

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: P162442

Luminaire Tested: **ECM-F02-LED-E1-SL3-HSS**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162442
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
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-SL3-HSS
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 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: 2721.7 lumens
Efficiency: N/A
Efficacy: 49.5 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

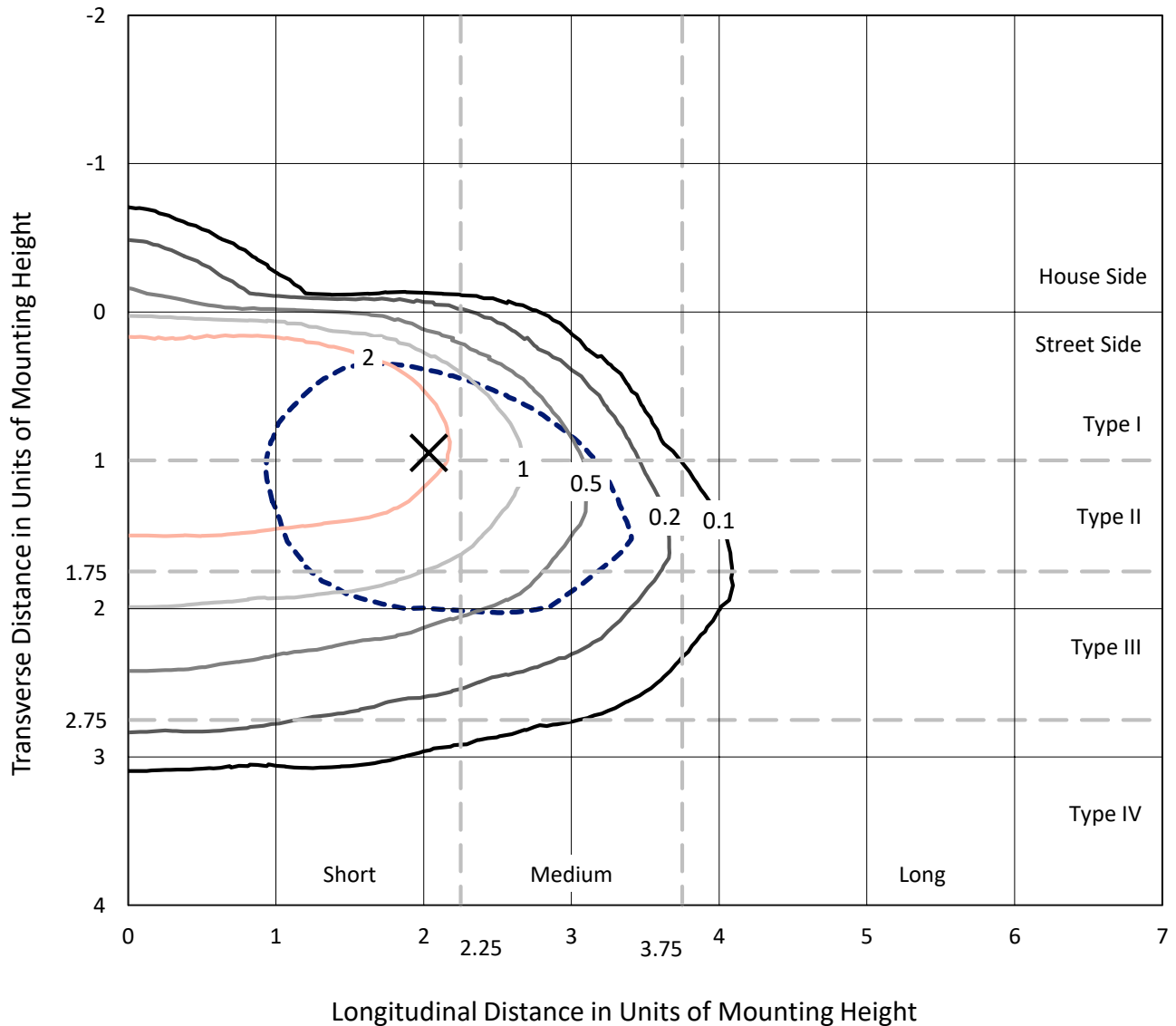
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

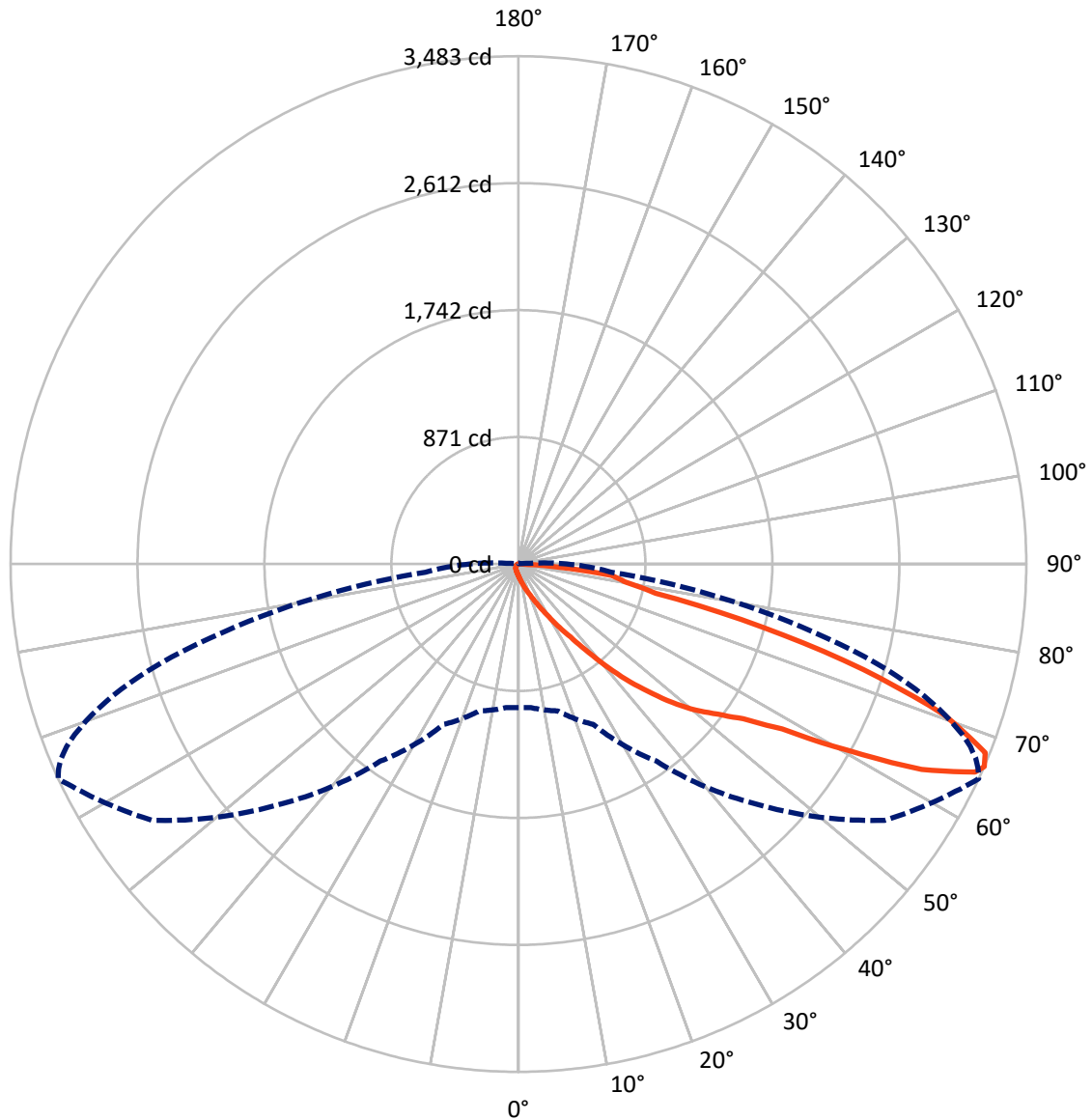


Based on 10 foot mounting height. Maximum calculated value = 4.5 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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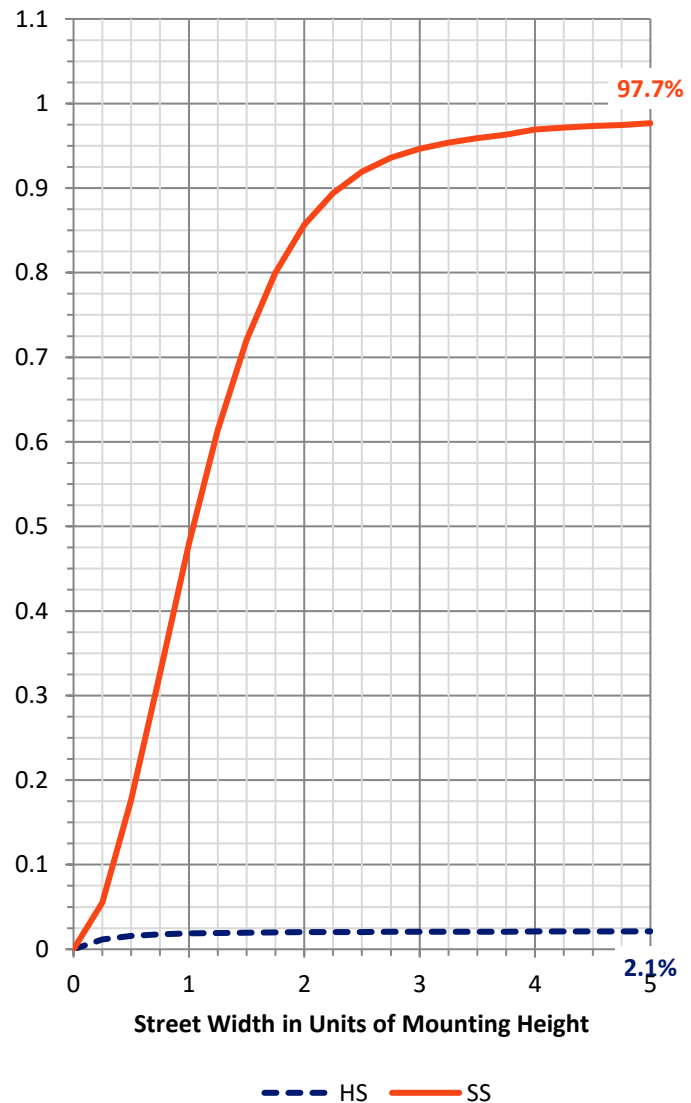
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	59.0	0.0	59.0
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	2662.7	0.0	2662.7
	% Fixture	97.8	0.0	97.8
Total	Lumens	2721.7	0.0	2721.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.2	0.3
10°-20°	39.0	1.4
20°-30°	84.1	3.1
30°-40°	179.6	6.6
40°-50°	397.2	14.6
50°-60°	673.1	24.7
60°-70°	898.2	33.0
70°-80°	395.7	14.5
80°-90°	45.6	1.7
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°	2721.7	100.0
0°-180°	2721.7	100.0



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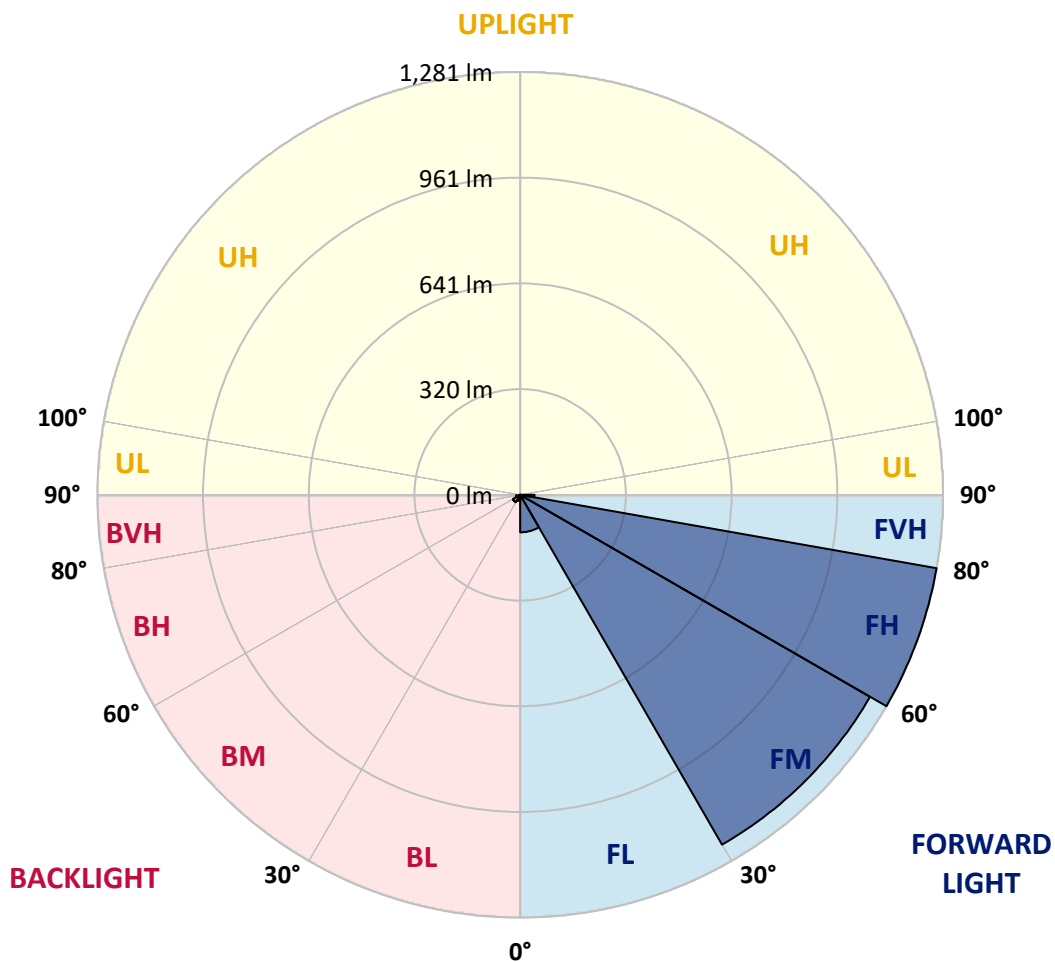
CATALOG NUMBER: ECM-F02-LED-E1-SL3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	113.7	4.2			
FM	(30°-60°)	1224.0	45.0			
FH	(60°-80°)	1281.2	47.1			G1/1800
FVH	(80°-90°)	43.8	1.6			G1/100
BL	(0°-30°)	18.6	0.7	B0/110		
BM	(30°-60°)	25.9	1.0	B0/220		
BH	(60°-80°)	12.7	0.5	B0/110		G0/110
BVH	(80°-90°)	1.8	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
2.5°	103.6	103.1	101.0	101.0	97.9	95.8	93.1	90.5	90.5	90.0	89.5
5°	137.1	134.0	133.4	127.7	122.9	116.2	109.9	101.5	100.4	99.4	98.9
7.5°	174.2	173.7	169.0	162.2	152.8	140.2	127.7	114.1	112.0	111.0	108.9
10°	222.4	219.8	213.5	202.0	187.8	171.1	150.7	129.2	126.6	124.5	123.5
12.5°	268.4	263.7	260.0	245.4	227.6	203.0	178.4	147.5	145.5	142.9	138.7
15°	311.3	307.2	300.9	288.3	268.4	237.5	208.8	171.1	165.9	162.2	159.1
17.5°	344.8	342.2	334.9	320.7	299.3	272.1	237.5	195.2	191.0	186.3	180.5
20°	376.7	373.1	361.6	342.2	319.2	298.2	271.5	226.6	220.8	215.1	208.8
22.5°	407.1	403.4	384.6	352.7	328.1	319.2	309.7	262.1	253.3	248.5	242.3
25°	449.5	441.6	412.3	361.6	328.6	335.4	351.6	308.2	299.8	293.0	283.1
27.5°	506.5	496.0	450.0	374.6	330.7	353.2	399.8	364.2	355.3	347.4	336.4
30°	570.9	564.1	509.1	406.0	345.9	379.4	453.7	435.3	424.9	415.5	402.4
32.5°	635.8	626.4	571.9	465.7	386.7	430.1	521.2	518.0	504.4	495.5	481.4
35°	692.8	688.0	647.8	563.6	479.8	519.1	611.2	614.8	602.8	593.4	577.6
37.5°	731.5	731.5	723.7	668.7	627.9	657.2	743.5	744.1	732.0	710.6	702.7
40°	751.4	757.1	785.4	795.9	793.8	831.5	917.3	907.9	897.9	886.9	860.7
42.5°	792.2	797.5	857.6	929.8	976.9	1026.6	1085.7	1082.6	1070.6	1050.7	1026.6
45°	861.3	868.1	939.8	1054.4	1151.2	1221.8	1259.5	1244.8	1232.8	1214.0	1201.4
47.5°	949.2	962.2	1043.4	1185.2	1301.9	1418.5	1457.8	1419.1	1408.6	1393.9	1373.5
50°	1042.9	1055.4	1141.8	1303.9	1435.8	1575.0	1640.4	1575.0	1559.8	1555.1	1532.1
52.5°	1123.9	1134.4	1217.6	1395.5	1538.3	1701.6	1796.8	1710.5	1699.5	1683.8	1667.1
55°	1172.1	1180.4	1258.4	1439.4	1608.0	1815.7	1948.1	1872.2	1855.9	1849.7	1825.6
57.5°	1188.3	1196.7	1266.8	1445.2	1645.6	1919.8	2131.7	2134.4	2115.0	2092.5	2085.2
60°	1188.3	1197.7	1256.8	1431.1	1682.3	2030.7	2376.6	2594.8	2553.0	2548.8	2522.1
62.5°	1139.1	1148.0	1207.7	1387.7	1731.5	2180.4	2717.7	3102.9	3090.8	3063.6	3019.7
65°	1032.3	1037.6	1096.2	1276.8	1712.6	2318.0	3013.4	3440.9	3421.5	3368.1	3311.7
66°	984.2	988.4	1043.4	1213.4	1650.8	2336.8	3065.7	3483.3	3451.4	3406.3	3342.6
67.5°	914.6	921.9	960.7	1095.7	1502.8	2271.4	3032.8	3453.4	3425.7	3371.3	3307.5
70°	610.6	605.4	742.0	840.9	1144.9	1850.7	2720.9	3100.8	3101.3	3075.7	3050.0
72.5°	289.9	293.0	332.8	517.5	749.3	1236.4	2165.7	2475.0	2510.5	2464.5	2432.6
75°	208.3	213.0	237.0	316.6	446.8	742.0	1403.9	1730.9	1732.0	1650.3	1577.6
77.5°	60.7	63.3	88.9	195.2	334.9	500.8	806.3	962.2	939.8	881.2	826.2
80°	25.1	25.1	26.1	62.2	134.5	340.1	564.1	740.9	738.3	715.8	683.4
82.5°	9.4	10.0	12.5	25.6	31.9	83.7	376.2	643.1	641.5	609.6	586.6
85°	1.0	1.0	3.1	11.0	12.1	15.7	75.3	283.6	282.1	283.6	248.5
87.5°	0.0	0.0	0.6	1.0	1.6	2.1	3.1	11.0	12.1	11.5	10.5
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
2.5°	89.5	88.4	88.4	87.9	87.9	87.9	87.4	86.8	86.8	86.3	85.8
5°	97.9	96.8	96.3	95.2	94.7	94.2	93.1	92.6	91.6	91.0	90.5
7.5°	107.8	105.7	105.2	103.6	102.0	101.0	99.9	98.3	97.3	95.2	94.7
10°	120.4	117.7	115.6	113.5	112.0	109.4	107.8	105.7	103.6	102.0	100.4
12.5°	136.5	132.9	129.8	127.7	124.0	120.9	117.7	116.2	112.0	109.9	107.3
15°	154.4	150.2	146.5	142.3	139.7	134.5	130.3	125.6	123.5	119.8	115.6
17.5°	177.4	170.6	164.8	160.6	155.4	150.2	145.5	140.8	134.5	130.3	125.0
20°	202.0	196.2	188.4	181.1	174.8	168.5	161.7	155.4	149.6	142.9	136.5
22.5°	233.3	225.0	215.6	208.3	199.9	193.1	183.7	175.3	165.9	157.0	149.6
25°	273.1	262.1	253.3	242.8	232.9	222.4	210.9	200.4	188.4	180.0	167.4
27.5°	322.3	311.9	299.8	286.2	276.3	260.6	245.4	232.3	218.2	205.1	191.0
30°	385.1	369.9	357.4	344.3	324.4	309.2	291.5	273.6	254.3	241.2	219.8
32.5°	460.5	444.2	425.4	406.5	388.3	366.8	344.8	322.8	301.4	277.3	255.4
35°	552.6	533.2	511.7	491.4	463.1	440.1	412.3	382.0	357.9	330.2	302.4
37.5°	674.5	642.5	623.7	602.2	564.1	532.7	501.8	471.4	429.1	399.8	360.5
40°	827.3	808.4	777.5	743.0	708.5	667.1	625.3	585.0	535.8	495.0	449.5
42.5°	1006.8	979.0	947.6	897.9	862.8	814.2	766.6	713.2	653.0	600.7	547.3
45°	1175.2	1142.3	1118.2	1068.5	1031.9	974.3	916.7	860.2	790.6	723.2	661.4
47.5°	1357.3	1330.1	1290.4	1250.1	1212.9	1148.0	1085.7	1017.2	944.0	863.9	783.8
50°	1517.4	1496.0	1468.8	1420.1	1378.8	1324.4	1251.1	1176.3	1083.6	1004.1	913.1
52.5°	1653.5	1636.7	1598.5	1564.0	1526.8	1475.5	1410.2	1338.5	1238.5	1151.2	1047.5
55°	1814.1	1802.1	1768.6	1747.1	1714.2	1665.0	1603.8	1537.3	1431.6	1336.4	1219.2
57.5°	2077.3	2067.9	2038.6	2029.7	1997.3	1954.3	1879.0	1807.8	1684.3	1566.1	1432.1
60°	2513.2	2494.4	2451.4	2429.5	2360.9	2303.3	2205.5	2107.7	1958.5	1807.8	1646.6
62.5°	2979.9	2927.1	2845.4	2775.3	2678.0	2578.1	2447.2	2297.6	2122.8	1943.9	1758.6
65°	3231.6	3141.6	3038.5	2927.1	2801.0	2654.0	2489.1	2309.7	2121.8	1932.9	1737.2
66°	3260.4	3158.8	3049.5	2925.5	2785.3	2628.8	2461.4	2273.0	2077.8	1893.6	1697.9
67.5°	3224.3	3118.1	3002.4	2864.8	2713.1	2550.9	2375.0	2179.3	1991.5	1804.7	1614.2
70°	2971.6	2865.8	2762.8	2617.8	2456.2	2292.9	2126.5	1907.8	1729.9	1558.3	1388.7
72.5°	2372.9	2301.2	2199.2	2075.2	1917.7	1726.2	1587.5	1391.8	1237.5	1071.1	939.8
75°	1482.9	1381.9	1255.8	1097.8	977.4	822.0	740.9	592.3	504.4	427.5	353.2
77.5°	758.2	682.3	593.9	504.9	419.6	334.9	259.0	183.2	123.5	85.8	63.8
80°	626.4	559.4	486.1	405.0	329.7	255.9	184.2	125.6	80.1	52.3	40.8
82.5°	517.5	461.0	395.6	320.2	254.8	200.9	139.7	91.0	56.5	36.7	28.8
85°	220.3	199.9	154.4	122.5	92.1	68.0	47.6	31.9	22.5	18.3	16.7
87.5°	9.4	10.5	10.0	7.9	5.8	5.8	5.2	4.2	4.2	4.2	4.2
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°	95°	105°	115°	125°	135°
0°	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
2.5°	85.8	85.3	84.8	84.8	84.3	83.7	80.6	78.0	74.8	72.8	70.7
5°	89.5	88.9	87.9	87.4	86.3	85.8	79.0	73.3	68.5	64.9	62.2
7.5°	93.1	92.6	91.0	89.5	88.9	87.9	76.9	69.6	63.3	59.1	56.5
10°	97.9	96.3	94.7	92.6	91.0	89.5	74.8	65.4	58.6	54.9	52.3
12.5°	104.7	102.0	99.4	96.8	94.7	92.1	73.8	61.7	54.9	50.7	48.2
15°	112.5	108.9	105.7	102.5	98.9	96.3	71.7	58.6	51.8	47.6	44.5
17.5°	119.8	115.6	111.0	106.2	102.5	98.9	69.6	55.5	48.7	44.5	41.3
20°	130.3	124.0	118.3	112.5	107.3	102.5	66.4	52.3	46.1	41.3	38.2
22.5°	141.8	134.5	127.1	119.3	112.5	106.2	63.8	49.7	43.4	38.7	35.1
25°	156.5	147.5	137.6	127.7	119.8	111.4	61.2	47.1	40.8	36.1	32.4
27.5°	176.9	164.3	153.3	140.8	128.7	119.3	59.1	45.0	38.2	33.5	29.8
30°	204.6	186.3	169.0	155.4	141.3	127.7	57.0	42.4	36.1	30.9	26.7
32.5°	235.4	214.0	194.1	173.7	155.9	140.2	54.9	40.3	33.5	28.2	24.6
35°	273.6	246.4	219.8	196.2	174.8	153.8	52.8	38.2	31.4	25.6	22.0
37.5°	328.6	294.6	259.5	229.2	201.4	173.7	51.3	36.1	28.8	23.0	19.4
40°	404.0	360.0	317.1	275.8	239.6	205.1	49.2	34.0	26.7	20.9	17.3
42.5°	485.6	432.2	375.7	329.1	279.4	236.0	47.1	31.9	24.6	18.8	15.2
45°	587.1	520.6	452.1	388.8	328.1	272.1	45.0	29.8	22.0	16.7	13.1
47.5°	698.0	613.3	535.8	456.3	384.1	317.1	42.4	28.2	19.9	14.6	11.5
50°	812.1	722.6	624.8	534.2	448.4	362.1	39.8	25.6	17.8	13.1	9.4
52.5°	935.0	829.4	729.4	616.9	517.0	421.2	37.1	23.6	16.2	11.5	7.9
55°	1091.5	973.2	856.0	729.9	609.6	489.8	34.6	20.9	14.1	10.0	6.3
57.5°	1288.3	1148.0	1004.1	861.8	715.8	579.7	32.4	18.3	12.1	8.4	5.2
60°	1474.0	1310.2	1136.0	972.2	807.4	648.8	29.3	16.2	10.5	6.8	5.2
62.5°	1570.3	1383.5	1195.6	1015.1	839.3	673.4	26.1	13.6	8.9	5.8	4.7
65°	1546.7	1356.3	1174.2	992.1	819.9	657.7	23.0	12.1	7.9	5.2	4.7
66°	1512.7	1324.4	1141.2	968.0	803.7	641.0	21.5	11.5	7.3	5.2	4.2
67.5°	1438.4	1256.3	1081.5	920.4	759.3	609.1	19.4	10.5	6.8	4.7	4.2
70°	1228.6	1063.2	923.5	780.2	648.8	513.3	15.7	8.9	5.8	4.2	4.2
72.5°	813.1	700.7	607.5	522.7	436.9	339.1	13.1	7.3	4.7	4.2	3.7
75°	306.6	277.3	238.1	214.0	186.8	163.8	10.5	4.7	3.7	3.7	3.7
77.5°	54.4	50.2	44.5	40.8	37.7	34.6	8.4	3.1	3.1	3.7	3.7
80°	36.7	34.0	30.9	28.2	26.1	23.6	5.8	2.6	3.1	3.1	3.7
82.5°	26.1	24.6	23.0	20.9	19.4	17.3	3.7	2.6	3.1	3.1	3.1
85°	15.7	14.6	13.6	12.5	11.0	10.5	2.6	2.6	2.6	3.1	3.1
87.5°	4.2	3.7	4.2	4.2	3.1	3.7	2.1	2.1	2.1	2.6	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):

	145°	155°	165°	175°	180°
0°	82.2	82.2	82.2	82.2	82.2
2.5°	69.6	69.6	68.5	70.1	70.1
5°	60.2	60.2	59.7	60.2	60.2
7.5°	54.9	54.4	54.4	54.4	54.9
10°	50.2	49.7	49.7	49.7	49.7
12.5°	46.1	45.5	45.0	45.5	45.5
15°	42.4	41.3	41.3	41.3	41.3
17.5°	39.2	38.2	37.7	37.7	37.7
20°	36.1	34.6	34.6	34.6	34.6
22.5°	33.0	31.4	31.4	31.4	31.4
25°	29.8	28.2	28.2	28.2	28.2
27.5°	27.2	25.6	25.6	25.6	25.6
30°	24.1	23.0	23.0	23.6	23.0
32.5°	22.0	20.4	20.4	20.9	20.9
35°	19.4	18.3	18.3	18.3	18.3
37.5°	16.7	15.7	15.7	15.7	15.7
40°	14.6	13.6	13.1	13.6	13.6
42.5°	12.5	11.5	11.0	11.0	11.0
45°	11.0	9.4	8.9	9.4	9.4
47.5°	8.9	7.9	7.9	8.4	8.4
50°	6.8	6.8	7.3	8.4	8.4
52.5°	6.3	6.3	7.3	8.4	8.4
55°	5.8	6.3	7.3	7.9	8.4
57.5°	5.2	6.3	7.3	7.9	7.9
60°	5.2	5.8	6.8	7.9	7.9
62.5°	4.7	5.2	6.3	7.3	7.3
65°	4.7	5.2	6.3	7.3	7.3
66°	4.7	5.2	6.3	7.3	7.3
67.5°	4.7	5.2	6.3	7.3	7.3
70°	4.7	5.2	6.3	6.8	6.8
72.5°	4.2	4.7	5.8	6.8	6.8
75°	4.2	4.7	5.8	6.8	6.8
77.5°	4.2	4.7	5.8	6.8	6.8
80°	4.2	4.7	5.8	6.3	6.8
82.5°	3.7	4.7	5.2	6.3	6.3
85°	3.7	4.2	5.2	5.8	6.3
87.5°	3.1	3.7	4.2	5.2	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)