

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: P401761

Luminaire Tested: **ENT-SA1E-830-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401761
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-8)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1E-830-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4203 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 57.2
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

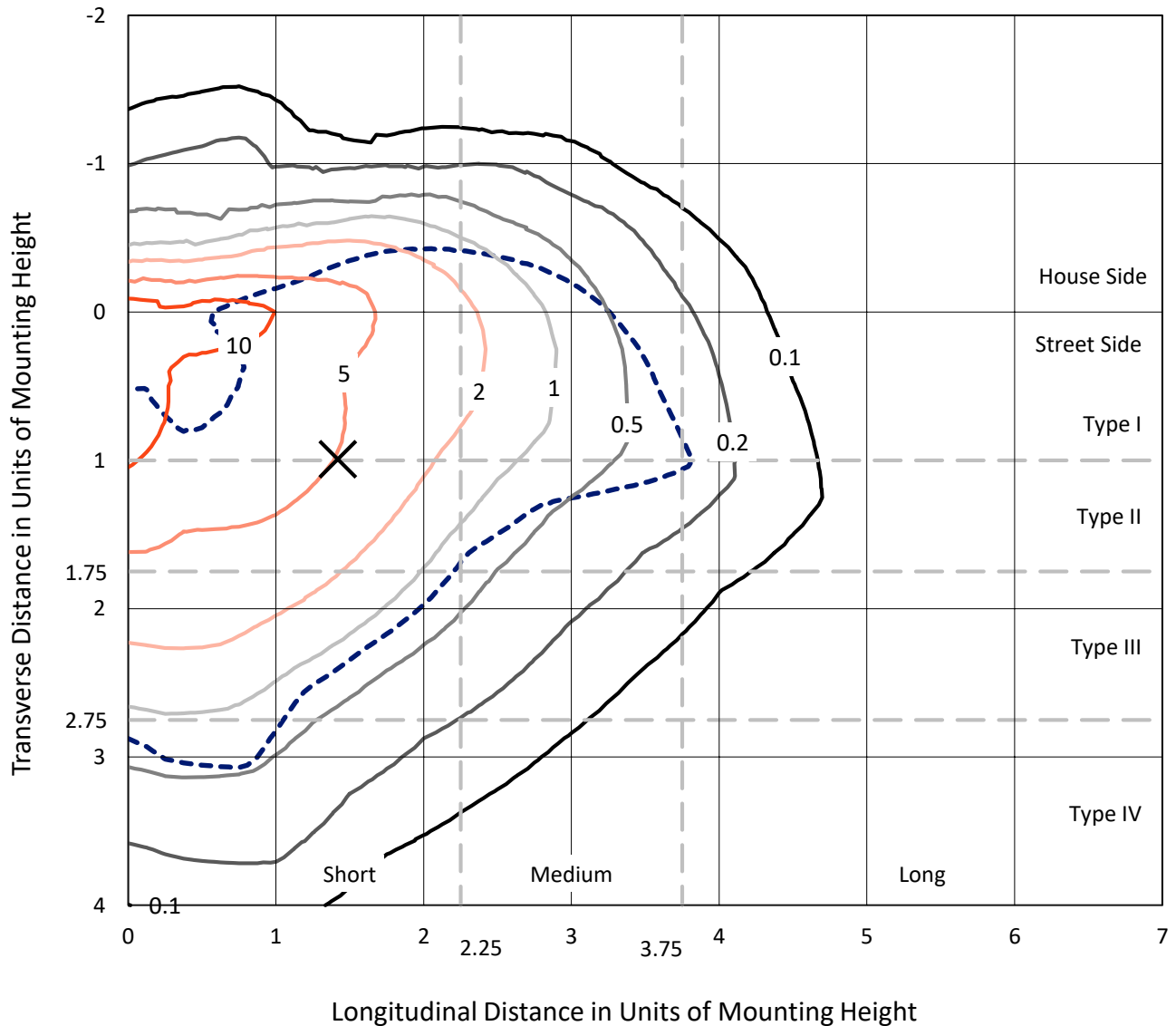


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

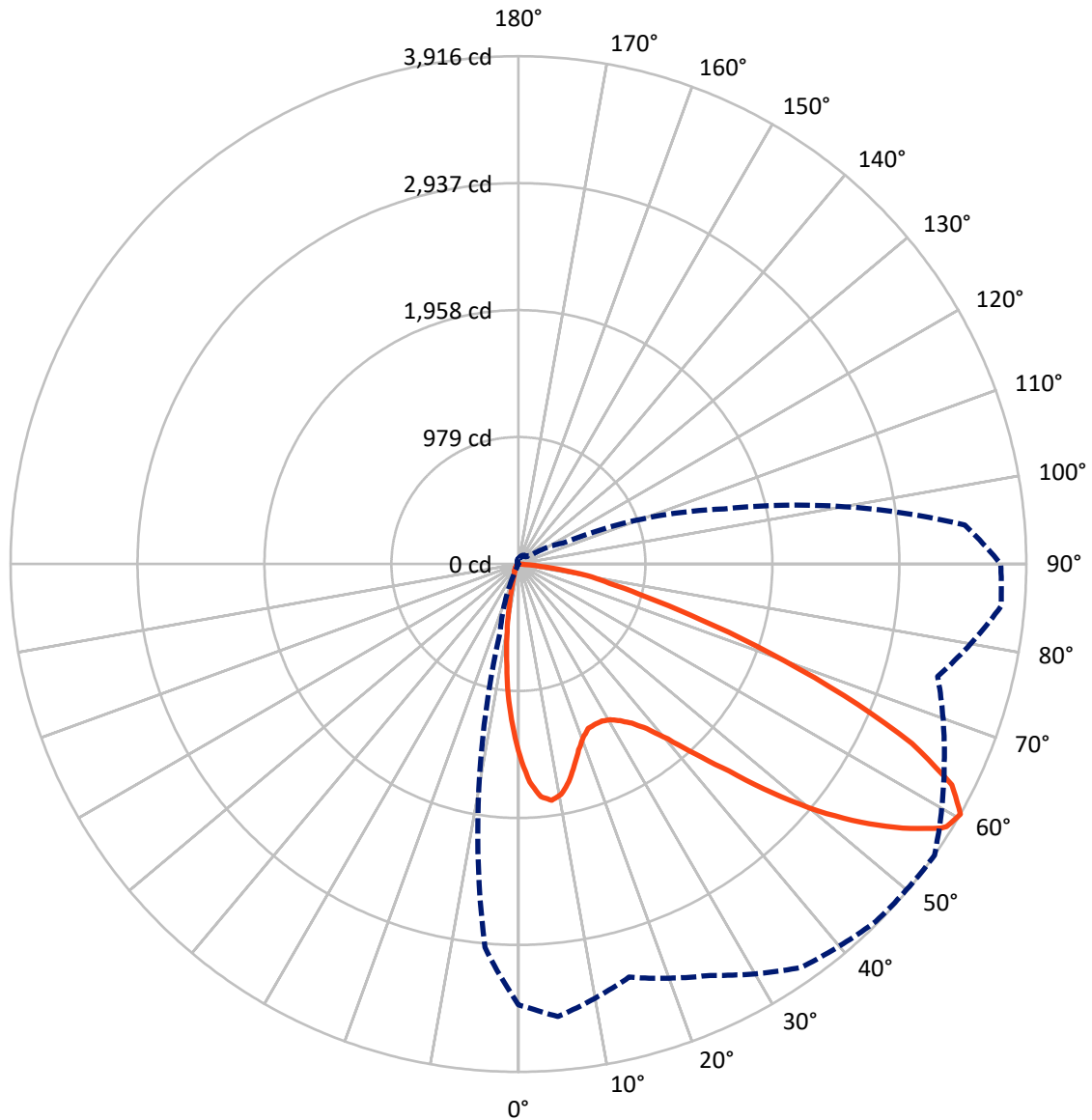


Based on 10 foot mounting height. Maximum calculated value = 17.5 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	744.3	0.0	744.3
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	3458.7	0.0	3458.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	4203.0	0.0	4203.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	2.7
10°-20°	212.4	5.1
20°-30°	303.0	7.2
30°-40°	444.5	10.6
40°-50°	655.4	15.6
50°-60°	970.9	23.1
60°-70°	1034.7	24.6
70°-80°	429.2	10.2
80°-90°	41.2	1.0
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°	4203.0	100.0
0°-180°	4203.0	100.0



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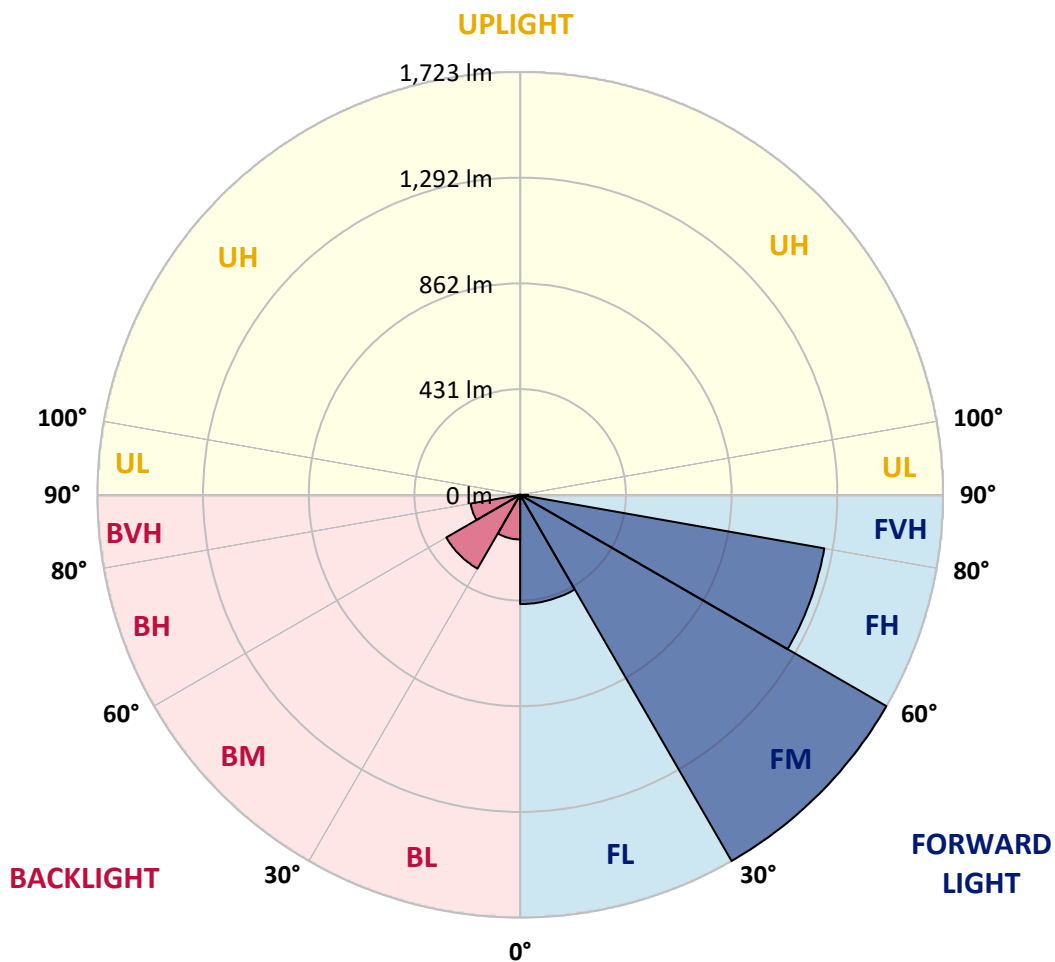
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	445.2	10.6			
FM	(30°-60°)	1723.3	41.0			
FH	(60°-80°)	1258.7	29.9			G1/1800
FVH	(80°-90°)	31.6	0.8			G1/100
BL	(0°-30°)	182.0	4.3	B1/500		
BM	(30°-60°)	347.5	8.3	B1/1000		
BH	(60°-80°)	205.2	4.9	B1/500		G1/500
BVH	(80°-90°)	9.7	0.2			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3
2.5°	1550.3	1547.9	1570.1	1616.2	1644.8	1662.3	1665.5	1683.8	1665.5	1655.9	1621.8
5°	1505.0	1504.2	1547.1	1648.0	1730.6	1792.6	1822.8	1802.1	1770.4	1707.6	1631.3
7.5°	1379.4	1379.4	1460.5	1595.6	1733.8	1841.1	1877.6	1839.5	1764.0	1637.7	1501.0
10°	1276.9	1286.5	1364.3	1525.6	1679.0	1796.6	1837.1	1807.7	1709.2	1545.5	1385.0
12.5°	1215.7	1221.3	1307.9	1470.0	1613.0	1708.4	1733.0	1724.3	1652.8	1474.8	1304.7
15°	1221.3	1229.2	1328.6	1461.3	1554.2	1592.4	1601.1	1612.2	1582.8	1446.2	1278.5
17.5°	1308.7	1314.3	1414.4	1500.2	1496.2	1484.3	1487.5	1505.8	1540.7	1470.0	1331.7
20°	1448.6	1462.9	1563.8	1565.4	1466.0	1410.4	1396.1	1426.3	1520.9	1532.8	1445.4
22.5°	1628.1	1633.7	1736.2	1675.0	1469.2	1359.6	1342.9	1377.0	1527.2	1634.5	1602.7
25°	1836.3	1856.2	1911.8	1817.2	1515.3	1352.4	1341.3	1369.9	1550.3	1742.6	1764.8
27.5°	1977.0	1992.9	2046.1	1914.2	1556.6	1356.4	1335.7	1370.7	1578.1	1844.3	1938.0
30°	2102.5	2113.6	2133.5	1965.0	1603.5	1376.2	1342.9	1392.9	1593.2	1865.7	2050.1
32.5°	2220.9	2234.4	2222.5	2026.2	1655.1	1413.6	1356.4	1439.8	1625.7	1908.6	2147.8
35°	2373.5	2374.3	2333.7	2087.4	1713.9	1458.1	1396.1	1506.6	1689.3	1975.4	2252.7
37.5°	2554.6	2556.2	2453.7	2150.2	1780.7	1532.8	1489.9	1609.9	1781.5	2052.4	2402.9
40°	2712.8	2719.1	2583.2	2222.5	1862.5	1678.2	1674.2	1773.5	1899.9	2154.9	2564.2
42.5°	2850.2	2868.5	2702.4	2282.9	1978.5	1901.5	1911.0	2001.6	2043.7	2240.8	2664.3
45°	2989.3	2988.5	2800.2	2343.3	2172.4	2189.1	2279.7	2275.7	2206.6	2286.9	2743.0
47.5°	3075.9	3071.9	2859.8	2441.8	2433.9	2593.6	2689.7	2637.3	2387.0	2336.1	2841.5
50°	3109.3	3107.7	2906.6	2567.3	2700.0	2959.9	3097.3	2992.5	2607.9	2418.8	2959.1
52.5°	3203.8	3195.9	3014.7	2710.4	2940.8	3312.7	3426.3	3309.5	2828.0	2567.3	3095.8
55°	3351.6	3354.0	3200.6	2878.0	3133.9	3561.4	3700.4	3596.4	3052.8	2771.6	3283.3
57.5°	3450.9	3458.1	3406.4	3064.8	3340.5	3735.4	3870.5	3841.1	3352.4	3015.5	3503.4
58°	3460.5	3466.0	3439.0	3100.5	3371.5	3755.3	3893.5	3872.9	3418.4	3093.4	3555.8
60°	3399.3	3416.0	3502.6	3297.6	3499.4	3797.4	3897.5	3915.8	3622.6	3346.1	3735.4
62.5°	3233.2	3238.8	3396.1	3518.5	3586.8	3693.3	3702.8	3750.5	3706.8	3642.4	3895.9
65°	3029.8	3029.8	3199.8	3528.8	3360.4	3342.9	3287.3	3334.9	3461.3	3828.4	3884.8
67.5°	2676.2	2678.6	2895.5	3143.4	2785.9	2725.5	2689.7	2707.2	2976.6	3673.4	3668.7
70°	2162.9	2161.3	2384.6	2545.1	2067.5	2015.9	2058.8	2053.2	2418.0	3264.2	3203.0
72.5°	1529.6	1543.1	1772.7	1965.8	1404.1	1210.2	1399.3	1472.4	1818.8	2751.7	2478.4
75°	861.3	879.6	1067.1	1365.9	886.0	818.4	915.4	1019.5	1315.1	2190.7	1664.7
77.5°	432.3	439.4	546.7	657.1	537.1	623.8	618.2	717.5	901.9	1478.0	951.9
80°	249.5	263.8	300.4	339.3	300.4	395.7	459.3	540.3	555.4	764.4	530.8
82.5°	100.1	112.0	140.6	159.7	124.8	117.6	80.3	252.7	334.5	369.5	203.4
85°	0.0	0.0	0.8	1.6	2.4	2.4	4.0	44.5	81.8	18.3	33.4
87.5°	0.0	0.0	0.8	0.8	1.6	2.4	3.2	5.6	7.2	8.7	30.2
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3
2.5°	1609.1	1600.3	1570.9	1526.4	1498.6	1455.7	1438.2	1397.7	1377.0	1342.9	1342.9
5°	1593.2	1557.4	1483.5	1387.4	1319.0	1247.5	1224.5	1176.8	1142.6	1102.1	1085.4
7.5°	1448.6	1398.5	1283.3	1171.2	1062.4	990.1	918.6	870.1	824.0	790.6	795.4
10°	1315.9	1244.3	1118.0	975.8	862.9	787.4	723.1	666.7	619.0	572.1	565.0
12.5°	1229.2	1147.4	996.4	843.9	759.6	704.0	644.4	582.4	523.6	472.0	451.3
15°	1192.7	1103.7	935.2	791.4	714.3	642.8	573.7	497.4	429.9	367.9	351.2
17.5°	1232.4	1125.9	929.7	756.5	649.2	559.4	463.3	379.8	300.4	255.9	242.4
20°	1340.5	1202.2	948.0	721.5	576.9	460.9	343.3	248.7	204.2	177.2	168.5
22.5°	1497.0	1328.6	978.9	687.3	503.8	343.3	236.8	179.6	153.4	139.1	135.1
25°	1667.1	1491.5	1036.2	658.7	430.7	255.1	175.6	147.0	131.1	120.8	116.8
27.5°	1858.6	1652.8	1106.1	637.3	363.1	204.2	151.0	129.5	116.8	109.7	106.5
30°	1978.5	1768.8	1159.3	599.1	317.0	185.9	143.8	122.4	108.9	103.3	100.9
32.5°	2089.0	1860.2	1210.2	555.4	282.1	164.5	139.8	128.7	112.8	101.7	96.9
35°	2210.6	1953.9	1234.8	529.2	259.0	143.0	115.2	100.1	91.4	89.8	87.4
37.5°	2391.7	2065.2	1250.7	514.9	244.7	130.3	107.3	90.6	80.3	70.7	66.7
40°	2563.4	2180.4	1258.6	501.4	237.6	122.4	102.5	85.8	74.7	66.0	62.0
42.5°	2697.7	2285.3	1263.4	491.9	224.9	117.6	98.5	82.6	70.7	62.0	58.0
45°	2807.3	2406.8	1259.4	488.7	214.5	120.8	96.9	80.3	67.5	58.8	54.8
47.5°	2914.6	2538.7	1274.5	484.7	204.2	116.0	97.7	79.5	65.2	56.4	52.4
50°	3055.2	2698.5	1329.4	473.6	197.1	108.9	105.7	80.3	64.4	54.8	51.6
52.5°	3237.2	2919.4	1428.7	461.7	188.3	102.5	110.4	80.3	62.8	53.2	49.3
55°	3458.1	3167.3	1538.3	444.2	173.2	94.6	105.7	80.3	61.2	52.4	47.7
57.5°	3638.5	3388.2	1625.0	423.5	145.4	85.0	96.9	77.1	57.2	49.3	45.3
58°	3654.4	3413.6	1636.9	418.0	142.2	83.4	94.6	76.3	55.6	48.5	44.5
60°	3718.7	3454.9	1641.6	387.8	118.4	79.5	81.8	73.9	52.4	45.3	42.1
62.5°	3696.5	3318.2	1540.7	334.5	105.7	72.3	68.3	75.5	48.5	41.3	38.1
65°	3586.0	3049.7	1350.0	299.6	106.5	64.4	58.8	66.0	44.5	37.3	34.2
67.5°	3323.0	2642.0	1096.5	280.5	111.2	57.2	50.9	49.3	39.7	33.4	31.0
70°	2834.3	2165.3	831.1	263.8	117.6	50.9	46.9	43.7	36.6	31.0	27.8
72.5°	2087.4	1603.5	604.7	247.1	114.4	45.3	43.7	39.7	33.4	27.8	26.2
75°	1302.3	931.3	414.0	201.8	102.5	39.7	40.5	37.3	30.2	26.2	23.8
77.5°	760.4	654.0	204.2	150.2	70.7	35.0	35.8	34.2	31.0	24.6	23.0
80°	455.3	406.8	87.4	64.4	38.9	31.0	30.2	31.8	29.4	23.0	21.5
82.5°	197.1	176.4	42.1	35.8	31.8	27.0	26.2	27.0	25.4	19.1	18.3
85°	11.1	29.4	19.9	26.2	23.8	19.9	19.9	20.7	18.3	15.1	15.1
87.5°	10.3	22.2	12.7	15.9	17.5	15.1	15.9	15.9	15.1	13.5	12.7
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3
2.5°	1324.6	1315.9	1289.6	1280.1	1238.8	1249.1	1252.3	1248.3	1249.9	1253.1	1265.0
5°	1097.3	1083.0	1048.9	1026.6	1014.7	1006.8	969.4	970.2	975.8	954.3	982.1
7.5°	779.5	795.4	798.6	777.9	765.2	738.2	704.0	684.9	652.4	670.6	674.6
10°	557.8	549.9	565.0	557.8	537.9	527.6	491.1	487.9	484.7	482.3	505.4
12.5°	425.1	401.3	383.8	387.8	372.7	347.2	340.9	341.7	344.9	344.9	351.2
15°	336.9	300.4	272.5	255.9	258.2	232.8	225.7	201.8	198.6	191.5	193.1
17.5°	236.0	220.9	204.2	185.1	177.2	154.2	126.3	113.6	104.1	105.7	110.4
20°	162.9	156.5	151.8	142.2	134.3	107.3	89.8	84.2	83.4	85.0	86.6
22.5°	131.1	124.8	120.0	116.8	106.5	86.6	77.1	73.1	73.1	73.1	73.9
25°	112.8	106.5	100.1	100.1	90.6	75.5	68.3	65.2	64.4	63.6	65.2
27.5°	104.9	96.1	89.8	85.8	78.7	66.7	60.4	57.2	56.4	56.4	57.2
30°	96.9	88.2	81.8	76.3	68.3	59.6	53.2	50.9	49.3	49.3	50.1
32.5°	92.2	83.4	75.5	68.3	59.6	52.4	46.9	43.7	42.1	42.9	43.7
35°	81.8	74.7	67.5	60.4	52.4	46.1	40.5	37.3	36.6	36.6	37.3
37.5°	64.4	58.8	57.2	53.2	46.1	39.7	34.2	31.0	30.2	30.2	31.0
40°	58.0	50.9	47.7	46.1	42.1	34.2	27.8	24.6	24.6	23.8	25.4
42.5°	53.2	46.1	40.5	38.9	36.6	29.4	22.2	19.9	19.1	19.1	19.9
45°	50.1	42.1	35.0	31.0	31.0	23.8	18.3	15.1	14.3	14.3	15.1
47.5°	48.5	39.7	31.0	25.4	24.6	19.9	14.3	11.1	10.3	10.3	10.3
50°	46.9	36.6	27.8	21.5	19.1	16.7	11.1	8.7	7.9	7.9	7.9
52.5°	44.5	35.0	25.4	19.1	15.1	12.7	8.7	6.4	5.6	4.8	5.6
55°	42.9	32.6	24.6	17.5	12.7	9.5	6.4	4.8	4.0	4.0	4.0
57.5°	40.5	30.2	22.2	16.7	11.9	7.2	4.8	3.2	2.4	2.4	3.2
58°	39.7	30.2	21.5	15.9	11.1	7.2	4.8	3.2	2.4	2.4	3.2
60°	37.3	27.8	20.7	14.3	10.3	6.4	4.0	2.4	1.6	1.6	2.4
62.5°	35.0	25.4	18.3	12.7	8.7	5.6	3.2	1.6	0.8	0.8	0.8
65°	31.0	23.0	15.9	11.9	7.2	4.0	2.4	0.8	0.0	0.0	0.0
67.5°	27.8	21.5	14.3	10.3	6.4	3.2	1.6	0.0	0.0	0.0	0.0
70°	25.4	19.9	12.7	8.7	5.6	2.4	0.8	0.0	0.0	0.0	0.0
72.5°	23.8	18.3	11.9	7.9	4.0	2.4	0.8	0.0	0.0	0.0	0.0
75°	23.0	17.5	11.9	7.2	4.0	2.4	1.6	0.8	0.0	0.0	0.8
77.5°	22.2	17.5	11.9	7.2	4.8	2.4	2.4	1.6	1.6	0.8	2.4
80°	20.7	15.9	10.3	6.4	4.0	3.2	2.4	1.6	0.0	0.0	0.0
82.5°	17.5	12.7	8.7	6.4	4.0	2.4	0.8	0.0	0.0	0.0	0.0
85°	14.3	10.3	7.2	4.0	2.4	0.8	0.0	0.0	0.0	0.0	0.0
87.5°	12.7	7.9	5.6	3.2	1.6	0.8	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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3	1484.3
2.5°	1275.3	1311.9	1327.0	1377.8	1400.1	1446.2	1485.9	1520.1	1536.8	1550.3
5°	989.3	1024.2	1061.6	1137.1	1202.2	1272.2	1359.6	1450.1	1476.4	1505.0
7.5°	690.5	742.2	804.9	872.5	965.4	1071.1	1196.7	1308.7	1365.1	1379.4
10°	536.4	597.5	664.3	731.0	808.1	920.9	1047.3	1191.9	1252.3	1276.9
12.5°	402.9	484.7	564.2	642.8	709.6	807.3	944.8	1117.2	1184.0	1215.7
15°	242.4	334.5	432.3	537.9	630.9	745.3	900.3	1101.3	1185.5	1221.3
17.5°	120.8	165.3	255.1	414.0	551.5	693.7	899.5	1158.5	1262.6	1308.7
20°	89.8	101.7	135.9	258.2	458.5	650.8	909.0	1256.3	1409.6	1448.6
22.5°	77.1	85.8	97.7	151.0	343.3	611.0	942.4	1385.8	1576.5	1628.1
25°	67.5	74.7	84.2	104.1	235.2	564.2	1005.2	1568.5	1765.6	1836.3
27.5°	59.6	66.0	73.9	87.4	157.3	476.0	1040.9	1721.9	1918.2	1977.0
30°	52.4	57.2	65.2	74.7	116.0	367.9	1074.3	1857.0	2056.4	2102.5
32.5°	46.1	50.1	56.4	63.6	88.2	278.9	1075.9	1973.0	2177.2	2220.9
35°	38.9	43.7	48.5	54.8	69.9	217.7	1043.3	2088.2	2320.2	2373.5
37.5°	32.6	36.6	42.1	47.7	63.6	168.5	975.8	2223.3	2494.2	2554.6
40°	27.8	31.8	36.6	42.9	56.4	122.4	867.7	2345.7	2657.1	2712.8
42.5°	22.2	26.2	31.8	42.1	46.9	88.2	758.8	2463.3	2798.6	2850.2
45°	17.5	22.2	29.4	40.5	38.9	62.0	665.1	2567.3	2920.1	2989.3
47.5°	12.7	18.3	29.4	36.6	31.8	44.5	617.4	2667.5	3029.0	3075.9
50°	9.5	15.1	31.8	31.0	27.0	38.1	624.6	2778.7	3079.1	3109.3
52.5°	7.2	12.7	24.6	22.2	23.0	33.4	652.4	2925.7	3182.4	3203.8
55°	6.4	9.5	15.1	16.7	20.7	31.8	645.2	3064.8	3314.3	3351.6
57.5°	5.6	7.9	11.9	13.5	18.3	30.2	604.7	3125.9	3399.3	3450.9
58°	4.8	7.9	11.1	13.5	18.3	29.4	594.4	3109.3	3395.3	3460.5
60°	4.0	7.2	10.3	11.9	15.9	26.2	544.3	2967.8	3307.9	3399.3
62.5°	3.2	4.8	7.9	8.7	12.7	21.5	448.2	2739.0	3120.4	3233.2
65°	1.6	3.2	4.8	6.4	8.7	15.9	318.6	2468.0	2919.4	3029.8
67.5°	0.0	1.6	3.2	4.0	5.6	11.9	183.6	2094.6	2588.8	2676.2
70°	0.0	0.8	1.6	2.4	3.2	7.9	96.9	1537.5	2005.6	2162.9
72.5°	0.8	0.8	0.8	0.0	1.6	6.4	42.9	912.2	1367.5	1529.6
75°	0.8	0.8	0.0	0.0	0.0	3.2	18.3	480.7	784.3	861.3
77.5°	3.2	1.6	0.0	0.0	0.0	0.8	8.7	259.0	406.8	432.3
80°	0.8	0.0	0.0	0.0	0.0	0.0	3.2	86.6	243.9	249.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	104.9	100.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	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

(END OF REPORT)