

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: P142030

Luminaire Tested: **ECM-E02-LED-E1-T4**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P142030
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-E02-LED-E1-T4
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (42) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5751.5 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

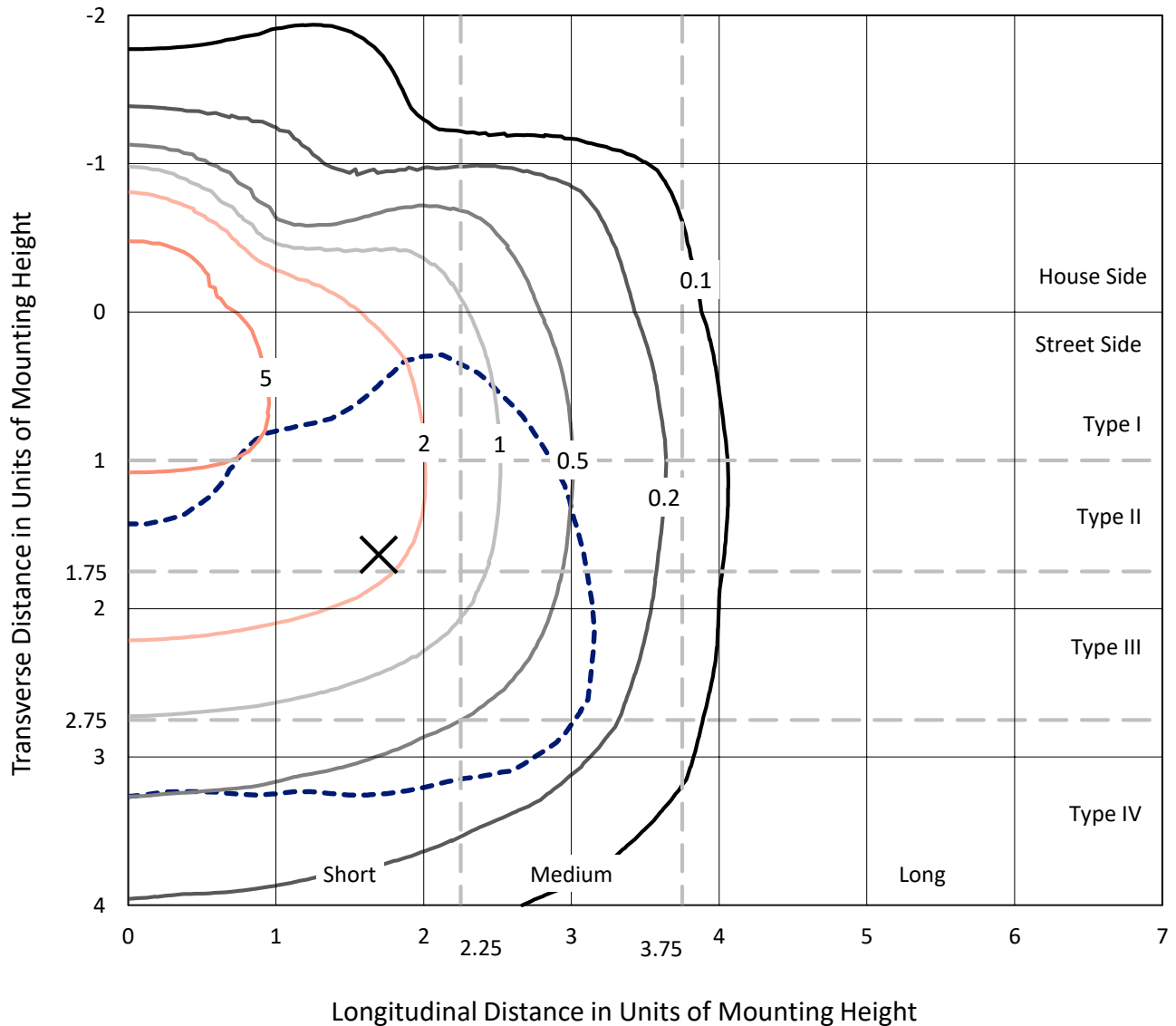
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

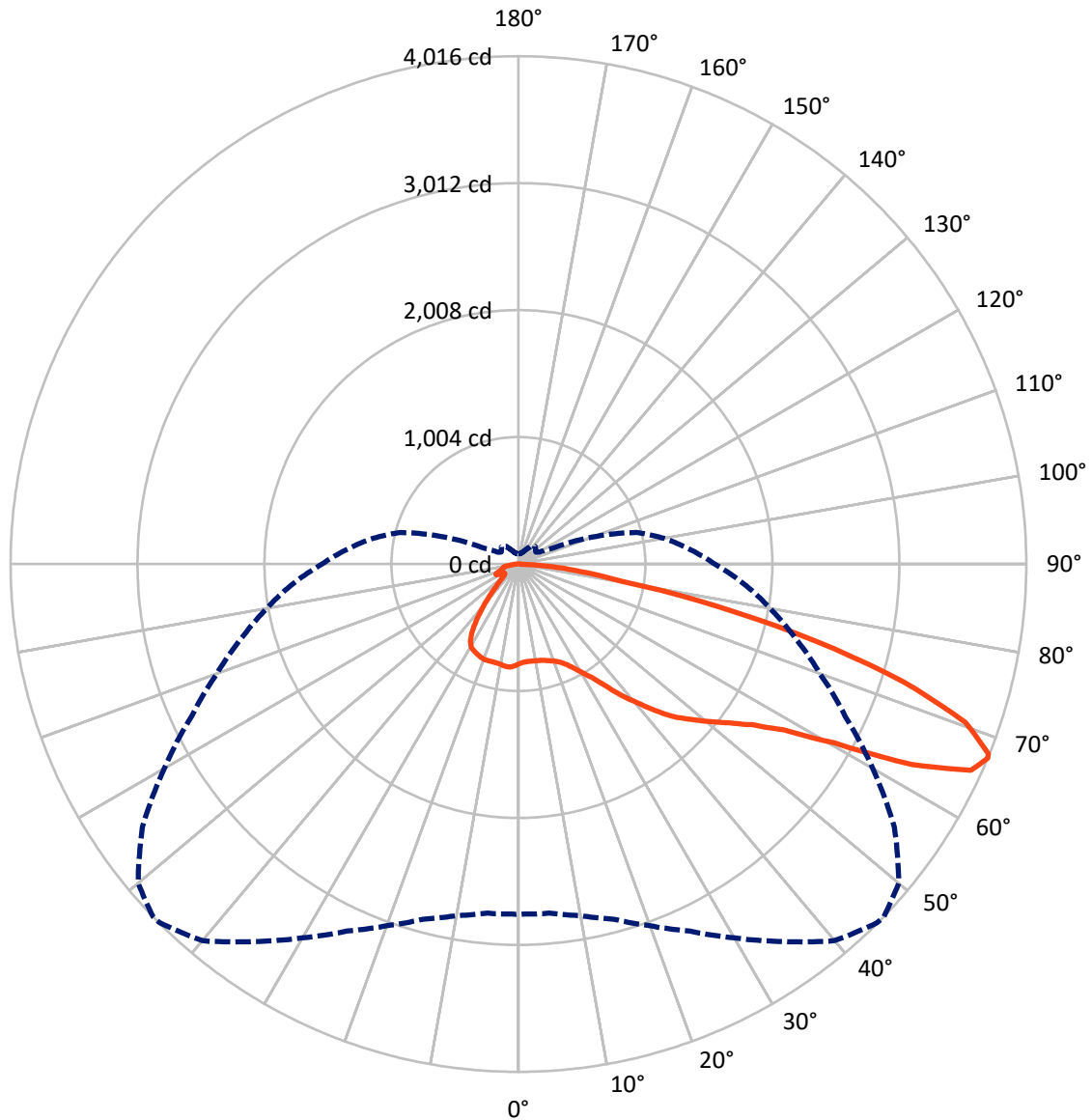
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8 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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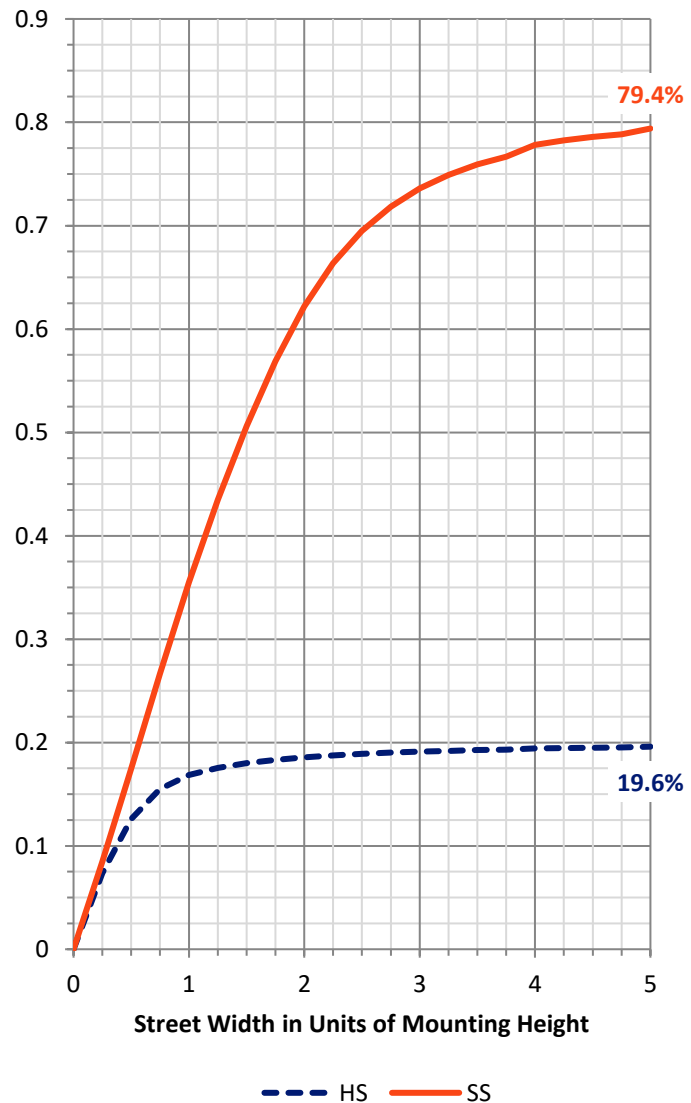
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1143.0	0.0	1143.0
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	4608.6	0.0	4608.6
	% Fixture	80.1	0.0	80.1
Total	Lumens	5751.5	0.0	5751.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	1.3
10°-20°	226.4	3.9
20°-30°	380.6	6.6
30°-40°	569.2	9.9
40°-50°	741.4	12.9
50°-60°	1015.4	17.7
60°-70°	1605.2	27.9
70°-80°	995.7	17.3
80°-90°	141.9	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°	5751.5	100.0
0°-180°	5751.5	100.0

Coefficient of Utilization



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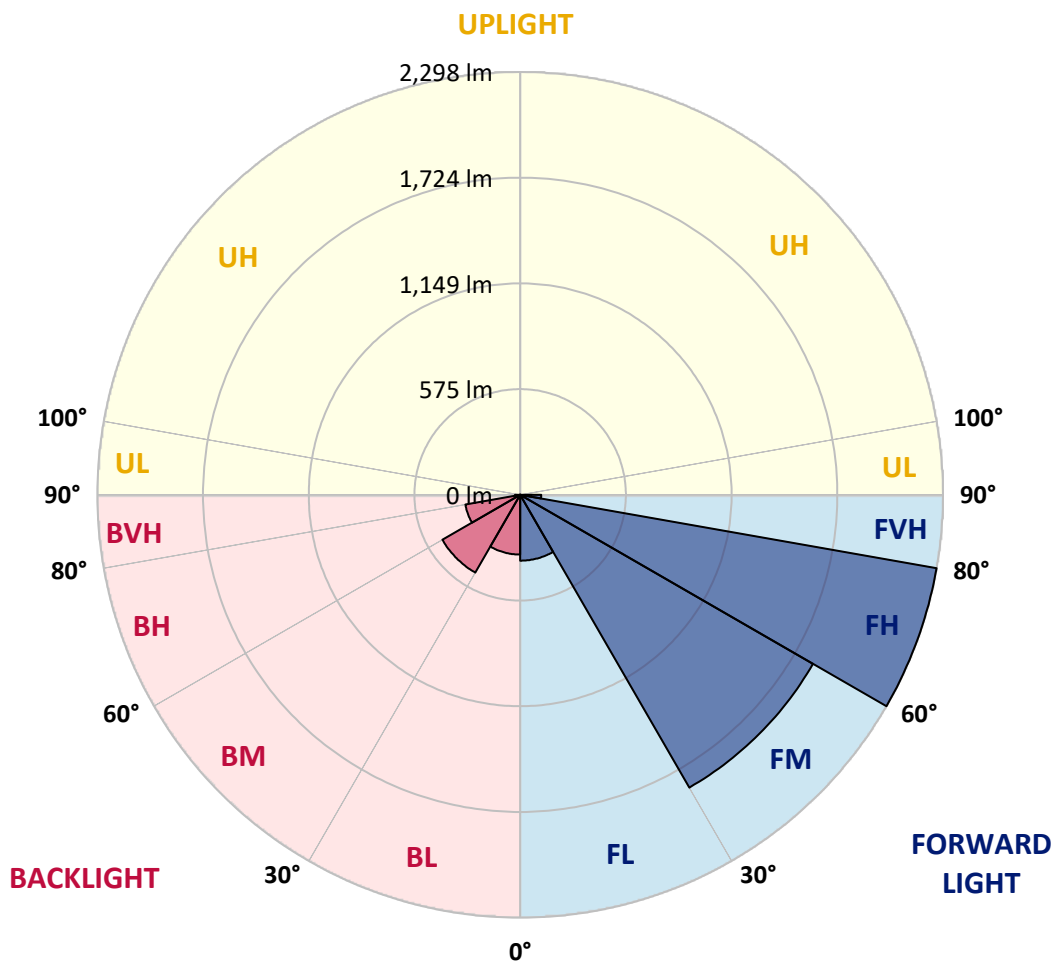
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	358.2	6.2			
FM	(30°-60°)	1837.8	32.0			
FH	(60°-80°)	2298.3	40.0			G2/5000
FVH	(80°-90°)	114.3	2.0			G2/225
BL	(0°-30°)	324.7	5.6	B1/500		
BM	(30°-60°)	488.1	8.5	B1/1000		
BH	(60°-80°)	302.6	5.3	B1/500		G1/500
BVH	(80°-90°)	27.6	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	46°
0°	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0
2.5°	770.7	772.7	772.0	771.3	772.0	772.7	773.3	775.3	776.0	776.7	777.3
5°	756.7	758.7	758.0	759.3	760.0	762.7	764.7	768.0	770.0	772.7	774.0
7.5°	752.7	754.0	754.0	755.3	756.0	758.7	762.0	766.0	770.0	774.0	775.3
10°	763.3	764.0	764.0	763.3	764.0	765.3	766.7	770.0	773.3	776.7	778.0
12.5°	788.7	786.7	786.0	784.0	784.7	782.0	782.0	781.3	781.3	782.0	782.0
15°	815.3	814.0	812.7	809.3	809.3	805.3	804.0	801.3	794.7	792.0	791.3
17.5°	839.3	838.0	835.3	832.7	831.3	826.0	824.7	820.0	812.0	806.0	804.0
20°	868.0	864.7	858.7	857.3	854.0	848.0	846.0	840.0	829.3	820.7	820.0
22.5°	912.0	906.7	900.7	896.0	887.3	881.3	876.0	868.0	855.3	845.3	842.7
25°	956.0	954.0	948.7	942.0	936.0	929.3	922.7	910.7	894.0	881.3	878.7
27.5°	1018.0	1013.3	1006.7	996.0	992.7	981.3	976.0	966.0	949.3	933.3	930.7
30°	1082.7	1078.0	1067.3	1058.0	1056.0	1044.0	1040.7	1030.0	1015.3	999.3	997.3
32.5°	1156.7	1152.0	1144.0	1138.7	1131.3	1124.7	1116.7	1106.7	1088.0	1074.7	1072.0
35°	1251.3	1247.3	1238.0	1242.0	1235.3	1233.3	1228.7	1212.0	1191.3	1175.3	1178.0
37.5°	1326.0	1325.3	1327.3	1325.3	1334.0	1342.7	1342.7	1344.0	1334.0	1316.7	1313.3
40°	1396.0	1395.3	1400.7	1406.7	1430.0	1444.0	1460.0	1466.0	1455.3	1442.0	1437.3
42.5°	1461.3	1460.0	1467.3	1489.3	1518.0	1544.0	1571.3	1594.7	1600.0	1585.3	1582.0
45°	1526.0	1528.0	1537.3	1562.0	1600.0	1634.0	1680.7	1708.0	1725.3	1717.3	1722.7
47.5°	1604.0	1606.0	1616.0	1645.3	1678.7	1721.3	1776.0	1822.7	1843.3	1843.3	1836.7
50°	1696.7	1706.0	1716.7	1736.7	1775.3	1817.3	1884.0	1930.7	1964.0	1962.7	1957.3
52.5°	1820.0	1822.0	1839.3	1855.3	1888.7	1931.3	1991.3	2055.3	2097.3	2093.3	2087.3
55°	1986.0	1978.0	1989.3	2004.7	2040.7	2078.0	2143.3	2217.3	2260.0	2247.3	2243.3
57.5°	2195.3	2188.7	2196.7	2215.3	2260.7	2291.3	2344.0	2412.0	2472.0	2482.7	2473.3
60°	2497.3	2497.3	2513.3	2553.3	2599.3	2645.3	2712.7	2794.7	2856.7	2872.0	2871.3
62.5°	2855.3	2878.0	2881.3	2933.3	3021.3	3100.7	3205.3	3350.0	3442.7	3508.7	3491.3
65°	2912.7	2920.0	2949.3	3030.0	3149.3	3290.0	3452.7	3642.7	3835.3	3930.7	3933.3
67°	2768.7	2771.3	2822.7	2907.3	3044.0	3202.7	3413.3	3644.7	3888.7	4012.0	4016.0
67.5°	2724.0	2718.7	2764.7	2853.3	3002.7	3181.3	3379.3	3622.7	3874.7	4006.7	4008.7
70°	2424.7	2427.3	2463.3	2562.0	2720.0	2887.3	3108.7	3358.7	3624.0	3744.7	3750.7
72.5°	2090.7	2073.3	2106.0	2211.3	2286.7	2450.0	2653.3	2842.0	3075.3	3189.3	3186.7
75°	1594.7	1546.7	1604.0	1665.3	1707.3	1869.3	1996.0	2126.0	2341.3	2428.0	2423.3
77.5°	859.3	857.3	920.0	968.0	1030.7	1176.7	1288.0	1370.0	1551.3	1594.0	1599.3
80°	466.7	484.0	521.3	574.7	625.3	695.3	760.0	811.3	870.7	843.3	837.3
82.5°	281.3	310.0	367.3	408.0	428.0	459.3	505.3	534.7	558.0	507.3	497.3
85°	44.7	80.7	207.3	248.0	269.3	284.0	294.0	313.3	286.0	268.0	272.7
87.5°	14.7	16.7	32.0	70.7	62.0	42.7	56.0	81.3	38.7	20.7	20.0
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0
2.5°	778.0	778.7	780.7	783.3	784.7	788.0	788.0	790.7	790.7	792.7	794.7
5°	776.0	779.3	782.0	786.0	788.0	792.7	794.7	798.7	800.7	803.3	806.0
7.5°	779.3	784.0	787.3	792.0	795.3	800.0	802.0	805.3	807.3	810.7	812.0
10°	782.0	786.7	790.7	796.0	798.7	802.0	804.0	806.7	807.3	809.3	810.7
12.5°	785.3	787.3	790.7	795.3	798.0	800.0	802.0	804.0	806.0	806.0	806.0
15°	790.0	788.0	788.7	792.7	795.3	796.7	798.7	800.0	800.7	800.7	799.3
17.5°	800.0	794.7	791.3	791.3	792.7	794.0	794.0	792.0	790.7	788.7	786.0
20°	814.7	806.0	799.3	796.0	793.3	790.0	784.7	778.0	772.0	766.7	763.3
22.5°	835.3	826.7	818.7	811.3	802.7	791.3	780.0	766.0	754.7	746.0	742.7
25°	874.0	861.3	855.3	844.0	830.7	812.7	795.3	776.0	762.7	750.7	745.3
27.5°	926.0	916.0	902.7	896.7	879.3	858.7	839.3	816.0	797.3	782.7	772.7
30°	992.0	985.3	974.0	964.0	947.3	928.7	900.0	874.0	841.3	815.3	800.7
32.5°	1068.0	1058.0	1048.0	1035.3	1023.3	998.7	972.0	932.7	887.3	842.7	815.3
35°	1163.3	1153.3	1146.7	1126.7	1106.7	1080.0	1044.0	997.3	934.0	874.0	827.3
37.5°	1294.7	1273.3	1240.7	1212.0	1176.0	1135.3	1094.7	1038.7	968.0	890.0	826.0
40°	1408.7	1377.3	1340.7	1291.3	1240.7	1187.3	1139.3	1078.7	996.0	903.3	816.7
42.5°	1556.7	1502.7	1440.7	1375.3	1306.0	1242.0	1182.7	1113.3	1016.7	904.0	794.7
45°	1690.0	1623.3	1541.3	1452.7	1368.0	1290.0	1222.0	1145.3	1034.0	901.3	769.3
47.5°	1808.7	1730.7	1630.7	1524.0	1424.0	1336.0	1261.3	1180.7	1056.7	910.0	760.0
50°	1923.3	1834.0	1721.3	1592.0	1480.7	1384.7	1306.7	1220.0	1094.7	939.3	774.7
52.5°	2046.0	1937.3	1810.0	1664.0	1542.7	1443.3	1356.0	1267.3	1140.0	978.7	801.3
55°	2196.0	2072.7	1927.3	1766.0	1626.7	1516.0	1417.3	1324.0	1194.0	1027.3	832.7
57.5°	2396.0	2271.3	2104.0	1918.0	1772.0	1640.7	1522.0	1416.7	1276.0	1094.7	879.3
60°	2781.3	2627.3	2404.7	2202.7	2044.7	1890.0	1746.7	1602.7	1433.3	1230.7	999.3
62.5°	3400.0	3185.3	2909.3	2628.0	2414.7	2210.0	2020.7	1833.3	1622.0	1394.7	1142.0
65°	3828.0	3562.7	3216.0	2863.3	2574.7	2324.7	2098.7	1876.0	1640.7	1424.0	1204.0
67°	3926.0	3629.3	3234.7	2852.0	2538.0	2266.7	2020.7	1788.7	1552.0	1355.3	1167.3
67.5°	3922.0	3626.0	3220.0	2828.0	2513.3	2246.0	1998.0	1754.0	1521.3	1328.7	1149.3
70°	3684.7	3387.3	2979.3	2589.3	2286.0	2020.0	1770.0	1557.3	1320.0	1164.0	1029.3
72.5°	3122.0	2863.3	2534.0	2183.3	1923.3	1685.3	1485.3	1276.7	1070.7	966.7	860.7
75°	2374.0	2144.7	1842.7	1586.0	1388.0	1222.7	1022.0	884.7	740.0	668.7	630.7
77.5°	1568.7	1305.3	1096.7	852.0	706.7	576.7	454.7	360.7	301.3	316.7	346.0
80°	830.0	658.7	487.3	377.3	291.3	226.7	180.0	134.7	98.0	114.7	144.0
82.5°	452.0	385.3	284.7	226.7	185.3	153.3	118.0	82.7	61.3	68.0	98.0
85°	258.0	226.7	176.0	137.3	120.0	98.0	67.3	45.3	44.0	47.3	60.7
87.5°	42.7	57.3	46.7	32.0	36.0	35.3	31.3	24.0	18.0	25.3	32.7
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°	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0	788.0
2.5°	796.0	798.0	800.7	801.3	800.7	802.7	806.0	808.7	806.7	805.3	808.7
5°	808.7	810.0	813.3	813.3	814.0	815.3	817.3	819.3	816.7	816.7	818.0
7.5°	814.0	814.0	817.3	816.0	816.0	815.3	817.3	818.0	814.0	813.3	814.0
10°	810.7	810.7	812.0	809.3	808.7	808.0	808.0	808.7	804.7	803.3	805.3
12.5°	806.0	806.0	804.7	803.3	802.0	800.7	802.0	802.7	800.0	800.0	800.7
15°	798.0	796.0	795.3	795.3	796.0	796.7	799.3	801.3	799.3	798.0	798.0
17.5°	784.7	783.3	785.3	789.3	794.0	797.3	801.3	802.7	798.0	792.7	788.7
20°	764.7	768.0	775.3	786.7	796.7	802.0	802.0	797.3	786.7	776.0	770.7
22.5°	744.0	753.3	769.3	786.7	798.7	800.7	793.3	783.3	768.7	757.3	747.3
25°	746.7	758.0	774.0	788.7	796.7	793.3	780.0	767.3	750.0	738.0	723.3
27.5°	774.7	785.3	793.3	798.0	795.3	784.7	769.3	752.0	732.7	716.0	698.7
30°	797.3	802.0	801.3	797.3	787.3	770.7	752.7	732.0	708.7	690.7	668.0
32.5°	801.3	792.7	779.3	764.7	751.3	732.7	712.0	688.0	662.0	638.7	616.0
35°	794.0	761.3	732.0	702.7	682.7	659.3	641.3	613.3	584.7	564.7	548.0
37.5°	766.7	710.0	663.3	622.0	592.7	566.0	538.7	511.3	487.3	478.0	473.3
40°	732.0	646.7	575.3	518.0	486.7	460.7	432.7	410.7	399.3	390.7	387.3
42.5°	681.3	574.7	486.0	424.7	384.7	360.7	333.3	321.3	316.0	318.0	315.3
45°	634.0	499.3	388.0	320.0	292.7	270.0	256.7	251.3	248.7	247.3	249.3
47.5°	600.7	441.3	312.7	243.3	220.7	204.7	199.3	197.3	196.7	194.0	193.3
50°	592.7	407.3	256.0	189.3	172.0	163.3	160.7	158.7	157.3	155.3	150.7
52.5°	602.0	398.0	228.0	162.7	148.0	141.3	139.3	136.0	134.7	129.3	123.3
55°	618.0	401.3	219.3	155.3	140.7	133.3	130.7	129.3	124.7	118.7	111.3
57.5°	651.3	422.0	223.3	157.3	142.0	135.3	134.0	132.7	126.7	118.0	108.7
60°	748.0	482.0	244.0	171.3	152.7	148.0	148.7	146.0	137.3	126.0	112.0
62.5°	897.3	575.3	282.0	188.7	170.0	170.0	174.0	172.0	158.7	140.0	120.0
65°	974.7	631.3	298.0	194.0	175.3	184.0	196.7	194.7	175.3	147.3	120.7
67°	962.7	620.7	288.7	186.0	165.3	176.7	189.3	190.0	168.7	140.7	115.3
67.5°	951.3	613.3	284.0	182.7	162.7	174.0	186.0	184.0	166.0	138.0	114.0
70°	854.7	538.7	253.3	170.7	150.7	154.0	157.3	154.7	140.7	122.0	105.3
72.5°	738.0	447.3	223.3	163.3	144.0	138.7	138.7	134.0	124.7	112.0	100.0
75°	562.7	348.0	196.0	155.3	136.0	128.0	126.7	123.3	115.3	106.0	95.3
77.5°	343.3	249.3	170.0	143.3	126.0	119.3	120.0	118.0	110.0	101.3	91.3
80°	172.0	161.3	142.7	124.7	114.0	107.3	108.0	104.0	97.3	90.7	82.7
82.5°	105.3	111.3	100.0	94.7	88.0	80.7	62.7	73.3	71.3	65.3	62.0
85°	70.0	69.3	62.7	55.3	50.7	44.0	39.3	40.0	44.0	45.3	45.3
87.5°	34.0	32.7	30.0	28.0	26.7	22.0	20.7	23.3	23.3	24.7	24.0
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):

	160°	165°	170°	175°	180°
0°	788.0	788.0	788.0	788.0	788.0
2.5°	809.3	810.7	810.0	812.0	810.0
5°	818.7	818.7	819.3	820.0	819.3
7.5°	814.0	813.3	814.7	816.0	815.3
10°	805.3	806.0	807.3	809.3	809.3
12.5°	802.0	802.7	805.3	807.3	807.3
15°	799.3	800.0	801.3	804.0	802.0
17.5°	787.3	784.7	784.7	786.7	784.7
20°	766.0	762.0	762.0	761.3	760.7
22.5°	740.7	730.7	728.0	724.7	725.3
25°	709.3	696.0	688.7	684.7	683.3
27.5°	684.0	668.7	661.3	655.3	653.3
30°	652.0	634.7	628.7	625.3	624.0
32.5°	605.3	590.0	582.0	580.0	576.0
35°	534.7	528.0	524.7	520.0	520.7
37.5°	464.0	462.0	454.0	456.7	454.0
40°	388.0	387.3	388.7	386.7	391.3
42.5°	316.7	314.7	318.0	316.0	318.0
45°	245.3	249.3	254.0	252.0	254.7
47.5°	188.0	188.7	187.3	188.7	190.0
50°	144.7	143.3	142.0	139.3	140.7
52.5°	119.3	114.7	111.3	109.3	108.7
55°	105.3	100.7	98.0	95.3	95.3
57.5°	101.3	95.3	91.3	89.3	88.7
60°	102.0	94.0	88.7	85.3	84.7
62.5°	104.7	94.0	86.7	83.3	82.0
65°	104.0	92.7	85.3	82.0	80.7
67°	100.7	90.7	84.7	81.3	80.7
67.5°	99.3	90.0	84.7	81.3	80.0
70°	94.7	88.0	83.3	80.0	78.7
72.5°	90.7	85.3	80.0	77.3	76.0
75°	86.7	81.3	76.7	74.0	73.3
77.5°	82.7	76.7	73.3	70.0	67.3
80°	75.3	68.7	64.0	58.7	57.3
82.5°	62.0	56.7	52.0	47.3	46.7
85°	46.0	44.0	40.0	36.0	36.0
87.5°	25.3	28.0	24.7	22.7	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)