

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: P401923

Luminaire Tested: **ENV-SA1F-827-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401923
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: ENV-SA1F-827-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 1200mA 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: 4303 lumens
Efficiency: N/A
Efficacy: 65.1 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): 66.1
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

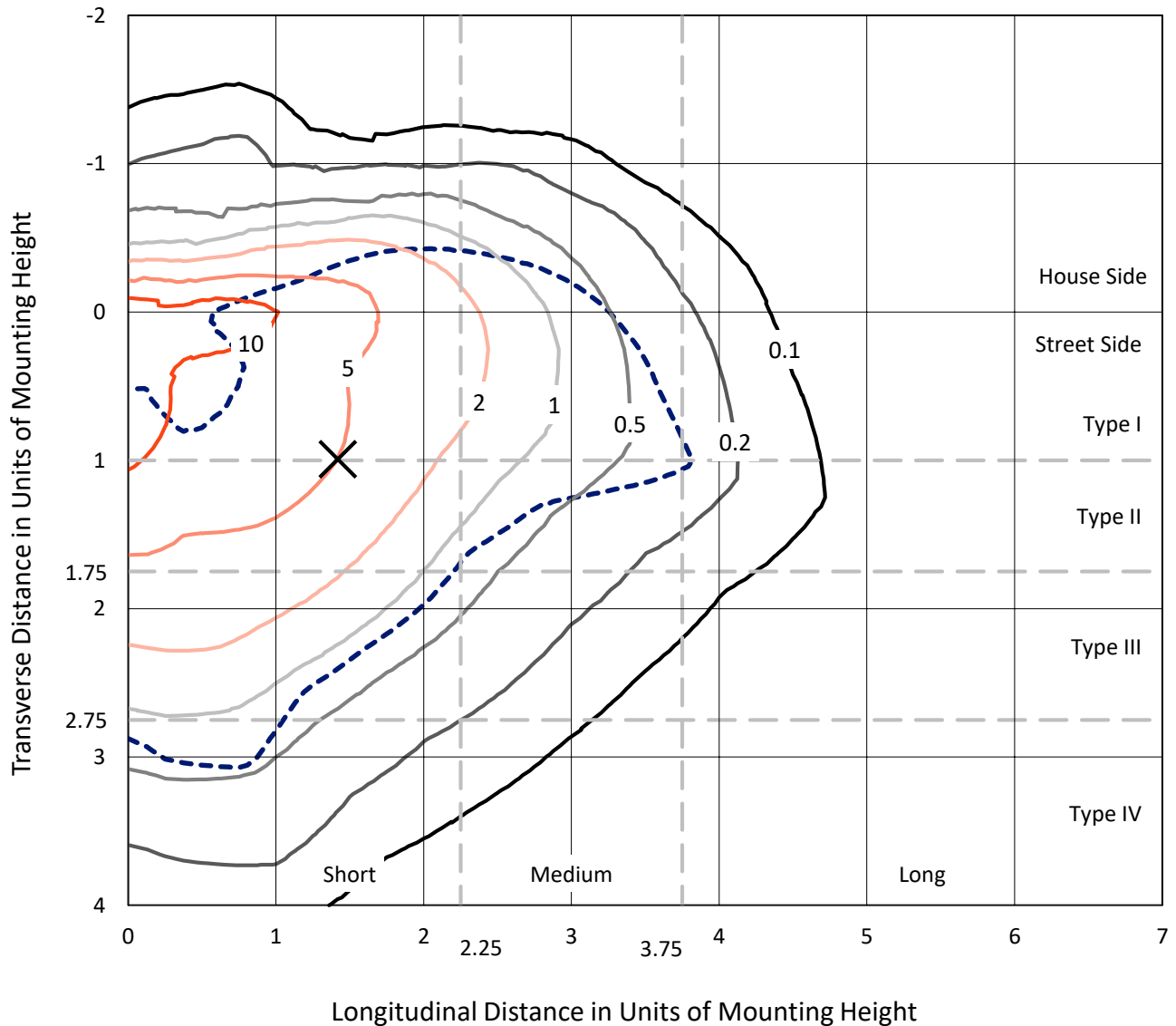


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

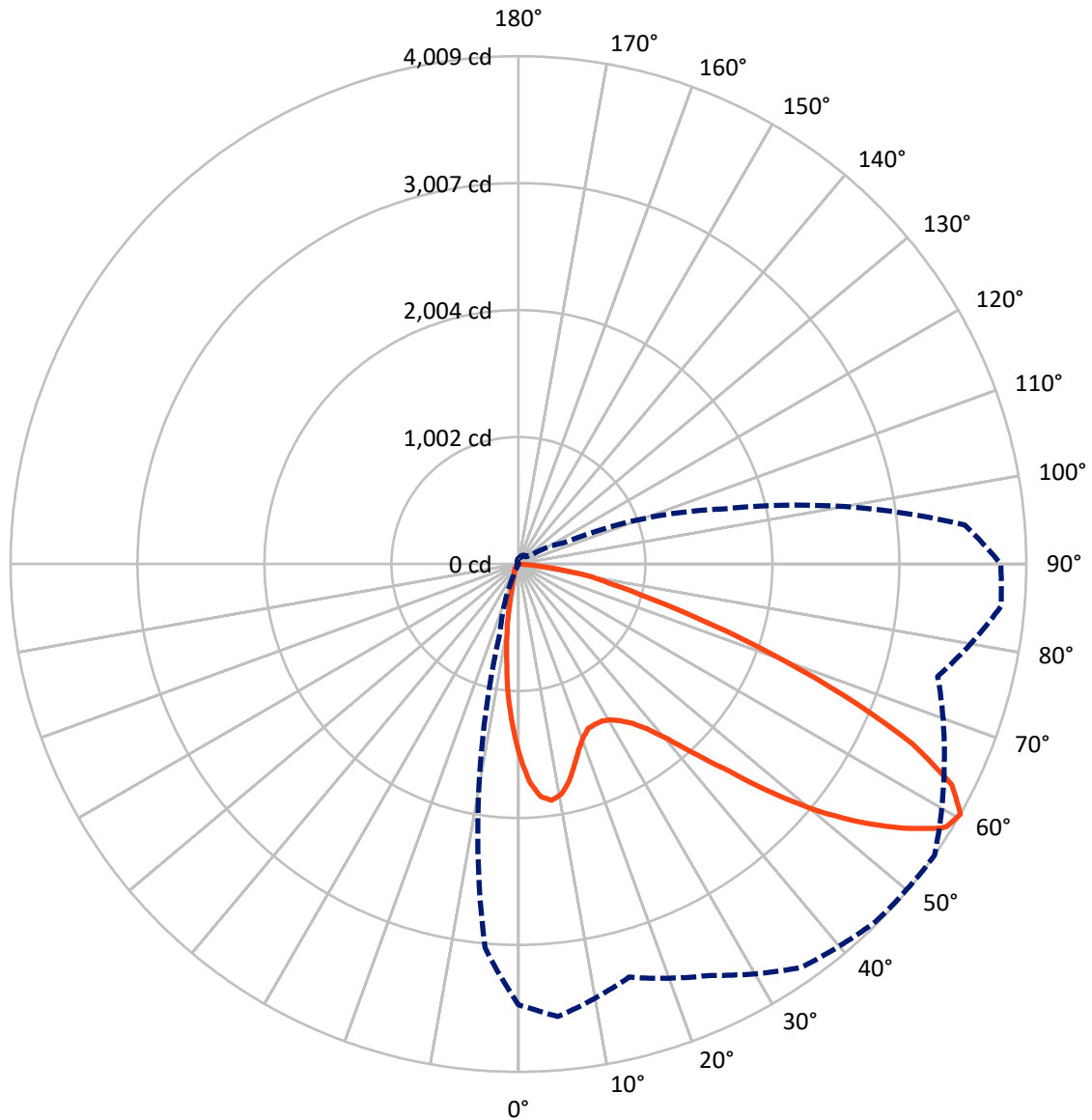


Based on 10 foot mounting height. Maximum calculated value = 17.9 fc
 Type III - Short - Semi-Cutoff

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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	762.0	0.0	762.0
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	3541.0	0.0	3541.0
	% Fixture	82.3	0.0	82.3
Total	Lumens	4303.0	0.0	4303.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	2.7
10°-20°	217.5	5.1
20°-30°	310.3	7.2
30°-40°	455.1	10.6
40°-50°	671.0	15.6
50°-60°	994.0	23.1
60°-70°	1059.3	24.6
70°-80°	439.4	10.2
80°-90°	42.2	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°	4303.0	100.0
0°-180°	4303.0	100.0



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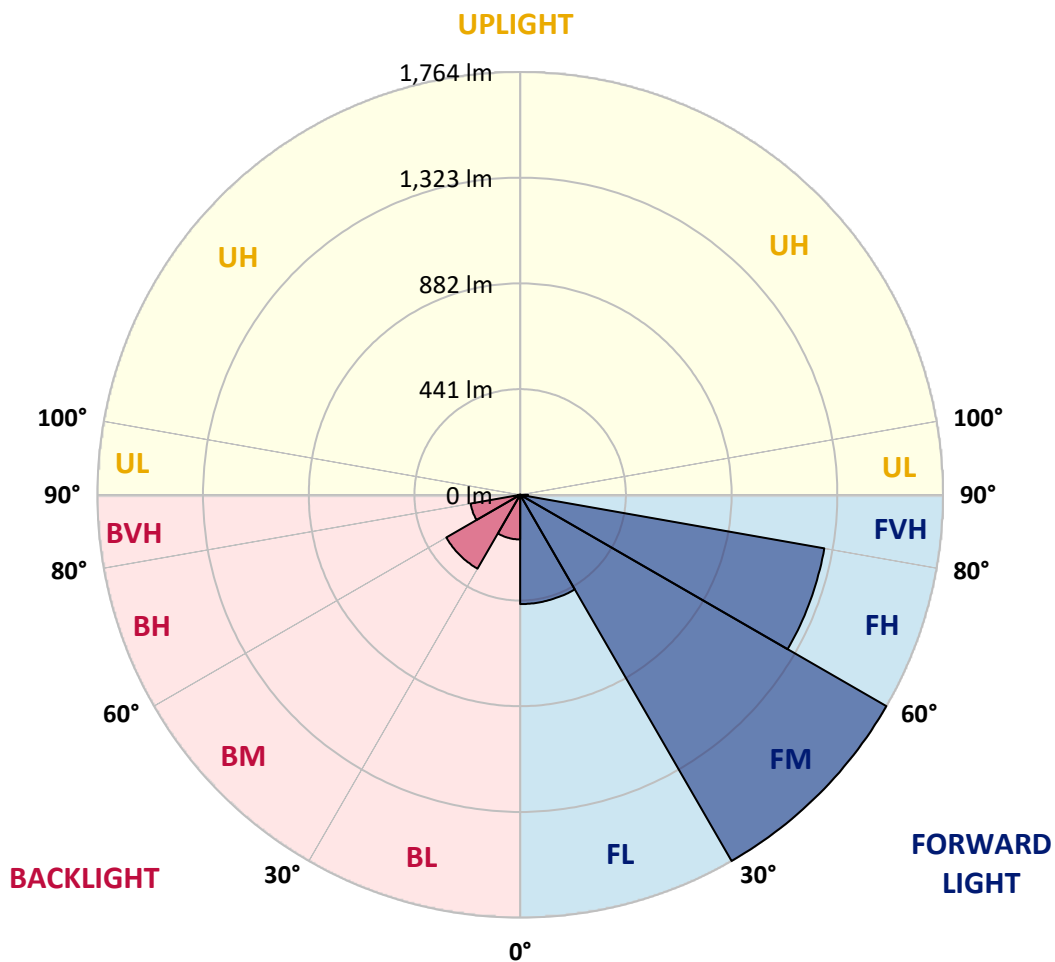
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	455.8	10.6			
FM	(30°-60°)	1764.3	41.0			
FH	(60°-80°)	1288.6	29.9			G1/1800
FVH	(80°-90°)	32.3	0.8			G1/100
BL	(0°-30°)	186.3	4.3	B1/500		
BM	(30°-60°)	355.8	8.3	B1/1000		
BH	(60°-80°)	210.1	4.9	B1/500		G1/500
BVH	(80°-90°)	9.9	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°	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6
2.5°	1587.1	1584.7	1607.5	1654.7	1684.0	1701.8	1705.1	1723.8	1705.1	1695.3	1660.4
5°	1540.8	1540.0	1583.9	1687.2	1771.8	1835.3	1866.2	1845.0	1812.5	1748.2	1670.1
7.5°	1412.2	1412.2	1495.2	1633.5	1775.1	1884.9	1922.3	1883.3	1806.0	1676.6	1536.7
10°	1307.3	1317.1	1396.8	1561.9	1718.9	1839.3	1880.8	1850.7	1749.8	1582.3	1417.9
12.5°	1244.7	1250.4	1339.0	1505.0	1651.4	1749.0	1774.3	1765.3	1692.1	1509.9	1335.8
15°	1250.4	1258.5	1360.2	1496.0	1591.2	1630.3	1639.2	1650.6	1620.5	1480.6	1308.9
17.5°	1339.8	1345.5	1448.0	1535.9	1531.8	1519.6	1522.9	1541.6	1577.4	1505.0	1363.4
20°	1483.0	1497.7	1601.0	1602.6	1500.9	1444.0	1429.3	1460.2	1557.0	1569.2	1479.8
22.5°	1666.9	1672.6	1777.5	1714.9	1504.2	1391.9	1374.8	1409.8	1563.6	1673.4	1640.8
25°	1880.0	1900.3	1957.3	1860.5	1551.4	1384.6	1373.2	1402.5	1587.1	1784.0	1806.8
27.5°	2024.0	2040.3	2094.8	1959.7	1593.7	1388.7	1367.5	1403.3	1615.6	1888.1	1984.1
30°	2152.5	2163.9	2184.3	2011.8	1641.7	1409.0	1374.8	1426.1	1631.1	1910.1	2098.8
32.5°	2273.7	2287.6	2275.4	2074.4	1694.5	1447.2	1388.7	1474.1	1664.4	1954.0	2198.9
35°	2429.9	2430.7	2389.3	2137.1	1754.7	1492.8	1429.3	1542.4	1729.5	2022.4	2306.3
37.5°	2615.4	2617.0	2512.1	2201.3	1823.1	1569.2	1525.3	1648.2	1823.9	2101.3	2460.0
40°	2777.3	2783.8	2644.7	2275.4	1906.9	1718.1	1714.1	1815.7	1945.1	2206.2	2625.2
42.5°	2918.0	2936.7	2766.7	2337.2	2025.6	1946.7	1956.5	2049.2	2092.3	2294.1	2727.7
45°	3060.4	3059.6	2866.8	2399.0	2224.1	2241.2	2333.9	2329.9	2259.1	2341.3	2808.2
47.5°	3149.1	3145.0	2927.8	2499.9	2491.8	2655.3	2753.7	2700.0	2443.8	2391.7	2909.1
50°	3183.2	3181.6	2975.8	2628.4	2764.3	3030.3	3171.0	3063.7	2669.9	2476.3	3029.5
52.5°	3280.0	3271.9	3086.4	2774.9	3010.8	3391.5	3507.8	3388.2	2895.3	2628.4	3169.4
55°	3431.4	3433.8	3276.8	2946.5	3208.5	3646.1	3788.5	3681.9	3125.5	2837.5	3361.4
57.5°	3533.0	3540.4	3487.5	3137.7	3420.0	3824.3	3962.6	3932.5	3432.2	3087.2	3586.7
58°	3542.8	3548.5	3520.8	3174.3	3451.7	3844.6	3986.2	3965.0	3499.7	3167.0	3640.4
60°	3480.2	3497.3	3585.9	3376.0	3582.7	3887.7	3990.2	4008.9	3708.8	3425.7	3824.3
62.5°	3310.1	3315.8	3476.9	3602.2	3672.2	3781.2	3790.9	3839.7	3795.0	3729.1	3988.6
65°	3101.9	3101.9	3276.0	3612.8	3440.3	3422.4	3365.5	3414.3	3543.6	3919.5	3977.2
67.5°	2739.9	2742.3	2964.4	3218.2	2852.1	2790.3	2753.7	2771.6	3047.4	3760.8	3755.9
70°	2214.4	2212.7	2441.3	2605.7	2116.7	2063.9	2107.8	2102.1	2475.5	3341.9	3279.2
72.5°	1566.0	1579.8	1814.9	2012.6	1437.5	1239.0	1432.6	1507.4	1862.1	2817.2	2537.3
75°	881.8	900.5	1092.5	1398.4	907.1	837.9	937.2	1043.7	1346.3	2242.8	1704.3
77.5°	442.5	449.9	559.7	672.8	549.9	638.6	632.9	734.6	923.3	1513.1	974.6
80°	255.4	270.1	307.5	347.4	307.5	405.1	470.2	553.2	568.6	782.6	543.4
82.5°	102.5	114.7	144.0	163.5	127.7	120.4	82.2	258.7	342.5	378.3	208.3
85°	0.0	0.0	0.8	1.6	2.4	2.4	4.1	45.6	83.8	18.7	34.2
87.5°	0.0	0.0	0.8	0.8	1.6	2.4	3.3	5.7	7.3	8.9	30.9
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°	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6
2.5°	1647.3	1638.4	1608.3	1562.7	1534.3	1490.3	1472.4	1431.0	1409.8	1374.8	1374.8
5°	1631.1	1594.5	1518.8	1420.4	1350.4	1277.2	1253.6	1204.8	1169.8	1128.3	1111.2
7.5°	1483.0	1431.8	1313.8	1199.1	1087.7	1013.6	940.4	890.8	843.6	809.4	814.3
10°	1347.2	1273.9	1144.6	999.0	883.5	806.2	740.3	682.5	633.7	585.7	578.4
12.5°	1258.5	1174.7	1020.1	863.9	777.7	720.8	659.8	596.3	536.1	483.2	462.1
15°	1221.1	1130.0	957.5	810.2	731.3	658.1	587.3	509.3	440.1	376.7	359.6
17.5°	1261.7	1152.7	951.8	774.5	664.6	572.7	474.3	388.9	307.5	261.9	248.1
20°	1372.4	1230.8	970.5	738.7	590.6	471.8	351.4	254.6	209.1	181.4	172.5
22.5°	1532.6	1360.2	1002.2	703.7	515.8	351.4	242.4	183.9	157.0	142.4	138.3
25°	1706.7	1526.9	1060.8	674.4	440.9	261.1	179.8	150.5	134.2	123.7	119.6
27.5°	1902.8	1692.1	1132.4	652.4	371.8	209.1	154.6	132.6	119.6	112.3	109.0
30°	2025.6	1810.9	1186.9	613.4	324.6	190.4	147.2	125.3	111.4	105.8	103.3
32.5°	2138.7	1904.4	1239.0	568.6	288.8	168.4	143.2	131.8	115.5	104.1	99.2
35°	2263.2	2000.4	1264.2	541.8	265.2	146.4	118.0	102.5	93.6	91.9	89.5
37.5°	2448.6	2114.3	1280.5	527.2	250.6	133.4	109.8	92.7	82.2	72.4	68.3
40°	2624.4	2232.3	1288.6	513.3	243.2	125.3	104.9	87.9	76.5	67.5	63.5
42.5°	2761.8	2339.6	1293.5	503.6	230.2	120.4	100.9	84.6	72.4	63.5	59.4
45°	2874.1	2464.1	1289.4	500.3	219.6	123.7	99.2	82.2	69.1	60.2	56.1
47.5°	2983.9	2599.1	1304.9	496.2	209.1	118.8	100.1	81.4	66.7	57.8	53.7
50°	3127.9	2762.7	1361.0	484.8	201.7	111.4	108.2	82.2	65.9	56.1	52.9
52.5°	3314.2	2988.8	1462.7	472.6	192.8	104.9	113.1	82.2	64.3	54.5	50.4
55°	3540.4	3242.6	1574.9	454.7	177.3	96.8	108.2	82.2	62.6	53.7	48.8
57.5°	3725.0	3468.8	1663.6	433.6	148.9	87.0	99.2	78.9	58.6	50.4	46.4
58°	3741.3	3494.8	1675.8	427.9	145.6	85.4	96.8	78.1	56.9	49.6	45.6
60°	3807.2	3537.1	1680.7	397.0	121.2	81.4	83.8	75.7	53.7	46.4	43.1
62.5°	3784.4	3397.2	1577.4	342.5	108.2	74.0	70.0	77.3	49.6	42.3	39.0
65°	3671.3	3122.2	1382.1	306.7	109.0	65.9	60.2	67.5	45.6	38.2	35.0
67.5°	3402.1	2704.9	1122.6	287.2	113.9	58.6	52.1	50.4	40.7	34.2	31.7
70°	2901.8	2216.8	850.9	270.1	120.4	52.1	48.0	44.7	37.4	31.7	28.5
72.5°	2137.1	1641.7	619.1	253.0	117.1	46.4	44.7	40.7	34.2	28.5	26.8
75°	1333.3	953.4	423.8	206.6	104.9	40.7	41.5	38.2	30.9	26.8	24.4
77.5°	778.5	669.5	209.1	153.8	72.4	35.8	36.6	35.0	31.7	25.2	23.6
80°	466.1	416.5	89.5	65.9	39.9	31.7	30.9	32.5	30.1	23.6	22.0
82.5°	201.7	180.6	43.1	36.6	32.5	27.7	26.8	27.7	26.0	19.5	18.7
85°	11.4	30.1	20.3	26.8	24.4	20.3	20.3	21.2	18.7	15.5	15.5
87.5°	10.6	22.8	13.0	16.3	17.9	15.5	16.3	16.3	15.5	13.8	13.0
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6
2.5°	1356.1	1347.2	1320.3	1310.6	1268.3	1278.8	1282.1	1278.0	1279.6	1282.9	1295.1
5°	1123.4	1108.8	1073.8	1051.0	1038.8	1030.7	992.5	993.3	999.0	977.0	1005.5
7.5°	798.0	814.3	817.6	796.4	783.4	755.7	720.8	701.2	667.9	686.6	690.7
10°	571.1	562.9	578.4	571.1	550.7	540.2	502.7	499.5	496.2	493.8	517.4
12.5°	435.2	410.8	392.9	397.0	381.5	355.5	349.0	349.8	353.1	353.1	359.6
15°	344.9	307.5	279.0	261.9	264.4	238.4	231.0	206.6	203.4	196.1	197.7
17.5°	241.6	226.2	209.1	189.5	181.4	157.8	129.3	116.3	106.6	108.2	113.1
20°	166.8	160.3	155.4	145.6	137.5	109.8	91.9	86.2	85.4	87.0	88.7
22.5°	134.2	127.7	122.8	119.6	109.0	88.7	78.9	74.8	74.8	74.8	75.7
25°	115.5	109.0	102.5	102.5	92.7	77.3	70.0	66.7	65.9	65.1	66.7
27.5°	107.4	98.4	91.9	87.9	80.5	68.3	61.8	58.6	57.8	57.8	58.6
30°	99.2	90.3	83.8	78.1	70.0	61.0	54.5	52.1	50.4	50.4	51.3
32.5°	94.4	85.4	77.3	70.0	61.0	53.7	48.0	44.7	43.1	43.9	44.7
35°	83.8	76.5	69.1	61.8	53.7	47.2	41.5	38.2	37.4	37.4	38.2
37.5°	65.9	60.2	58.6	54.5	47.2	40.7	35.0	31.7	30.9	30.9	31.7
40°	59.4	52.1	48.8	47.2	43.1	35.0	28.5	25.2	25.2	24.4	26.0
42.5°	54.5	47.2	41.5	39.9	37.4	30.1	22.8	20.3	19.5	19.5	20.3
45°	51.3	43.1	35.8	31.7	31.7	24.4	18.7	15.5	14.6	14.6	15.5
47.5°	49.6	40.7	31.7	26.0	25.2	20.3	14.6	11.4	10.6	10.6	10.6
50°	48.0	37.4	28.5	22.0	19.5	17.1	11.4	8.9	8.1	8.1	8.1
52.5°	45.6	35.8	26.0	19.5	15.5	13.0	8.9	6.5	5.7	4.9	5.7
55°	43.9	33.4	25.2	17.9	13.0	9.8	6.5	4.9	4.1	4.1	4.1
57.5°	41.5	30.9	22.8	17.1	12.2	7.3	4.9	3.3	2.4	2.4	3.3
58°	40.7	30.9	22.0	16.3	11.4	7.3	4.9	3.3	2.4	2.4	3.3
60°	38.2	28.5	21.2	14.6	10.6	6.5	4.1	2.4	1.6	1.6	2.4
62.5°	35.8	26.0	18.7	13.0	8.9	5.7	3.3	1.6	0.8	0.8	0.8
65°	31.7	23.6	16.3	12.2	7.3	4.1	2.4	0.8	0.0	0.0	0.0
67.5°	28.5	22.0	14.6	10.6	6.5	3.3	1.6	0.0	0.0	0.0	0.0
70°	26.0	20.3	13.0	8.9	5.7	2.4	0.8	0.0	0.0	0.0	0.0
72.5°	24.4	18.7	12.2	8.1	4.1	2.4	0.8	0.0	0.0	0.0	0.0
75°	23.6	17.9	12.2	7.3	4.1	2.4	1.6	0.8	0.0	0.0	0.8
77.5°	22.8	17.9	12.2	7.3	4.9	2.4	2.4	1.6	1.6	0.8	2.4
80°	21.2	16.3	10.6	6.5	4.1	3.3	2.4	1.6	0.0	0.0	0.0
82.5°	17.9	13.0	8.9	6.5	4.1	2.4	0.8	0.0	0.0	0.0	0.0
85°	14.6	10.6	7.3	4.1	2.4	0.8	0.0	0.0	0.0	0.0	0.0
87.5°	13.0	8.1	5.7	3.3	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°	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6	1519.6
2.5°	1305.7	1343.1	1358.6	1410.6	1433.4	1480.6	1521.3	1556.2	1573.3	1587.1
5°	1012.8	1048.6	1086.8	1164.1	1230.8	1302.4	1391.9	1484.6	1511.5	1540.8
7.5°	706.9	759.8	824.1	893.2	988.4	1096.6	1225.1	1339.8	1397.6	1412.2
10°	549.1	611.8	680.1	748.4	827.3	942.9	1072.2	1220.3	1282.1	1307.3
12.5°	412.4	496.2	577.6	658.1	726.5	826.5	967.3	1143.8	1212.1	1244.7
15°	248.1	342.5	442.5	550.7	645.9	763.1	921.7	1127.5	1213.7	1250.4
17.5°	123.7	169.2	261.1	423.8	564.6	710.2	920.9	1186.1	1292.7	1339.8
20°	91.9	104.1	139.1	264.4	469.4	666.3	930.6	1286.1	1443.2	1483.0
22.5°	78.9	87.9	100.1	154.6	351.4	625.6	964.8	1418.8	1614.0	1666.9
25°	69.1	76.5	86.2	106.6	240.8	577.6	1029.1	1605.9	1807.6	1880.0
27.5°	61.0	67.5	75.7	89.5	161.1	487.3	1065.7	1762.9	1963.8	2024.0
30°	53.7	58.6	66.7	76.5	118.8	376.7	1099.9	1901.2	2105.3	2152.5
32.5°	47.2	51.3	57.8	65.1	90.3	285.5	1101.5	2019.9	2229.0	2273.7
35°	39.9	44.7	49.6	56.1	71.6	222.9	1068.1	2137.9	2375.4	2429.9
37.5°	33.4	37.4	43.1	48.8	65.1	172.5	999.0	2276.2	2553.6	2615.4
40°	28.5	32.5	37.4	43.9	57.8	125.3	888.3	2401.5	2720.4	2777.3
42.5°	22.8	26.8	32.5	43.1	48.0	90.3	776.9	2521.9	2865.2	2918.0
45°	17.9	22.8	30.1	41.5	39.9	63.5	680.9	2628.4	2989.6	3060.4
47.5°	13.0	18.7	30.1	37.4	32.5	45.6	632.1	2730.9	3101.1	3149.1
50°	9.8	15.5	32.5	31.7	27.7	39.0	639.4	2844.8	3152.3	3183.2
52.5°	7.3	13.0	25.2	22.8	23.6	34.2	667.9	2995.3	3258.1	3280.0
55°	6.5	9.8	15.5	17.1	21.2	32.5	660.6	3137.7	3393.1	3431.4
57.5°	5.7	8.1	12.2	13.8	18.7	30.9	619.1	3200.3	3480.2	3533.0
58°	4.9	8.1	11.4	13.8	18.7	30.1	608.5	3183.2	3476.1	3542.8
60°	4.1	7.3	10.6	12.2	16.3	26.8	557.2	3038.4	3386.6	3480.2
62.5°	3.3	4.9	8.1	8.9	13.0	22.0	458.8	2804.1	3194.6	3310.1
65°	1.6	3.3	4.9	6.5	8.9	16.3	326.2	2526.7	2988.8	3101.9
67.5°	0.0	1.6	3.3	4.1	5.7	12.2	187.9	2144.4	2650.4	2739.9
70°	0.0	0.8	1.6	2.4	3.3	8.1	99.2	1574.1	2053.3	2214.4
72.5°	0.8	0.8	0.8	0.0	1.6	6.5	43.9	933.9	1400.0	1566.0
75°	0.8	0.8	0.0	0.0	0.0	3.3	18.7	492.2	802.9	881.8
77.5°	3.3	1.6	0.0	0.0	0.0	0.8	8.9	265.2	416.5	442.5
80°	0.8	0.0	0.0	0.0	0.0	0.0	3.3	88.7	249.7	255.4
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	107.4	102.5
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)