

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: P139855

Luminaire Tested: **ENV-F02-LED-E1-GZW**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P139855
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33649)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-F02-LED-E1-GZW
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - WALL GRAZER WIDE
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4597.9 lumens
Efficiency: N/A
Efficacy: 93.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 49.3
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



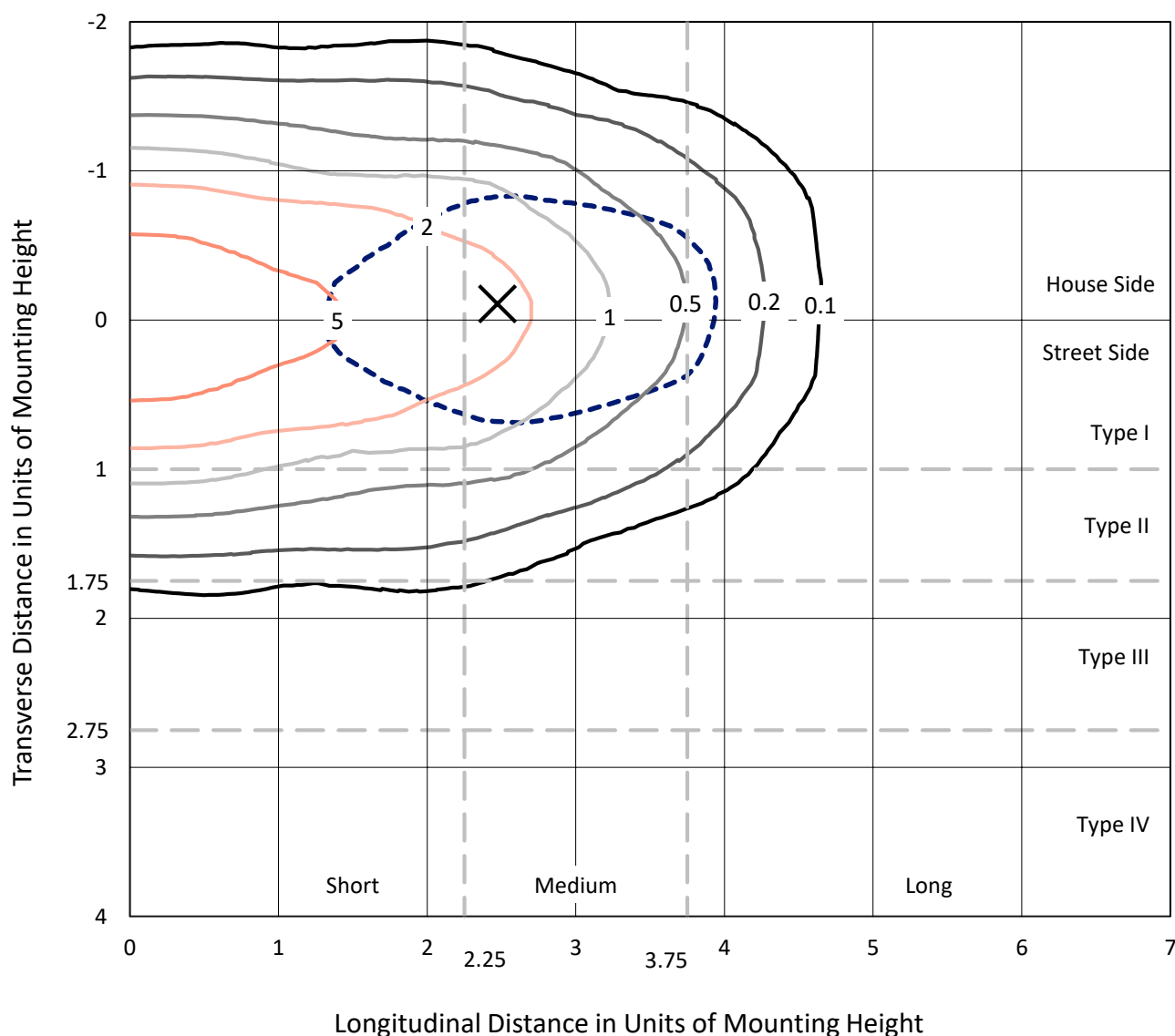
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

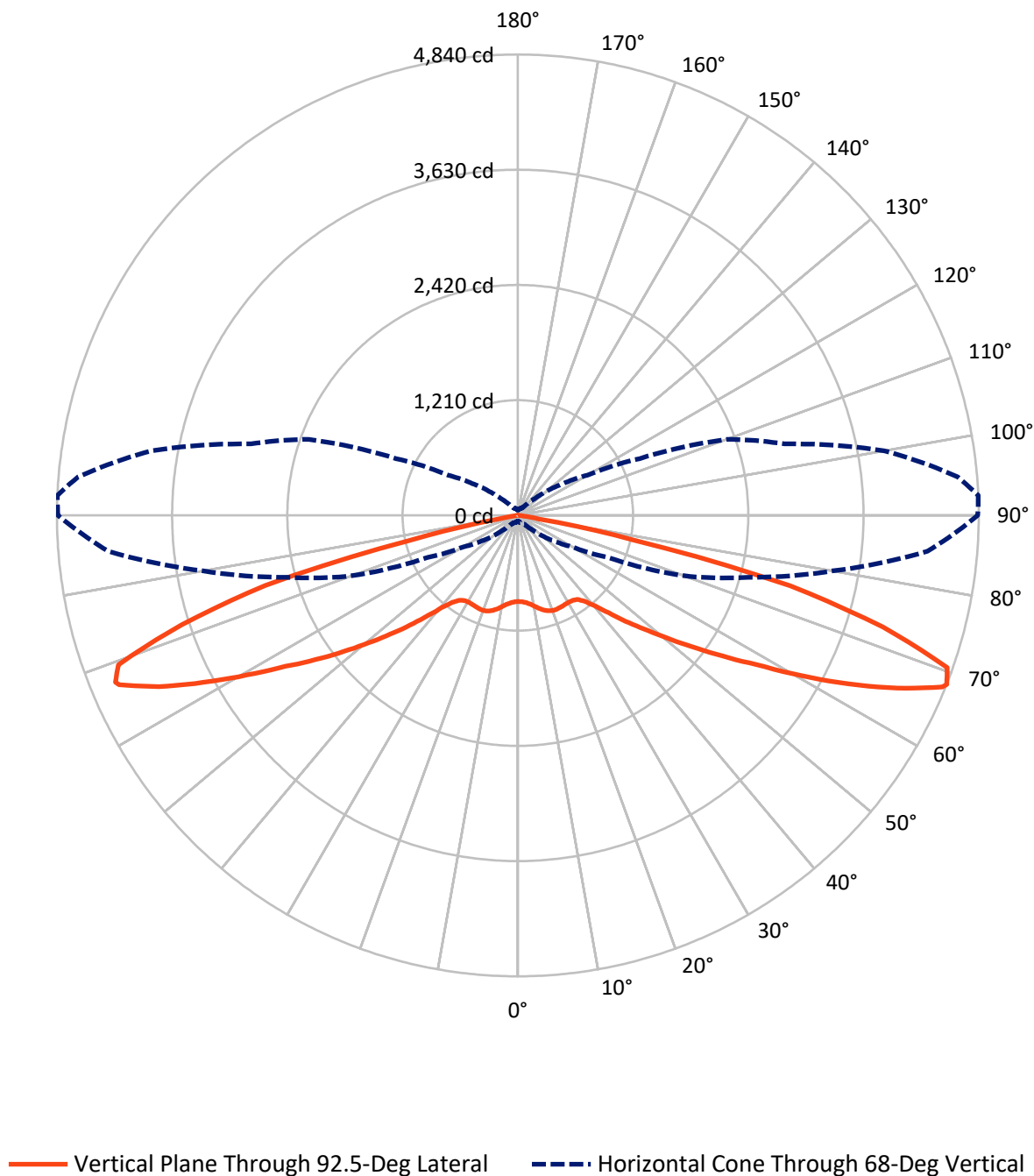


Based on 10 foot mounting height. Maximum calculated value = 9.3 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



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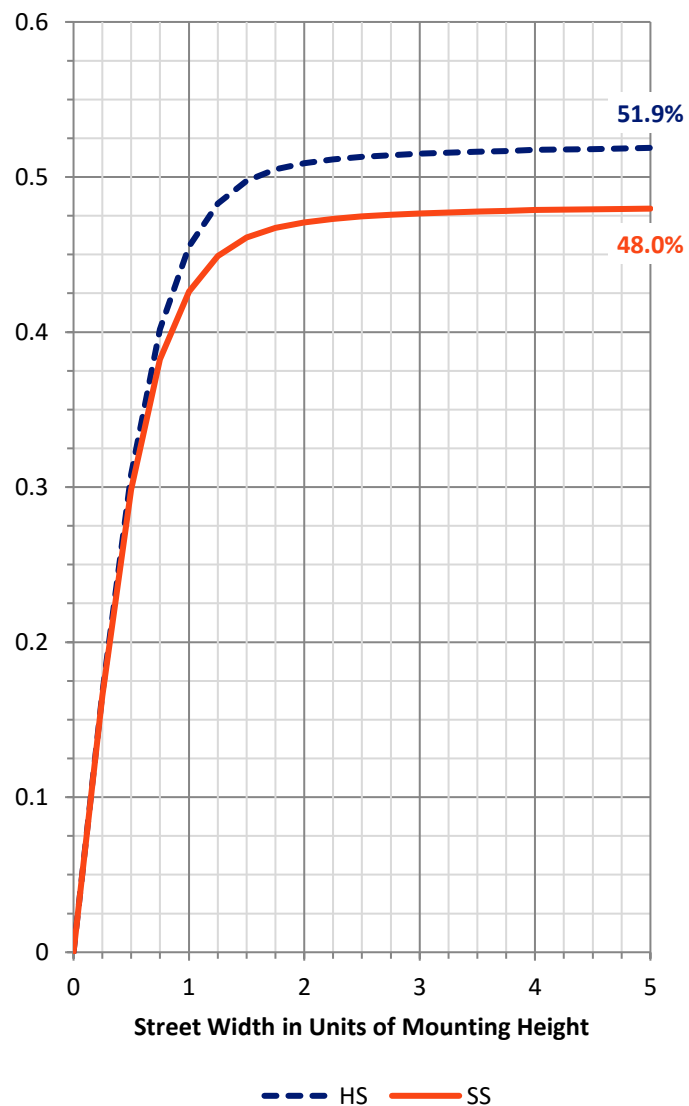
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2401.9	0.0	2401.9
	% Fixture	52.2	0.0	52.2
Street Side	Lumens	2195.9	0.0	2195.9
	% Fixture	47.8	0.0	47.8
Total	Lumens	4597.9	0.0	4597.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	1.9
10°-20°	281.1	6.1
20°-30°	456.0	9.9
30°-40°	566.8	12.3
40°-50°	704.7	15.3
50°-60°	866.9	18.9
60°-70°	1024.9	22.3
70°-80°	573.9	12.5
80°-90°	34.9	0.8
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°	4597.9	100.0
0°-180°	4597.9	100.0

Coefficient of Utilization



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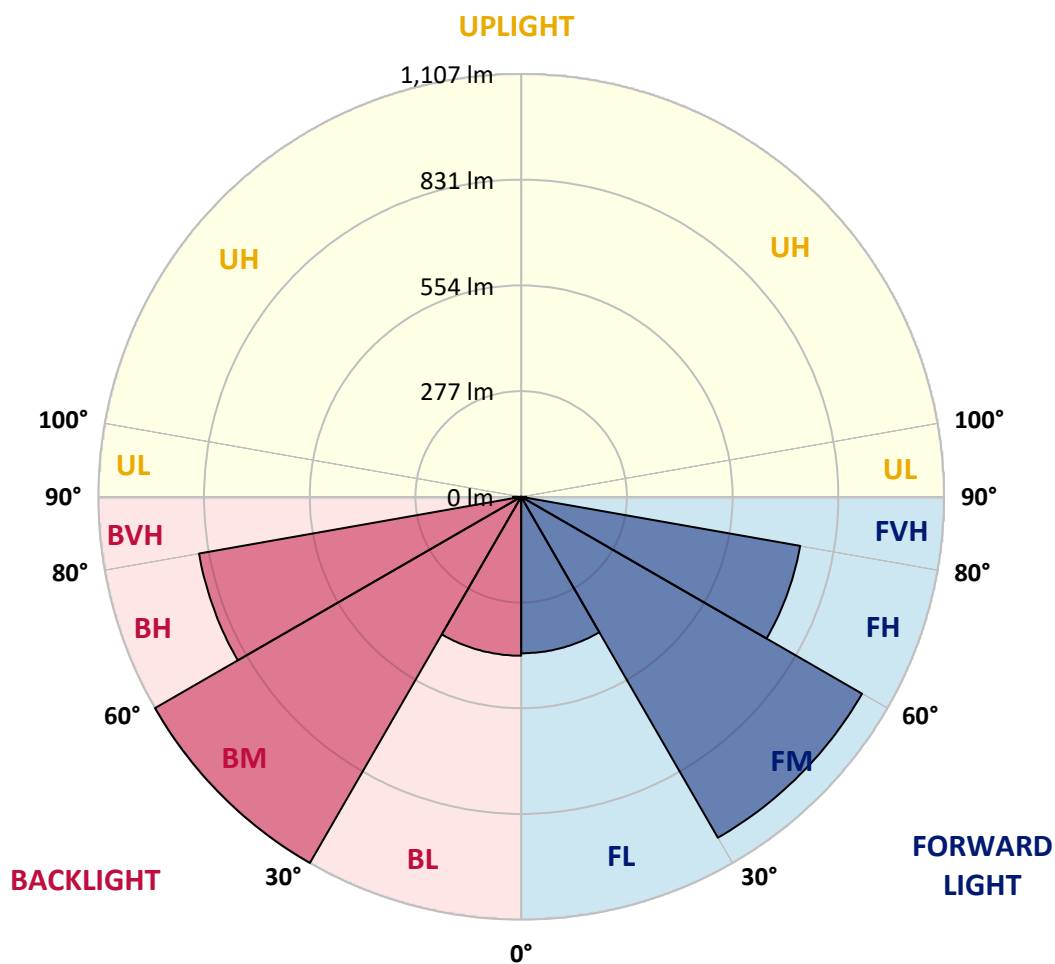
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	409.7	8.9			
FM	(30°-60°)	1030.9	22.4			
FH	(60°-80°)	742.0	16.1			G1/1800
FVH	(80°-90°)	13.3	0.3			G1/100
BL	(0°-30°)	416.2	9.1	B1/500		
BM	(30°-60°)	1107.4	24.1	B2/2500		
BH	(60°-80°)	856.8	18.6	B2/1000		G2/1000
BVH	(80°-90°)	21.6	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type I Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9
2.5°	908.1	908.1	908.1	908.9	909.7	911.4	910.6	912.2	909.7	913.0	913.0
5°	918.8	919.6	920.5	920.5	922.1	922.9	922.1	924.6	922.1	925.4	926.2
7.5°	928.7	928.7	929.5	930.4	932.0	933.7	934.5	937.0	936.1	939.4	942.7
10°	936.1	935.3	936.1	937.8	941.9	944.4	947.7	951.0	952.7	956.0	960.9
12.5°	939.4	938.6	941.1	945.2	949.4	954.3	959.3	966.7	971.6	976.6	984.0
15°	937.8	937.8	941.1	946.1	954.3	963.4	972.5	982.4	991.5	1002.2	1009.6
17.5°	922.1	923.8	928.7	937.0	949.4	963.4	978.2	994.8	1009.6	1024.5	1034.4
20°	894.0	895.7	904.8	914.7	931.2	951.8	974.9	998.9	1022.0	1041.8	1055.8
22.5°	859.4	857.7	866.0	879.2	901.5	926.2	956.0	991.5	1022.8	1050.9	1070.7
25°	805.7	805.7	814.8	831.3	855.2	885.8	922.1	967.5	1009.6	1045.9	1074.0
27.5°	748.8	749.6	761.1	775.2	802.4	831.3	873.4	926.2	977.4	1025.3	1066.6
30°	691.8	694.3	704.2	718.2	747.1	777.6	820.6	872.6	927.9	987.3	1043.5
32.5°	633.2	636.5	644.7	661.2	692.6	726.5	770.2	816.4	869.3	934.5	1007.1
35°	577.9	580.3	586.9	606.8	639.0	675.3	724.0	768.6	822.2	882.5	962.6
37.5°	525.9	528.3	535.8	556.4	588.6	624.9	672.8	723.2	778.5	837.9	917.2
40°	469.7	475.5	485.4	505.2	534.9	576.2	624.9	677.8	736.4	804.1	885.0
42.5°	418.5	423.5	432.6	449.9	479.6	523.4	574.6	629.0	692.6	769.4	861.0
45°	371.5	375.6	384.7	400.4	431.7	466.4	512.7	569.6	635.7	724.0	835.4
47.5°	326.1	330.2	340.1	359.1	384.7	418.5	459.8	510.2	571.3	661.2	786.7
50°	280.7	284.8	294.7	313.7	338.5	371.5	409.5	454.9	515.1	592.7	715.7
52.5°	231.1	235.3	245.2	264.2	288.1	319.5	358.3	405.3	461.5	534.9	636.5
55°	177.5	183.3	192.3	208.0	233.6	265.0	303.8	355.0	411.9	483.8	577.9
57.5°	128.0	132.1	142.8	155.2	176.7	209.7	244.4	297.2	360.8	434.2	527.5
60°	93.3	97.4	104.8	114.7	129.6	153.5	184.1	233.6	303.8	386.3	482.1
62.5°	77.6	80.9	88.3	98.2	106.5	118.1	136.2	174.2	242.7	334.3	435.1
65°	68.5	71.0	77.6	87.5	94.1	99.1	106.5	132.1	188.2	278.2	388.8
67.5°	61.1	63.6	68.5	76.8	84.2	86.7	90.8	108.1	147.8	226.2	340.1
68°	60.3	62.7	66.9	74.3	81.7	84.2	88.3	105.7	143.6	215.5	326.9
70°	56.1	57.8	61.9	67.7	73.5	75.1	80.1	97.4	134.6	188.2	265.0
72.5°	51.2	52.0	54.5	59.4	65.2	66.0	71.0	85.0	105.7	138.7	197.3
75°	42.9	43.8	47.1	51.2	54.5	56.1	57.8	64.4	71.8	85.9	116.4
77.5°	33.0	34.7	37.1	39.6	44.6	46.2	44.6	49.5	52.8	58.6	71.0
80°	19.8	19.8	22.3	24.8	27.2	31.4	29.7	34.7	37.1	40.5	47.9
82.5°	3.3	4.1	4.1	5.8	7.4	9.1	9.9	12.4	15.7	19.0	25.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	2.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	92.5°	95°	100°
0°	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9
2.5°	908.1	910.6	910.6	909.7	909.7	909.7	907.3	908.1	908.9	911.4	908.1
5°	921.3	923.8	922.9	922.1	922.1	922.1	918.8	919.6	920.5	922.1	918.8
7.5°	938.6	941.1	941.9	941.9	941.9	943.6	938.6	938.6	940.3	941.9	937.0
10°	964.2	964.2	966.7	968.3	970.0	971.6	968.3	966.7	970.0	970.0	964.2
12.5°	988.2	989.8	993.9	997.2	998.1	1001.4	1001.4	1000.5	1003.0	1002.2	995.6
15°	1015.4	1017.0	1020.3	1024.5	1025.3	1028.6	1028.6	1029.4	1031.9	1033.6	1023.7
17.5°	1041.0	1043.5	1043.5	1044.3	1045.9	1048.4	1050.1	1050.9	1053.4	1055.0	1045.1
20°	1062.5	1064.9	1060.8	1057.5	1054.2	1055.8	1059.1	1062.5	1064.1	1064.9	1052.5
22.5°	1079.0	1079.8	1073.2	1064.1	1055.0	1054.2	1058.3	1064.1	1065.8	1064.9	1047.6
25°	1088.0	1090.5	1083.9	1069.9	1053.4	1047.6	1051.7	1059.1	1062.5	1059.1	1038.5
27.5°	1088.0	1097.1	1093.8	1079.0	1056.7	1041.0	1043.5	1055.0	1057.5	1053.4	1029.4
30°	1079.8	1098.8	1102.9	1093.8	1070.7	1043.5	1040.2	1053.4	1056.7	1049.2	1025.3
32.5°	1063.3	1097.9	1114.5	1115.3	1097.1	1063.3	1046.8	1060.0	1062.5	1053.4	1033.6
35°	1040.2	1097.1	1129.3	1145.0	1139.2	1105.4	1076.5	1084.7	1083.1	1073.2	1065.8
37.5°	1014.6	1097.1	1150.8	1187.1	1200.3	1183.0	1145.0	1140.9	1145.0	1130.1	1126.0
40°	986.5	1099.6	1181.3	1245.7	1285.3	1291.1	1257.3	1245.7	1250.7	1236.6	1242.4
42.5°	970.0	1102.9	1221.8	1314.2	1391.0	1449.6	1434.8	1400.1	1397.6	1399.3	1411.6
45°	961.7	1111.2	1262.2	1391.8	1499.2	1629.6	1643.6	1581.7	1585.0	1594.1	1613.1
47.5°	952.7	1126.8	1309.3	1472.7	1617.2	1800.5	1869.0	1785.6	1779.0	1812.9	1818.6
50°	919.6	1145.8	1362.9	1563.5	1741.0	1992.8	2101.0	2015.9	2017.6	2049.0	2037.4
52.5°	843.7	1146.7	1419.9	1654.4	1864.9	2182.7	2347.0	2290.8	2286.7	2317.2	2256.2
55°	738.8	1094.6	1466.1	1743.5	1982.1	2359.4	2601.2	2613.6	2605.4	2610.3	2478.2
57.5°	654.6	966.7	1471.1	1818.6	2081.1	2526.9	2862.1	2951.3	2952.1	2930.6	2696.2
60°	600.2	823.0	1406.7	1880.5	2196.7	2740.7	3202.2	3402.0	3413.5	3326.0	2987.6
62.5°	554.8	750.4	1273.8	1944.1	2329.6	2957.0	3568.7	3897.3	3898.1	3752.0	3308.7
65°	519.3	710.8	1127.7	1920.2	2432.0	3166.7	3956.7	4395.9	4374.5	4213.5	3613.3
67.5°	479.6	675.3	1060.0	1883.0	2519.5	3360.7	4298.5	4802.9	4808.7	4610.6	3895.7
68°	471.4	662.1	1042.6	1851.7	2509.6	3354.1	4316.7	4830.1	4840.1	4636.1	3908.0
70°	406.2	577.9	907.3	1617.2	2331.3	3175.0	4201.1	4753.4	4783.9	4556.1	3770.2
72.5°	270.8	399.6	605.9	1142.5	1796.3	2522.8	3439.1	3981.5	4007.1	3853.6	3131.2
75°	171.7	242.7	322.0	658.8	1206.9	1810.4	2593.0	2909.1	2951.3	2900.9	2344.5
77.5°	104.0	170.1	198.1	319.5	635.7	847.0	1171.4	1192.1	1239.9	1210.2	1215.2
80°	68.5	118.1	144.5	217.1	220.4	182.4	207.2	208.9	221.2	235.3	245.2
82.5°	38.8	71.8	100.7	148.6	131.3	67.7	57.8	60.3	61.9	63.6	75.1
85°	5.8	13.2	28.1	46.2	47.1	22.3	20.6	19.0	19.8	21.5	27.2
87.5°	0.0	0.0	0.0	0.0	0.8	1.7	2.5	2.5	2.5	5.0	5.0
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°	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9	903.9
2.5°	907.3	906.4	907.3	904.8	907.3	906.4	906.4	906.4	905.6	906.4	906.4
5°	917.2	917.2	917.2	915.5	917.2	917.2	917.2	917.2	916.3	917.2	918.0
7.5°	936.1	936.1	935.3	932.8	934.5	934.5	933.7	932.0	930.4	931.2	930.4
10°	961.7	963.4	958.4	958.4	956.0	952.7	950.2	947.7	946.9	945.2	941.9
12.5°	993.1	992.3	985.7	983.2	981.5	974.9	970.0	967.5	964.2	960.1	955.1
15°	1021.2	1017.9	1012.9	1010.4	1008.0	1000.5	993.9	988.2	984.0	978.2	970.8
17.5°	1040.2	1036.9	1034.4	1033.6	1033.6	1027.0	1021.2	1013.7	1004.7	993.9	981.5
20°	1044.3	1044.3	1045.1	1050.1	1055.0	1052.5	1045.9	1036.9	1023.7	1006.3	987.3
22.5°	1038.5	1041.8	1049.2	1061.6	1072.4	1073.2	1066.6	1053.4	1031.1	1006.3	978.2
25°	1028.6	1037.7	1053.4	1070.7	1085.6	1085.6	1074.0	1055.0	1024.5	989.0	951.8
27.5°	1023.7	1041.8	1064.1	1082.3	1092.2	1086.4	1065.8	1038.5	996.4	951.0	908.1
30°	1029.4	1057.5	1081.4	1093.8	1095.5	1076.5	1041.0	1000.5	951.0	896.5	852.8
32.5°	1050.9	1084.7	1102.9	1105.4	1093.8	1058.3	1003.0	946.9	891.6	841.2	796.6
35°	1094.6	1123.5	1130.1	1120.2	1091.3	1031.9	952.7	886.6	837.1	789.2	743.0
37.5°	1165.6	1178.8	1166.5	1137.6	1083.1	999.7	906.4	842.0	789.2	742.1	691.0
40°	1266.4	1251.5	1216.0	1159.0	1074.0	964.2	870.1	805.7	747.1	695.1	643.9
42.5°	1391.8	1339.8	1266.4	1183.8	1064.1	941.1	843.7	769.4	705.0	647.2	593.6
45°	1532.2	1435.6	1335.7	1211.9	1060.8	927.1	812.3	724.8	649.7	591.9	539.1
47.5°	1675.0	1537.1	1405.9	1242.4	1064.9	902.3	764.4	666.2	587.8	531.6	482.1
50°	1819.5	1651.0	1487.6	1282.0	1062.5	851.9	699.2	599.3	526.7	476.3	431.7
52.5°	1964.7	1772.4	1571.8	1317.5	1029.4	772.7	627.4	542.4	472.2	423.5	379.7
55°	2107.6	1890.5	1654.4	1328.3	933.7	689.3	567.1	485.4	416.1	366.5	318.7
57.5°	2243.0	1996.9	1712.1	1265.5	815.6	624.1	513.5	433.4	359.9	303.0	255.9
60°	2411.4	2098.5	1728.6	1113.6	721.5	569.6	464.8	373.1	290.6	230.3	187.4
62.5°	2595.5	2236.3	1703.1	968.3	666.2	521.7	404.5	302.1	222.1	163.5	131.3
65°	2730.8	2293.3	1573.5	890.7	631.5	474.7	340.1	234.4	153.5	112.3	99.9
67.5°	2910.8	2349.4	1439.7	852.8	593.6	413.6	262.5	169.2	118.9	93.3	85.9
68°	2898.4	2333.8	1411.6	842.9	582.0	392.1	247.7	165.9	115.6	90.8	83.4
70°	2730.8	2141.4	1225.9	747.1	482.1	305.4	213.0	151.1	106.5	82.6	75.9
72.5°	2240.5	1661.0	879.2	492.0	313.7	223.7	157.7	113.9	88.3	72.6	67.7
75°	1585.8	1038.5	440.8	283.2	197.3	129.6	89.2	73.5	65.2	57.8	57.8
77.5°	891.6	543.2	232.8	194.0	111.4	75.1	59.4	55.3	51.2	47.1	52.0
80°	290.6	283.2	171.7	132.9	77.6	55.3	46.2	43.8	41.3	37.1	46.2
82.5°	156.8	194.0	123.8	94.9	57.0	39.6	34.7	35.5	32.2	28.9	34.7
85°	70.2	92.5	82.6	66.0	35.5	22.3	18.2	21.5	19.0	17.3	16.5
87.5°	27.2	45.4	33.0	19.0	8.3	5.0	5.0	4.1	3.3	3.3	2.5
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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CATALOG NUMBER: ENV-F02-LED-E1-GZW

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	903.9	903.9	903.9	903.9	903.9
2.5°	903.9	903.9	903.1	902.3	900.6
5°	915.5	915.5	914.7	913.9	912.2
7.5°	927.9	927.1	926.2	925.4	923.8
10°	941.1	939.4	939.4	940.3	939.4
12.5°	954.3	951.8	949.4	948.5	951.0
15°	967.5	962.6	958.4	957.6	957.6
17.5°	974.9	966.7	959.3	956.8	956.8
20°	973.3	958.4	948.5	943.6	944.4
22.5°	957.6	937.0	923.8	917.2	914.7
25°	924.6	899.8	883.3	874.2	875.1
27.5°	875.1	848.6	830.5	825.5	820.6
30°	816.4	790.0	771.9	761.1	762.0
32.5°	758.7	729.8	713.3	700.9	699.2
35°	703.3	672.0	652.2	643.1	641.4
37.5°	648.9	615.8	597.7	589.4	583.6
40°	598.5	568.8	547.3	534.9	532.5
42.5°	549.0	515.1	493.7	484.6	482.1
45°	492.8	460.6	441.7	434.2	432.6
47.5°	442.5	411.9	396.3	386.3	383.0
50°	393.8	364.9	346.7	337.6	336.0
52.5°	342.6	313.7	294.7	287.3	280.7
55°	286.5	255.9	236.9	223.7	218.8
57.5°	221.2	194.0	174.2	165.1	156.0
60°	158.5	134.6	118.9	111.4	104.8
62.5°	112.3	96.6	86.7	79.3	75.1
65°	92.5	85.0	74.3	67.7	64.4
67.5°	81.7	74.3	66.0	60.3	57.8
68°	80.1	72.6	64.4	58.6	57.0
70°	73.5	66.0	58.6	54.5	52.8
72.5°	65.2	59.4	52.8	48.7	47.1
75°	56.1	50.4	46.2	42.9	40.5
77.5°	49.5	41.3	39.6	36.3	34.7
80°	41.3	37.1	33.8	31.4	29.7
82.5°	33.8	28.1	23.9	21.5	20.6
85°	19.0	17.3	14.0	10.7	9.9
87.5°	1.7	0.8	0.8	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)