918.3	928.8	861.3	739.9	486.6	209.3	76.9	48.7	35.6
57.5°	1308.1	1346.9	1369.3	1368.8	1257.4	1042.9	653.5	269.0	85.8	56.5	42.4
60°	1808.3	1779.1	1737.7	1635.7	1487.6	1190.4	731.0	289.4	74.3	45.0	38.7
62.5°	2250.5	2078.9	1926.6	1761.3	1567.1	1241.7	746.7	287.8	64.9	34.0	27.2
65°	2526.3	2217.5	1971.6	1764.4	1535.8	1198.8	706.4	264.2	54.9	27.7	22.5
67.5°	2592.2	2142.7	1794.7	1530.5	1283.0	933.0	518.5	198.8	42.9	23.0	19.9
69°	2448.3	1904.7	1487.1	1187.3	933.5	619.0	320.7	125.6	33.0	20.9	18.3
70°	2252.1	1656.6	1211.3	952.8	691.2	434.8	224.5	88.4	26.7	19.4	16.7
72.5°	1448.9	870.2	595.5	414.4	285.2	173.2	87.9	39.8	20.4	16.2	13.6
75°	562.0	321.8	233.3	177.4	138.7	96.3	53.4	25.6	17.3	13.6	10.5
77.5°	276.8	211.9	173.2	118.8	69.1	42.9	28.8	19.9	14.1	10.0	6.8
80°	218.7	145.5	86.8	53.9	40.8	30.9	22.0	16.2	10.5	6.3	4.7
82.5°	112.0	61.2	45.0	36.7	30.3	24.1	17.8	11.5	6.8	4.2	3.7
85°	35.1	25.6	23.0	22.5	20.9	17.3	12.5	7.3	4.2	2.6	2.6
87.5°	2.6	3.7	4.7	3.7	4.2	3.7	4.7	3.1	2.1	2.1	1.6
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2	241.2
2.5°	219.8	213.5	207.8	204.1	197.2	194.7	192.0	191.0	186.3	187.3	183.2
5°	192.0	181.1	172.7	164.3	156.5	150.7	146.0	140.2	135.5	133.4	129.2
7.5°	166.9	152.8	141.8	132.9	123.5	116.2	109.9	105.7	101.5	97.3	95.2
10°	145.0	129.8	117.2	108.3	99.4	93.1	88.4	85.3	82.7	81.1	80.6
12.5°	124.5	109.9	98.3	90.5	83.7	80.6	78.5	76.9	76.4	75.9	75.9
15°	108.9	94.2	85.3	79.5	76.4	74.8	74.3	73.3	72.2	71.7	71.7
17.5°	94.2	83.2	76.9	73.8	72.2	71.2	70.1	69.1	68.0	67.5	67.5
20°	84.3	75.3	72.2	70.1	68.5	67.5	65.9	64.9	64.3	63.8	63.3
22.5°	76.4	70.7	68.5	67.0	64.9	63.3	62.2	61.2	60.2	59.7	59.1
25°	70.7	67.0	65.4	63.3	61.2	59.7	58.1	56.5	55.5	54.9	53.9
27.5°	66.4	63.8	61.7	59.1	57.0	55.5	53.9	52.3	51.3	50.2	49.7
30°	62.8	60.2	57.6	55.5	52.8	51.3	49.2	47.6	47.1	46.1	45.0
32.5°	59.1	56.5	53.9	51.3	48.7	46.6	45.5	43.4	42.4	41.9	40.8
35°	54.9	52.3	49.2	47.1	44.5	42.4	40.8	39.2	38.2	37.1	36.7
37.5°	51.3	48.2	45.0	42.4	40.3	38.2	36.7	35.1	34.0	33.0	32.4
40°	47.1	44.0	40.8	38.2	36.1	34.6	33.0	31.4	30.3	29.8	29.8
42.5°	43.4	39.8	36.7	34.6	33.0	30.9	29.3	27.7	27.2	26.7	27.2
45°	39.8	36.1	33.5	31.4	29.8	27.7	26.1	25.1	24.6	25.1	25.6
47.5°	36.7	33.0	30.3	28.8	27.2	25.6	24.1	23.0	23.0	24.1	25.1
50°	33.5	29.8	27.7	26.7	25.1	23.6	21.5	20.9	21.5	22.5	23.6
52.5°	30.3	26.1	24.6	24.1	22.5	20.9	19.4	18.8	19.4	20.4	19.9
55°	27.2	23.0	22.5	22.0	20.4	18.3	16.7	16.7	16.7	16.2	15.2
57.5°	26.1	20.4	19.9	19.4	17.8	15.7	14.6	13.6	13.1	11.5	11.0
60°	27.2	18.3	18.3	17.3	15.7	13.6	12.1	10.5	9.4	8.4	8.4
62.5°	22.0	16.7	16.2	15.2	13.1	11.0	9.4	7.9	7.3	6.8	6.8
65°	17.8	15.2	14.1	12.5	11.0	8.9	7.3	6.3	5.8	5.8	6.3
67.5°	16.2	13.6	12.1	10.5	8.9	6.8	5.8	5.2	5.2	5.8	5.8
69°	15.2	12.5	11.0	9.4	7.9	6.3	5.2	5.2	5.2	5.2	5.8
70°	14.1	12.1	10.5	8.9	6.8	5.2	4.7	4.7	5.2	5.2	5.8
72.5°	11.0	9.4	8.9	7.3	5.2	4.7	4.2	4.7	4.7	5.2	5.2
75°	8.4	6.8	6.8	5.8	4.2	3.7	3.7	4.2	4.2	4.7	4.7
77.5°	5.8	4.7	4.7	4.2	3.7	3.1	3.1	3.7	4.2	4.2	4.7
80°	4.2	3.7	3.1	3.7	3.1	2.6	3.1	3.7	3.7	4.2	4.2
82.5°	3.1	3.1	3.1	3.1	2.6	2.6	3.1	3.1	3.7	4.2	4.2
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.1	3.1	3.7	3.7
87.5°	1.6	1.6	1.6	2.1	2.1	2.6	2.6	2.6	2.6	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P162602

CATALOG NUMBER: ECM-F02-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	241.2	241.2	241.2	241.2
2.5°	182.1	181.6	179.5	180.0
5°	127.7	124.5	126.6	126.1
7.5°	93.7	93.1	92.6	93.7
10°	80.1	80.1	79.5	80.1
12.5°	75.3	75.3	75.3	75.3
15°	71.7	71.7	71.2	71.2
17.5°	67.5	67.5	67.5	67.0
20°	63.3	62.8	62.8	62.8
22.5°	58.6	58.1	58.1	58.1
25°	53.9	53.4	53.4	53.4
27.5°	49.2	48.7	48.2	48.2
30°	44.5	44.0	43.4	43.4
32.5°	39.8	39.2	38.7	38.7
35°	35.6	35.6	35.1	34.6
37.5°	31.9	31.9	31.9	31.9
40°	29.3	29.8	29.8	29.8
42.5°	27.7	28.2	28.8	29.3
45°	26.7	27.7	28.2	28.2
47.5°	26.1	26.7	27.2	27.2
50°	24.1	23.6	23.6	23.6
52.5°	19.4	18.3	17.8	17.3
55°	14.1	13.6	12.5	12.5
57.5°	10.0	10.0	9.4	9.4
60°	7.9	7.9	7.3	7.9
62.5°	6.8	6.8	6.8	6.8
65°	6.3	6.3	6.3	6.3
67.5°	6.3	6.3	6.3	6.3
69°	5.8	5.8	5.8	5.8
70°	5.8	5.8	5.8	5.8
72.5°	5.2	5.2	5.2	5.2
75°	4.7	5.2	5.2	5.2
77.5°	4.7	4.7	4.7	4.7
80°	4.2	4.2	4.7	4.7
82.5°	4.2	4.2	4.2	4.2
85°	3.7	3.7	4.2	4.2
87.5°	3.1	3.1	3.7	3.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)