

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: P140755

Luminaire Tested: **ECM-F02-LED-E1-RW**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P140755
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33689)
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-RW
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4882.7 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

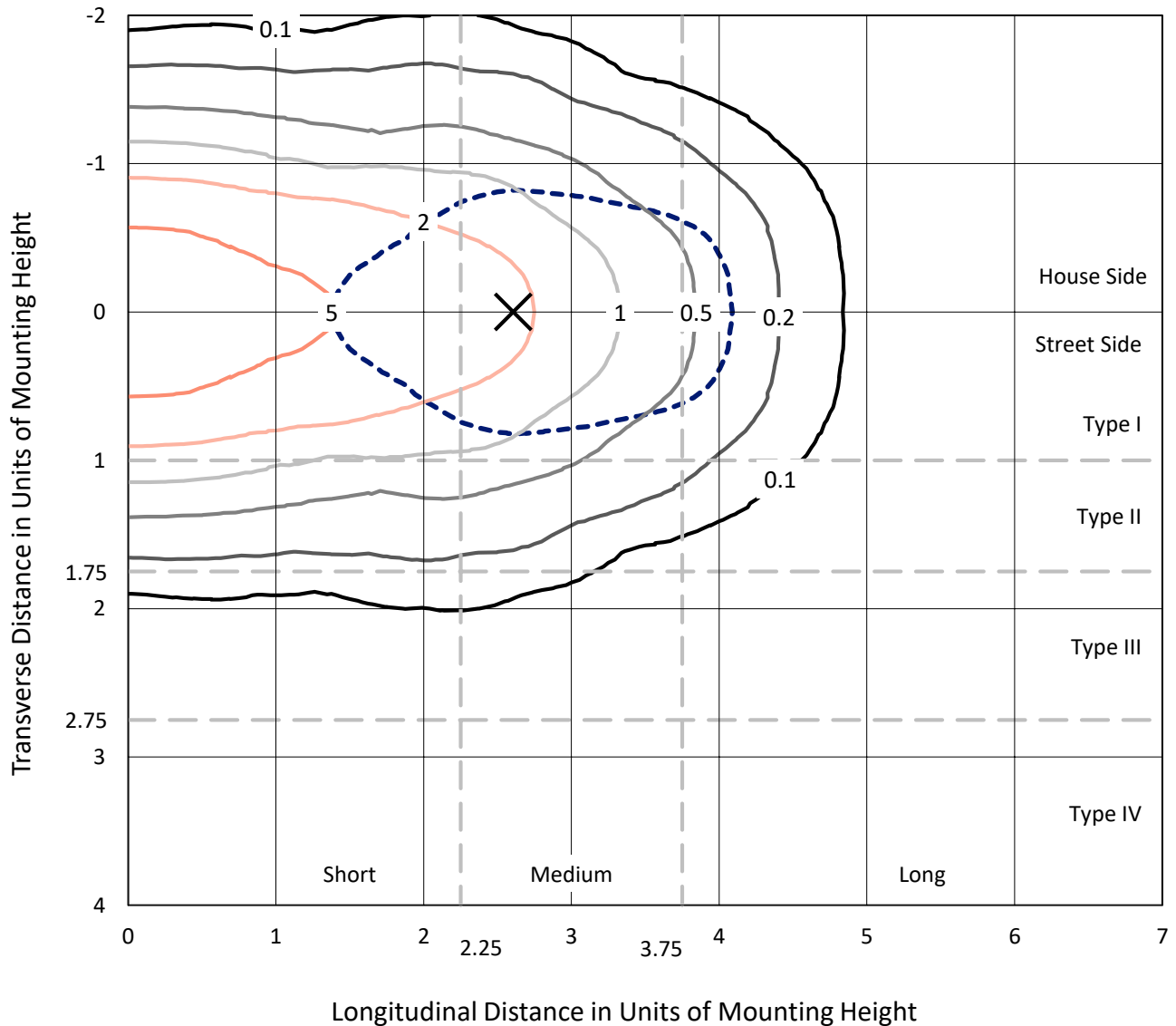
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

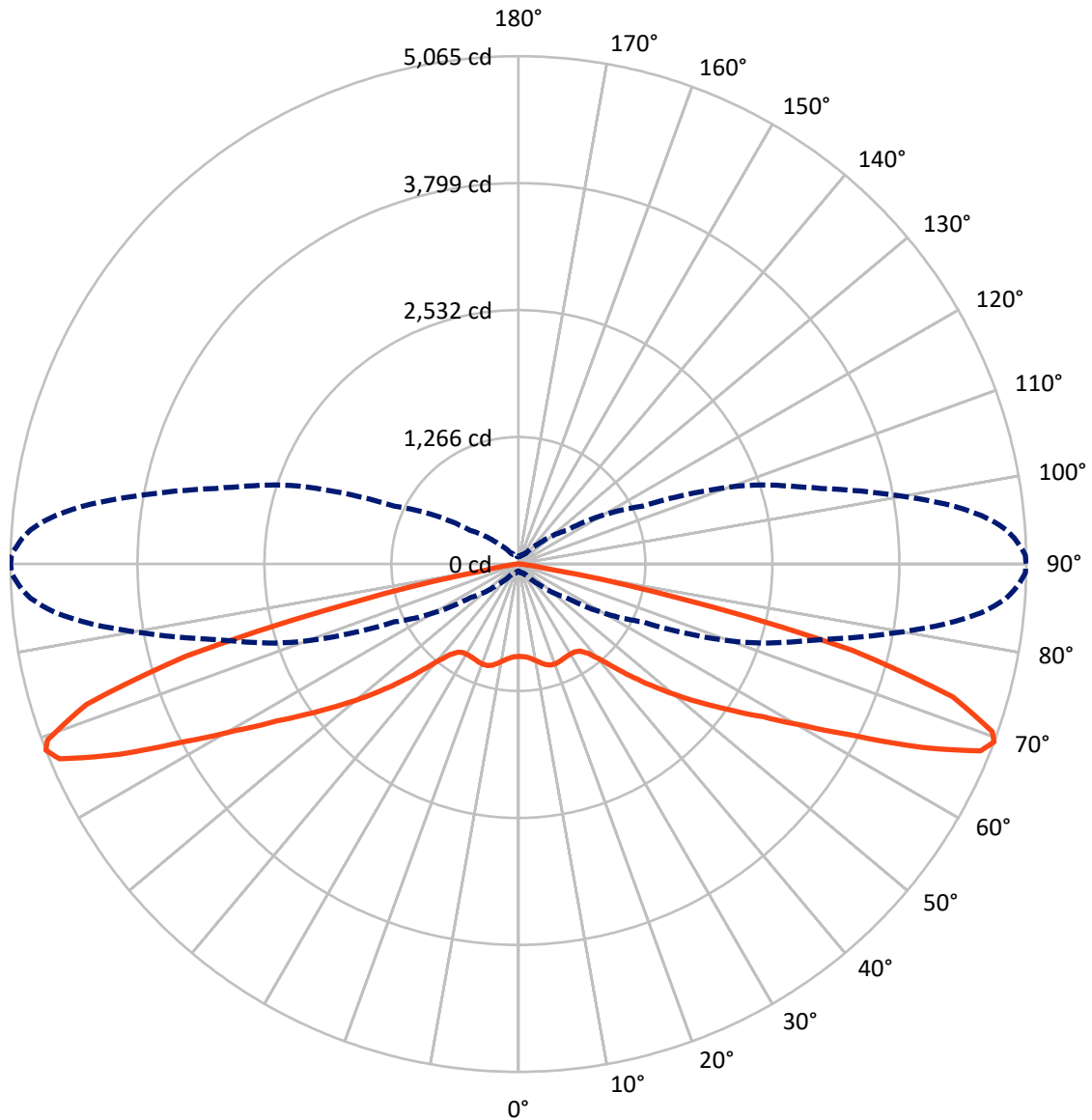
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.4 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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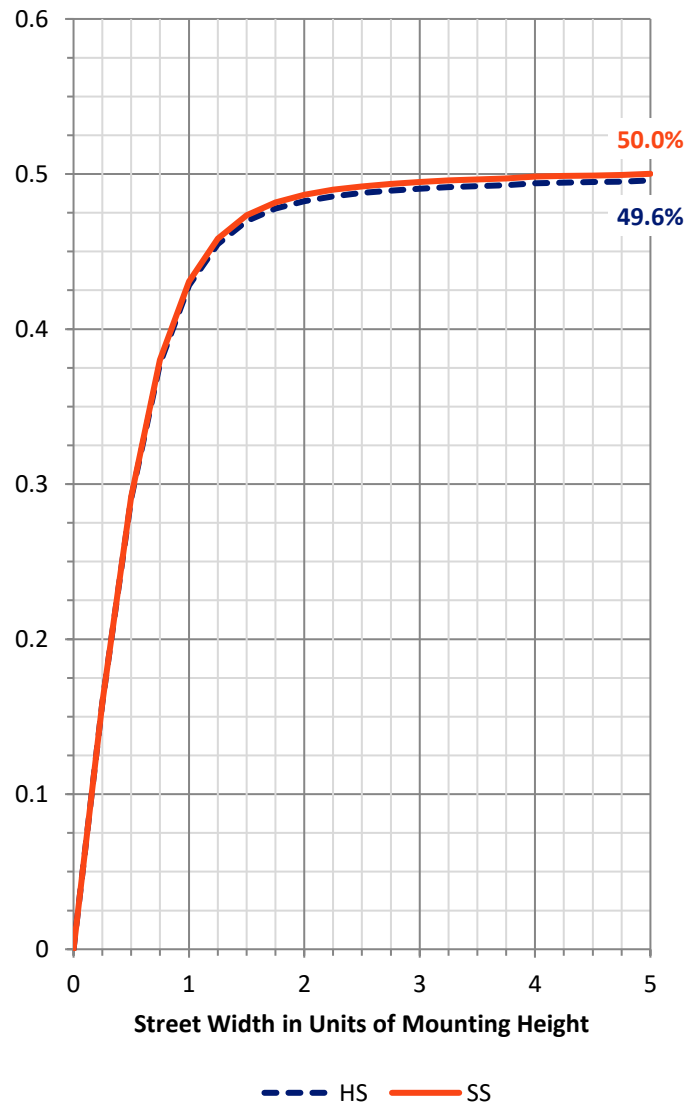
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2441.3	0.0	2441.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2441.3	0.0	2441.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	4882.7	0.0	4882.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.3	1.8
10°-20°	283.7	5.8
20°-30°	458.9	9.4
30°-40°	573.2	11.7
40°-50°	716.9	14.7
50°-60°	883.4	18.1
60°-70°	1093.6	22.4
70°-80°	714.8	14.6
80°-90°	67.9	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°	4882.7	100.0
0°-180°	4882.7	100.0



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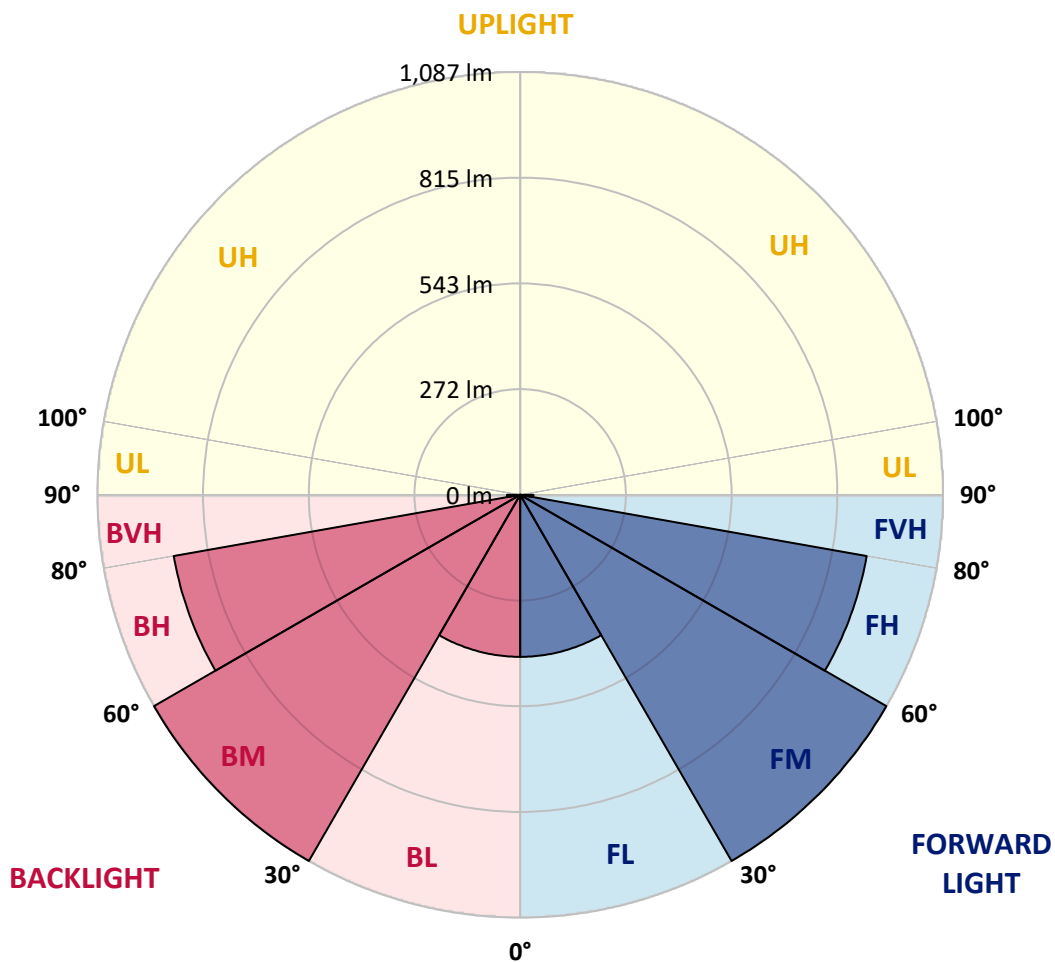
CATALOG NUMBER: ECM-F02-LED-E1-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	416.4	8.5			
FM	(30°-60°)	1086.7	22.3			
FH	(60°-80°)	904.2	18.5			G1/1800
FVH	(80°-90°)	34.0	0.7			G1/100
BL	(0°-30°)	416.4	8.5	B1/500		
BM	(30°-60°)	1086.7	22.3	B2/2500		
BH	(60°-80°)	904.2	18.5	B2/1000		G2/1000
BVH	(80°-90°)	34.0	0.7			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°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8
2.5°	927.9	928.4	926.8	927.4	927.9	927.4	926.5	926.5	926.2	925.9	925.7
5°	934.0	934.2	933.4	934.8	935.0	935.9	935.8	936.2	936.0	935.8	935.7
7.5°	942.4	943.6	942.8	944.6	946.6	949.4	950.7	954.0	954.0	953.9	953.9
10°	950.4	951.6	951.6	956.0	960.6	965.9	971.4	976.6	976.9	977.3	977.6
12.5°	956.5	957.4	958.7	966.7	977.2	986.0	995.6	1003.8	1004.2	1004.5	1004.8
15°	954.0	956.0	962.3	975.0	993.4	1008.0	1019.8	1029.7	1030.4	1031.0	1031.7
17.5°	945.5	948.6	957.6	979.1	1007.4	1030.8	1044.8	1047.6	1048.0	1048.5	1048.9
20°	927.0	931.4	945.8	976.3	1018.2	1049.8	1063.8	1058.9	1058.5	1058.0	1057.6
22.5°	896.2	902.0	919.9	963.4	1019.0	1063.6	1077.3	1063.6	1062.0	1060.5	1058.9
25°	855.0	859.6	880.0	931.4	1006.3	1066.0	1085.8	1066.6	1064.1	1061.6	1059.2
27.5°	804.8	808.8	834.1	888.8	974.9	1053.4	1091.4	1071.8	1068.6	1065.4	1062.2
30°	748.5	751.8	779.6	837.9	930.9	1025.6	1090.8	1083.6	1079.8	1076.0	1072.2
32.5°	692.3	693.7	718.5	782.6	882.0	984.6	1081.7	1101.8	1098.1	1094.4	1090.7
35°	630.7	635.1	661.5	731.4	826.6	939.4	1069.6	1127.1	1125.0	1122.9	1120.8
37.5°	581.2	582.5	610.9	683.6	781.8	898.4	1054.2	1159.6	1161.1	1162.6	1164.0
40°	531.6	531.6	559.7	635.1	736.9	861.6	1041.2	1199.5	1207.0	1214.6	1222.1
42.5°	477.4	481.3	508.8	583.9	693.4	830.2	1034.6	1247.4	1261.6	1275.8	1290.0
45°	426.8	429.2	457.4	530.8	639.2	794.4	1032.8	1300.8	1322.3	1343.9	1365.5
47.5°	377.0	380.6	407.2	474.7	580.1	746.8	1030.2	1361.6	1389.1	1416.7	1444.3
50°	330.8	333.0	362.6	424.0	521.8	685.2	1014.0	1429.6	1463.2	1496.9	1530.6
52.5°	281.8	286.2	310.7	374.0	462.8	618.9	971.4	1503.6	1544.3	1585.0	1625.7
55°	230.6	229.5	258.9	318.4	411.4	555.3	892.7	1567.7	1616.8	1666.0	1715.1
57.5°	169.0	172.5	199.5	259.8	351.6	501.9	799.9	1601.0	1662.3	1723.6	1784.9
60°	121.0	126.0	149.4	197.0	292.2	449.6	705.2	1577.8	1659.1	1740.3	1821.5
62.5°	94.6	96.9	117.0	147.8	227.8	394.9	641.7	1517.9	1629.8	1741.8	1853.8
65°	82.6	85.0	102.9	118.9	173.0	342.8	603.4	1470.0	1617.8	1765.7	1913.5
67.5°	75.1	78.2	93.6	104.6	142.0	298.6	594.4	1430.9	1604.4	1777.8	1951.2
69°	71.5	74.6	88.9	99.0	131.8	284.5	583.9	1365.1	1541.2	1717.2	1893.1
70°	69.8	72.4	86.2	95.8	128.5	276.3	560.3	1290.0	1460.2	1630.2	1800.4
72.5°	64.4	65.8	78.4	87.8	121.6	231.2	443.8	965.6	1107.8	1249.9	1392.1
75°	57.0	59.2	70.7	80.4	97.7	148.0	291.2	583.6	688.9	794.2	899.5
77.5°	49.0	50.9	60.8	76.8	75.1	89.8	167.3	326.1	383.0	439.9	496.8
80°	42.3	44.3	53.4	71.2	61.1	66.3	112.8	212.7	234.3	256.0	277.6
82.5°	33.3	34.7	44.8	58.0	47.3	49.2	84.4	185.8	198.8	211.8	224.9
85°	21.2	22.0	32.8	39.6	33.0	29.2	53.1	136.2	146.5	156.8	167.1
87.5°	7.4	10.4	14.6	13.8	13.8	10.4	18.8	50.4	54.4	58.4	62.4
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8
2.5°	925.4	925.1	925.4	925.4	925.2	924.8	924.8	924.6	924.0	924.0	923.8
5°	935.5	935.4	935.8	935.6	935.8	935.6	935.6	935.3	935.6	934.4	934.2
7.5°	953.8	953.8	953.8	954.6	954.0	953.8	954.4	954.4	954.3	953.8	953.8
10°	977.9	978.2	978.8	979.4	979.4	979.4	980.4	979.6	981.3	979.6	980.4
12.5°	1005.2	1005.5	1006.8	1007.4	1008.0	1008.0	1008.0	1009.6	1010.7	1010.4	1010.7
15°	1032.3	1033.0	1033.3	1034.2	1034.1	1034.4	1035.5	1037.4	1036.9	1038.0	1038.0
17.5°	1049.4	1049.8	1049.5	1049.5	1050.0	1050.9	1052.0	1053.1	1052.8	1053.6	1054.2
20°	1057.1	1056.7	1055.8	1055.3	1055.0	1055.6	1055.6	1055.8	1056.4	1056.4	1056.4
22.5°	1057.4	1055.8	1053.9	1052.8	1051.4	1050.6	1051.2	1050.6	1050.6	1050.6	1050.0
25°	1056.7	1054.2	1051.2	1048.9	1046.8	1045.4	1044.0	1043.5	1042.4	1042.4	1042.4
27.5°	1059.0	1055.8	1052.8	1048.7	1045.6	1044.0	1042.1	1040.2	1039.0	1038.0	1038.0
30°	1068.4	1064.6	1060.8	1055.8	1051.8	1050.4	1046.8	1044.8	1042.1	1040.7	1040.2
32.5°	1087.0	1083.4	1078.2	1072.6	1069.4	1065.2	1062.2	1058.0	1055.0	1053.1	1050.6
35°	1118.7	1116.6	1112.2	1108.6	1103.8	1099.1	1093.0	1090.8	1084.4	1083.4	1080.4
37.5°	1165.5	1167.0	1166.2	1163.4	1160.1	1156.0	1153.5	1148.8	1146.4	1143.9	1141.2
40°	1229.7	1237.2	1239.6	1242.7	1243.6	1247.1	1242.9	1242.4	1239.1	1241.8	1240.2
42.5°	1304.2	1318.4	1326.0	1335.2	1345.0	1354.1	1361.2	1373.4	1372.0	1381.4	1387.9
45°	1387.0	1408.6	1428.4	1443.6	1462.6	1483.4	1501.9	1519.0	1538.2	1549.2	1565.5
47.5°	1471.9	1499.4	1527.8	1555.8	1582.8	1609.8	1642.8	1672.8	1702.0	1721.8	1746.8
50°	1564.2	1597.9	1632.1	1666.4	1704.7	1747.1	1784.0	1823.0	1863.2	1904.0	1932.6
52.5°	1666.5	1707.2	1744.3	1780.6	1828.0	1872.8	1920.7	1969.7	2030.6	2074.8	2114.2
55°	1764.3	1813.4	1854.1	1897.6	1947.1	1997.0	2055.6	2116.9	2181.3	2245.2	2303.0
57.5°	1846.2	1907.6	1956.0	1999.2	2052.2	2109.8	2172.8	2248.8	2322.2	2401.4	2476.0
60°	1902.8	1984.0	2042.4	2094.4	2156.0	2219.8	2302.1	2391.8	2488.4	2586.9	2682.7
62.5°	1965.8	2077.8	2157.6	2232.0	2304.9	2375.9	2468.6	2580.0	2711.0	2830.1	2957.0
65°	2061.3	2209.1	2326.9	2421.6	2525.0	2628.4	2736.6	2866.8	3015.6	3189.5	3337.4
67.5°	2124.6	2298.0	2447.6	2583.4	2704.2	2829.9	2966.4	3122.1	3301.8	3479.3	3663.1
69°	2069.2	2245.2	2403.4	2552.8	2685.1	2820.6	2959.2	3116.0	3299.6	3495.8	3689.8
70°	1970.4	2140.6	2304.0	2461.4	2590.8	2732.2	2868.7	3018.1	3204.2	3400.4	3611.4
72.5°	1534.2	1676.4	1844.2	1996.1	2150.5	2279.6	2402.8	2552.8	2740.5	2927.4	3132.9
75°	1004.8	1110.1	1263.6	1388.6	1522.0	1643.0	1732.5	1881.4	1995.3	2171.1	2362.1
77.5°	553.7	610.6	690.4	792.2	849.8	918.0	1007.4	1061.6	1142.5	1265.6	1322.8
80°	299.2	320.8	354.5	375.6	392.7	375.9	366.8	383.0	376.2	374.2	355.8
82.5°	237.9	251.0	268.3	280.6	272.7	236.6	198.4	170.6	152.7	128.5	110.1
85°	177.4	187.6	194.2	202.6	201.2	181.9	145.6	112.6	88.3	70.4	61.4
87.5°	66.4	70.4	72.4	88.0	80.9	76.8	59.7	43.4	33.3	24.2	19.6
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):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8	921.8
2.5°	924.3	924.0	924.0	924.0	924.3	923.8	923.2	923.8	923.4	923.5	923.5
5°	935.3	935.0	935.0	935.3	935.0	935.3	935.0	934.0	934.4	934.8	935.0
7.5°	954.3	954.0	954.0	955.4	955.2	954.8	954.6	955.2	954.3	954.3	954.9
10°	980.4	981.6	981.3	982.1	981.8	981.2	980.7	981.3	982.1	982.4	981.3
12.5°	1012.4	1012.6	1012.1	1013.4	1012.6	1014.6	1012.4	1013.4	1014.6	1012.9	1013.7
15°	1038.2	1038.2	1039.4	1039.6	1039.4	1039.9	1041.6	1040.7	1039.9	1041.2	1041.8
17.5°	1053.9	1054.8	1055.0	1055.3	1055.8	1056.4	1056.6	1056.4	1056.6	1057.2	1058.3
20°	1057.5	1057.2	1057.8	1058.0	1058.8	1058.9	1059.4	1059.2	1060.0	1060.2	1060.5
22.5°	1051.2	1051.4	1051.8	1052.6	1052.3	1052.8	1053.1	1053.9	1053.6	1054.2	1054.5
25°	1042.6	1043.2	1043.5	1043.2	1043.2	1043.4	1043.8	1043.4	1044.6	1045.1	1045.1
27.5°	1037.2	1037.2	1038.0	1037.7	1037.2	1037.7	1037.4	1037.4	1037.4	1037.7	1038.5
30°	1039.4	1038.5	1038.0	1038.0	1037.7	1037.2	1036.6	1035.8	1035.8	1036.0	1035.8
32.5°	1051.2	1049.6	1048.7	1047.9	1047.3	1046.0	1044.3	1043.8	1042.4	1042.4	1041.8
35°	1081.4	1079.6	1079.5	1076.5	1074.8	1074.0	1072.6	1068.5	1068.8	1067.1	1066.6
37.5°	1141.7	1138.4	1137.0	1139.8	1134.6	1136.8	1132.1	1130.2	1131.2	1128.2	1129.9
40°	1243.0	1248.2	1245.9	1249.0	1250.4	1251.0	1251.0	1246.3	1251.0	1243.5	1246.0
42.5°	1389.0	1402.8	1407.8	1409.4	1418.0	1415.8	1413.3	1413.0	1412.8	1416.3	1414.4
45°	1572.9	1574.8	1598.2	1602.6	1607.3	1612.5	1611.2	1617.2	1621.6	1615.6	1616.4
47.5°	1760.8	1780.4	1797.4	1806.8	1817.0	1811.8	1815.9	1818.4	1834.0	1832.4	1831.0
50°	1967.8	2000.5	2009.6	2019.8	2027.8	2043.8	2042.4	2052.0	2050.4	2063.2	2064.9
52.5°	2164.0	2200.0	2236.6	2252.6	2264.7	2283.2	2290.3	2300.8	2296.9	2295.8	2305.4
55°	2359.0	2419.3	2461.2	2502.2	2525.0	2549.5	2560.0	2574.8	2581.4	2584.4	2572.3
57.5°	2552.6	2624.9	2695.6	2746.2	2781.5	2818.4	2837.9	2854.1	2873.1	2879.4	2873.4
60°	2778.7	2884.6	2977.4	3045.0	3110.0	3150.2	3192.3	3223.1	3228.9	3255.0	3271.8
62.5°	3080.0	3209.1	3326.6	3425.1	3525.8	3601.0	3676.9	3707.2	3737.2	3757.5	3769.9
65°	3490.9	3661.0	3823.3	3963.4	4086.9	4211.8	4300.4	4347.0	4406.6	4418.5	4405.6
67.5°	3851.1	4051.7	4253.4	4431.7	4565.2	4694.8	4799.9	4876.9	4932.8	4960.3	4971.9
69°	3890.7	4094.6	4300.7	4478.5	4640.0	4769.4	4877.0	4953.4	5009.0	5056.6	5064.9
70°	3809.5	4038.4	4238.8	4418.2	4584.7	4716.5	4812.8	4900.4	4963.6	5000.2	5013.1
72.5°	3344.2	3550.0	3752.2	3958.9	4101.8	4260.0	4339.2	4409.4	4493.6	4541.5	4531.0
75°	2534.4	2712.4	2888.8	3043.4	3153.5	3211.8	3304.6	3372.6	3360.2	3440.8	3443.0
77.5°	1429.5	1452.6	1572.4	1556.4	1609.2	1610.6	1624.4	1648.3	1602.4	1696.7	1629.0
80°	346.8	342.0	366.8	337.6	335.2	332.7	324.5	340.7	342.8	326.1	329.1
82.5°	101.8	97.4	95.5	93.0	97.2	95.8	96.6	97.2	99.9	96.4	100.2
85°	55.8	52.6	52.2	50.9	50.7	47.6	47.3	47.3	45.4	45.9	45.7
87.5°	21.4	20.1	19.0	18.2	17.9	17.1	16.2	14.9	13.2	11.8	11.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)