

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: P401617

Luminaire Tested: **ENT-SA1E-727-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401617
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-727-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 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: 4423 lumens
Efficiency: N/A
Efficacy: 77.3 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

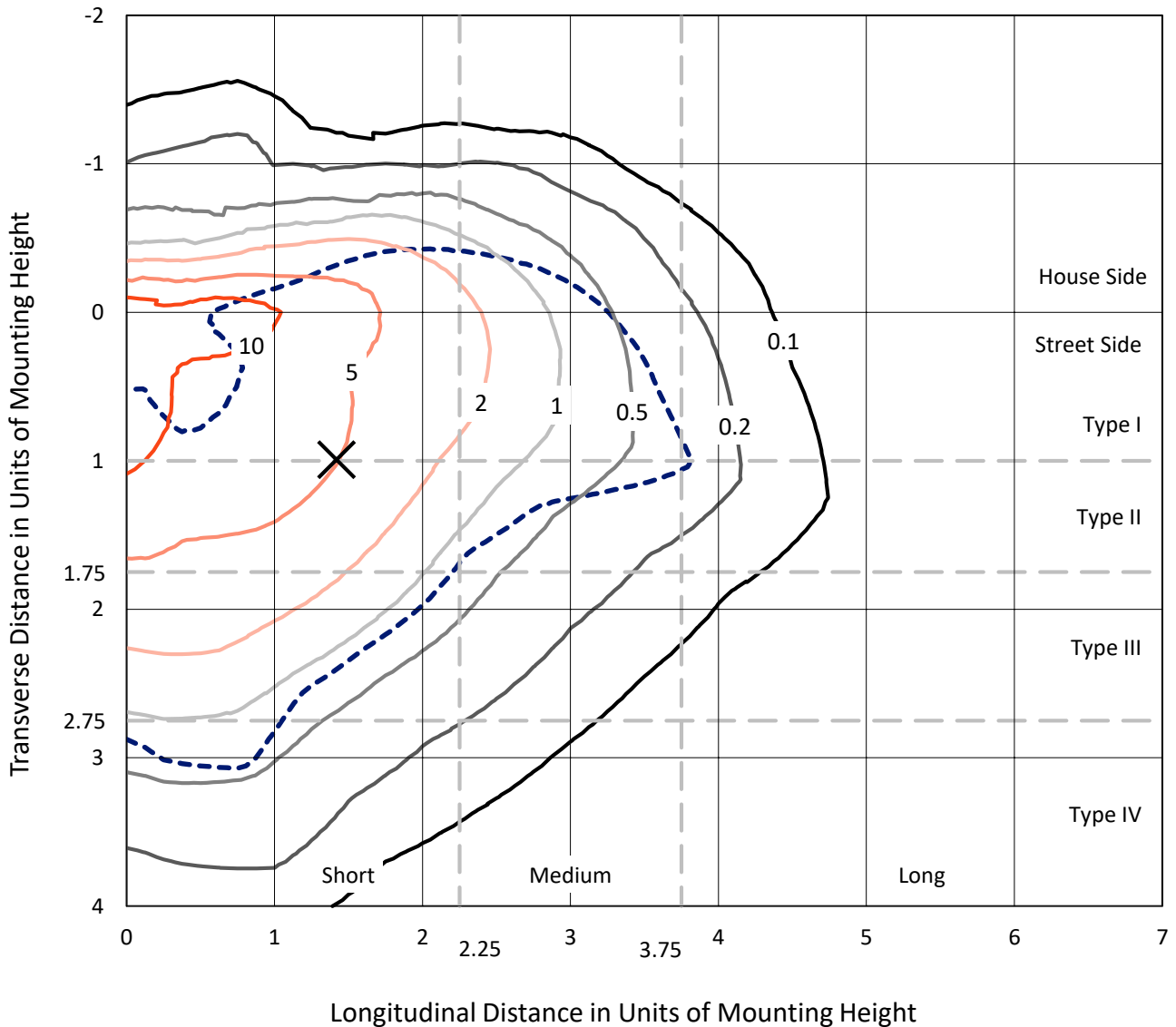


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

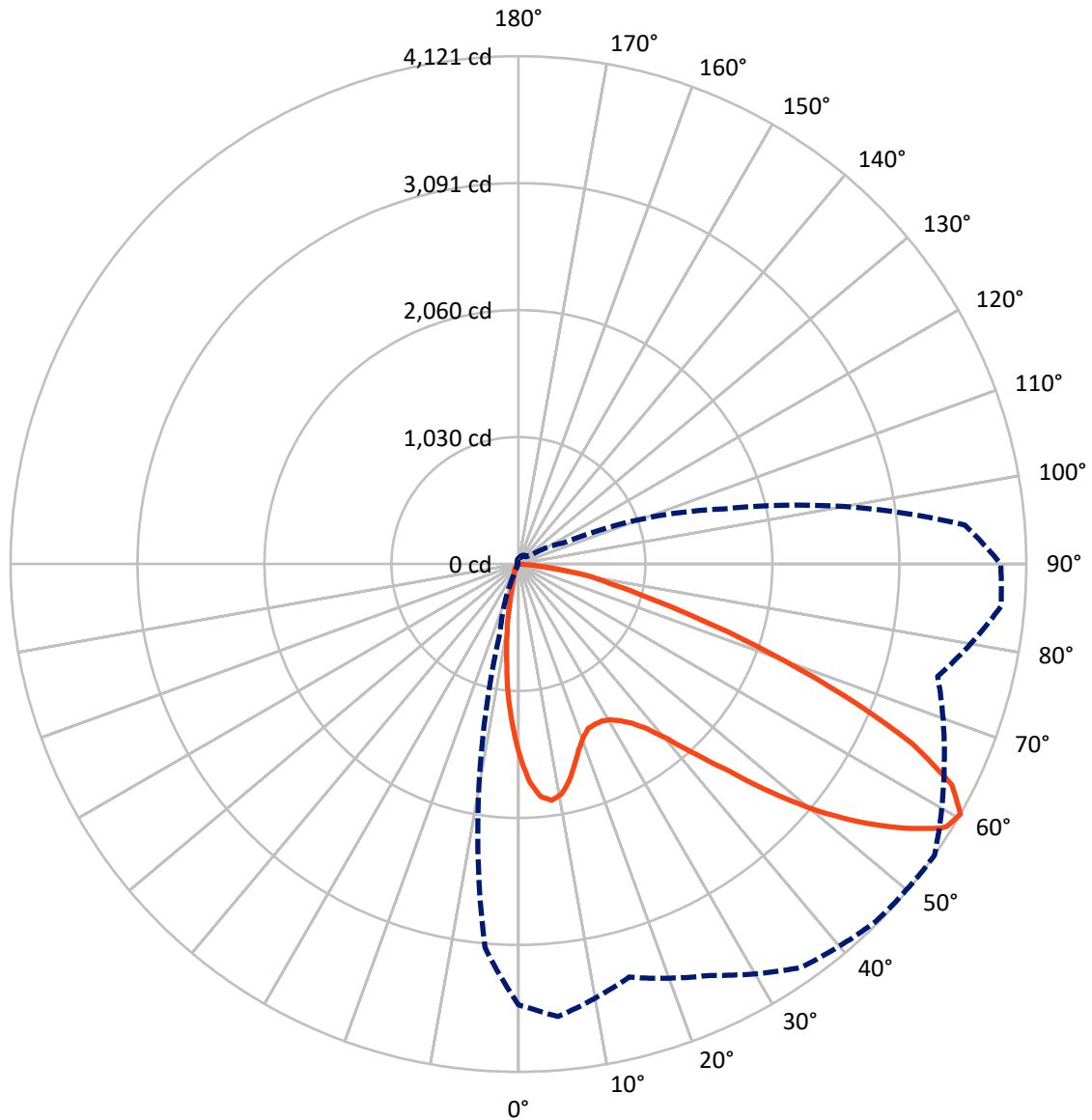


Based on 10 foot mounting height. Maximum calculated value = 18.5 fc
 Type III - Short - Semi-Cutoff

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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	783.3	0.0	783.3
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	3639.7	0.0	3639.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	4423.0	0.0	4423.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.5	2.7
10°-20°	223.6	5.1
20°-30°	318.9	7.2
30°-40°	467.8	10.6
40°-50°	689.7	15.6
50°-60°	1021.7	23.1
60°-70°	1088.8	24.6
70°-80°	451.6	10.2
80°-90°	43.4	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°	4423.0	100.0
0°-180°	4423.0	100.0



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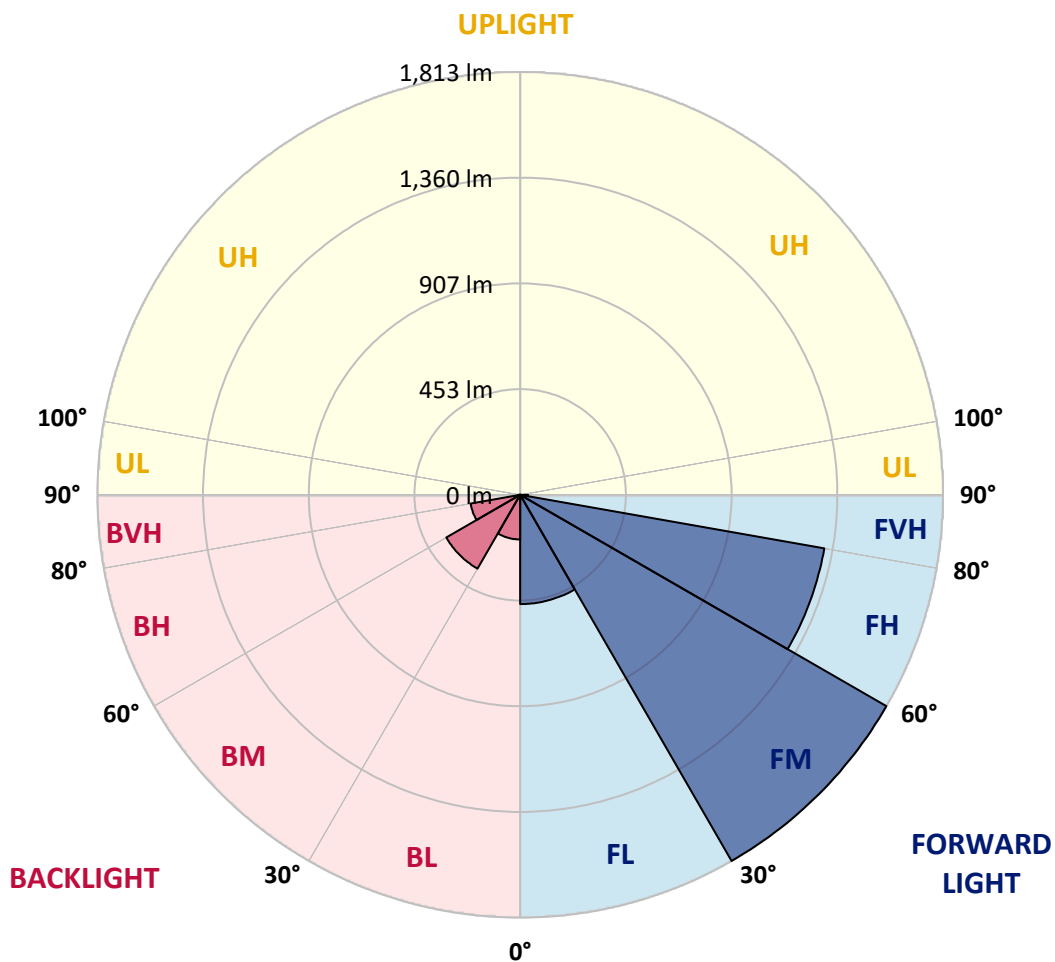
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	468.5	10.6			
FM	(30°-60°)	1813.5	41.0			
FH	(60°-80°)	1324.5	29.9			G1/1800
FVH	(80°-90°)	33.2	0.8			G1/100
BL	(0°-30°)	191.5	4.3	B1/500		
BM	(30°-60°)	365.7	8.3	B1/1000		
BH	(60°-80°)	215.9	4.9	B1/500		G1/500
BVH	(80°-90°)	10.2	0.2			G1/100
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°	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0
2.5°	1631.4	1628.9	1652.3	1700.8	1730.9	1749.3	1752.7	1771.9	1752.7	1742.6	1706.7
5°	1583.7	1582.9	1628.1	1734.3	1821.2	1886.4	1918.2	1896.5	1863.0	1797.0	1716.7
7.5°	1451.6	1451.6	1536.9	1679.1	1824.6	1937.5	1975.9	1935.8	1856.3	1723.4	1579.6
10°	1343.8	1353.8	1435.7	1605.5	1766.9	1890.6	1933.3	1902.3	1798.6	1626.4	1457.5
12.5°	1279.4	1285.2	1376.4	1547.0	1697.5	1797.8	1823.7	1814.5	1739.3	1552.0	1373.0
15°	1285.2	1293.6	1398.1	1537.8	1635.6	1675.7	1684.9	1696.6	1665.7	1521.9	1345.4
17.5°	1377.2	1383.1	1488.4	1578.7	1574.5	1562.0	1565.3	1584.6	1621.4	1547.0	1401.5
20°	1524.4	1539.4	1645.6	1647.3	1542.8	1484.2	1469.2	1501.0	1600.5	1613.0	1521.0
22.5°	1713.4	1719.2	1827.1	1762.7	1546.1	1430.7	1413.2	1449.1	1607.2	1720.0	1686.6
25°	1932.4	1953.3	2011.9	1912.4	1594.6	1423.2	1411.5	1441.6	1631.4	1833.8	1857.2
27.5°	2080.4	2097.2	2153.2	2014.4	1638.1	1427.4	1405.6	1442.4	1660.7	1940.8	2039.5
30°	2212.6	2224.3	2245.2	2067.9	1687.4	1448.3	1413.2	1465.8	1676.6	1963.4	2157.4
32.5°	2337.2	2351.4	2338.8	2132.3	1741.8	1487.6	1427.4	1515.2	1710.8	2008.5	2260.2
35°	2497.7	2498.5	2455.9	2196.7	1803.7	1534.4	1469.2	1585.4	1777.7	2078.8	2370.6
37.5°	2688.4	2690.0	2582.2	2262.7	1873.9	1613.0	1567.9	1694.1	1874.7	2159.9	2528.6
40°	2854.8	2861.4	2718.5	2338.8	1960.0	1766.0	1761.9	1866.4	1999.3	2267.7	2698.4
42.5°	2999.4	3018.6	2843.9	2402.4	2082.1	2001.0	2011.0	2106.4	2150.7	2358.1	2803.7
45°	3145.7	3144.9	2946.7	2465.9	2286.1	2303.7	2399.0	2394.8	2322.1	2406.6	2886.5
47.5°	3236.9	3232.7	3009.4	2569.6	2561.3	2729.3	2830.5	2775.3	2511.9	2458.4	2990.2
50°	3272.0	3270.3	3058.8	2701.7	2841.4	3114.8	3259.5	3149.1	2744.4	2545.4	3114.0
52.5°	3371.5	3363.2	3172.5	2852.2	3094.7	3486.1	3605.7	3482.7	2976.0	2701.7	3257.8
55°	3527.1	3529.6	3368.2	3028.7	3297.9	3747.8	3894.1	3784.6	3212.6	2916.6	3455.1
57.5°	3631.6	3639.1	3584.7	3225.2	3515.3	3930.9	4073.1	4042.1	3527.9	3173.3	3686.8
58°	3641.6	3647.5	3619.0	3262.8	3548.0	3951.8	4097.3	4075.6	3597.3	3255.3	3742.0
60°	3577.2	3594.8	3685.9	3470.2	3682.6	3996.2	4101.5	4120.7	3812.2	3521.2	3930.9
62.5°	3402.5	3408.3	3573.9	3702.6	3774.6	3886.6	3896.6	3946.8	3900.8	3833.1	4099.8
65°	3188.4	3188.4	3367.3	3713.5	3536.2	3517.9	3459.3	3509.5	3642.4	4028.8	4088.1
67.5°	2816.3	2818.8	3047.1	3308.0	2931.7	2868.1	2830.5	2848.9	3132.4	3865.7	3860.7
70°	2276.1	2274.4	2509.4	2678.3	2175.8	2121.4	2166.6	2160.7	2544.5	3435.1	3370.7
72.5°	1609.7	1623.9	1865.5	2068.7	1477.5	1273.5	1472.5	1549.5	1914.0	2895.7	2608.1
75°	906.4	925.7	1123.0	1437.4	932.4	861.3	963.3	1072.8	1383.9	2305.4	1751.8
77.5°	454.9	462.4	575.3	691.5	565.3	656.4	650.6	755.1	949.1	1555.3	1001.8
80°	262.6	277.6	316.1	357.1	316.1	416.4	483.3	568.6	584.5	804.4	558.6
82.5°	105.4	117.9	148.0	168.1	131.3	123.8	84.5	265.9	352.0	388.8	214.1
85°	0.0	0.0	0.8	1.7	2.5	2.5	4.2	46.8	86.1	19.2	35.1
87.5°	0.0	0.0	0.8	0.8	1.7	2.5	3.3	5.9	7.5	9.2	31.8
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°	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0
2.5°	1693.3	1684.1	1653.1	1606.3	1577.1	1531.9	1513.5	1470.9	1449.1	1413.2	1413.2
5°	1676.6	1638.9	1561.2	1460.0	1388.1	1312.8	1288.6	1238.4	1202.4	1159.8	1142.2
7.5°	1524.4	1471.7	1350.4	1232.5	1118.0	1041.9	966.6	915.6	867.1	832.0	837.0
10°	1384.7	1309.5	1176.5	1026.8	908.1	828.7	760.9	701.6	651.4	602.1	594.5
12.5°	1293.6	1207.5	1048.6	888.0	799.4	740.9	678.2	612.9	551.0	496.7	475.0
15°	1255.1	1161.5	984.2	832.8	751.7	676.5	603.7	523.5	452.4	387.2	369.6
17.5°	1296.9	1184.9	978.3	796.1	683.2	588.7	487.5	399.7	316.1	269.3	255.0
20°	1410.7	1265.2	997.6	759.3	607.1	485.0	361.2	261.7	214.9	186.5	177.3
22.5°	1575.4	1398.1	1030.2	723.3	530.1	361.2	249.2	189.0	161.4	146.3	142.2
25°	1754.3	1569.5	1090.4	693.2	453.2	268.4	184.8	154.7	138.0	127.1	122.9
27.5°	1955.8	1739.3	1164.0	670.6	382.1	214.9	158.9	136.3	122.9	115.4	112.0
30°	2082.1	1861.4	1220.0	630.5	333.6	195.7	151.4	128.8	114.6	108.7	106.2
32.5°	2198.3	1957.5	1273.5	584.5	296.8	173.1	147.2	135.5	118.7	107.0	102.0
35°	2326.3	2056.2	1299.4	556.9	272.6	150.5	121.2	105.4	96.2	94.5	92.0
37.5°	2516.9	2173.3	1316.2	541.9	257.5	137.1	112.9	95.3	84.5	74.4	70.2
40°	2697.5	2294.5	1324.5	527.6	250.0	128.8	107.9	90.3	78.6	69.4	65.2
42.5°	2838.9	2404.9	1329.5	517.6	236.6	123.8	103.7	87.0	74.4	65.2	61.0
45°	2954.3	2532.8	1325.4	514.3	225.8	127.1	102.0	84.5	71.1	61.9	57.7
47.5°	3067.1	2671.6	1341.2	510.1	214.9	122.1	102.9	83.6	68.6	59.4	55.2
50°	3215.2	2839.7	1398.9	498.4	207.4	114.6	111.2	84.5	67.7	57.7	54.4
52.5°	3406.6	3072.2	1503.5	485.8	198.2	107.9	116.2	84.5	66.1	56.0	51.8
55°	3639.1	3333.1	1618.9	467.4	182.3	99.5	111.2	84.5	64.4	55.2	50.2
57.5°	3828.9	3565.5	1710.0	445.7	153.0	89.5	102.0	81.1	60.2	51.8	47.7
58°	3845.6	3592.3	1722.6	439.8	149.7	87.8	99.5	80.3	58.5	51.0	46.8
60°	3913.4	3635.8	1727.6	408.1	124.6	83.6	86.1	77.8	55.2	47.7	44.3
62.5°	3890.0	3491.9	1621.4	352.0	111.2	76.1	71.9	79.4	51.0	43.5	40.1
65°	3773.7	3209.3	1420.7	315.2	112.0	67.7	61.9	69.4	46.8	39.3	36.0
67.5°	3496.9	2780.3	1153.9	295.2	117.1	60.2	53.5	51.8	41.8	35.1	32.6
70°	2982.7	2278.6	874.7	277.6	123.8	53.5	49.3	46.0	38.5	32.6	29.3
72.5°	2196.7	1687.4	636.3	260.1	120.4	47.7	46.0	41.8	35.1	29.3	27.6
75°	1370.5	980.0	435.7	212.4	107.9	41.8	42.6	39.3	31.8	27.6	25.1
77.5°	800.2	688.2	214.9	158.0	74.4	36.8	37.6	36.0	32.6	25.9	24.2
80°	479.1	428.1	92.0	67.7	41.0	32.6	31.8	33.4	30.9	24.2	22.6
82.5°	207.4	185.6	44.3	37.6	33.4	28.4	27.6	28.4	26.8	20.1	19.2
85°	11.7	30.9	20.9	27.6	25.1	20.9	20.9	21.7	19.2	15.9	15.9
87.5°	10.9	23.4	13.4	16.7	18.4	15.9	16.7	16.7	15.9	14.2	13.4
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0
2.5°	1393.9	1384.7	1357.1	1347.1	1303.6	1314.5	1317.8	1313.7	1315.3	1318.7	1331.2
5°	1154.8	1139.7	1103.8	1080.4	1067.8	1059.5	1020.2	1021.0	1026.8	1004.3	1033.5
7.5°	820.3	837.0	840.4	818.6	805.3	776.8	740.9	720.8	686.5	705.7	709.9
10°	587.0	578.6	594.5	587.0	566.1	555.2	516.8	513.4	510.1	507.6	531.8
12.5°	447.4	422.3	403.9	408.1	392.2	365.4	358.7	359.6	362.9	362.9	369.6
15°	354.5	316.1	286.8	269.3	271.8	245.0	237.5	212.4	209.0	201.5	203.2
17.5°	248.3	232.5	214.9	194.8	186.5	162.2	133.0	119.6	109.5	111.2	116.2
20°	171.4	164.7	159.7	149.7	141.3	112.9	94.5	88.6	87.8	89.5	91.1
22.5°	138.0	131.3	126.3	122.9	112.0	91.1	81.1	76.9	76.9	76.9	77.8
25°	118.7	112.0	105.4	105.4	95.3	79.4	71.9	68.6	67.7	66.9	68.6
27.5°	110.4	101.2	94.5	90.3	82.8	70.2	63.6	60.2	59.4	59.4	60.2
30°	102.0	92.8	86.1	80.3	71.9	62.7	56.0	53.5	51.8	51.8	52.7
32.5°	97.0	87.8	79.4	71.9	62.7	55.2	49.3	46.0	44.3	45.2	46.0
35°	86.1	78.6	71.1	63.6	55.2	48.5	42.6	39.3	38.5	38.5	39.3
37.5°	67.7	61.9	60.2	56.0	48.5	41.8	36.0	32.6	31.8	31.8	32.6
40°	61.0	53.5	50.2	48.5	44.3	36.0	29.3	25.9	25.9	25.1	26.8
42.5°	56.0	48.5	42.6	41.0	38.5	30.9	23.4	20.9	20.1	20.1	20.9
45°	52.7	44.3	36.8	32.6	32.6	25.1	19.2	15.9	15.1	15.1	15.9
47.5°	51.0	41.8	32.6	26.8	25.9	20.9	15.1	11.7	10.9	10.9	10.9
50°	49.3	38.5	29.3	22.6	20.1	17.6	11.7	9.2	8.4	8.4	8.4
52.5°	46.8	36.8	26.8	20.1	15.9	13.4	9.2	6.7	5.9	5.0	5.9
55°	45.2	34.3	25.9	18.4	13.4	10.0	6.7	5.0	4.2	4.2	4.2
57.5°	42.6	31.8	23.4	17.6	12.5	7.5	5.0	3.3	2.5	2.5	3.3
58°	41.8	31.8	22.6	16.7	11.7	7.5	5.0	3.3	2.5	2.5	3.3
60°	39.3	29.3	21.7	15.1	10.9	6.7	4.2	2.5	1.7	1.7	2.5
62.5°	36.8	26.8	19.2	13.4	9.2	5.9	3.3	1.7	0.8	0.8	0.8
65°	32.6	24.2	16.7	12.5	7.5	4.2	2.5	0.8	0.0	0.0	0.0
67.5°	29.3	22.6	15.1	10.9	6.7	3.3	1.7	0.0	0.0	0.0	0.0
70°	26.8	20.9	13.4	9.2	5.9	2.5	0.8	0.0	0.0	0.0	0.0
72.5°	25.1	19.2	12.5	8.4	4.2	2.5	0.8	0.0	0.0	0.0	0.0
75°	24.2	18.4	12.5	7.5	4.2	2.5	1.7	0.8	0.0	0.0	0.8
77.5°	23.4	18.4	12.5	7.5	5.0	2.5	2.5	1.7	1.7	0.8	2.5
80°	21.7	16.7	10.9	6.7	4.2	3.3	2.5	1.7	0.0	0.0	0.0
82.5°	18.4	13.4	9.2	6.7	4.2	2.5	0.8	0.0	0.0	0.0	0.0
85°	15.1	10.9	7.5	4.2	2.5	0.8	0.0	0.0	0.0	0.0	0.0
87.5°	13.4	8.4	5.9	3.3	1.7	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°	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0	1562.0
2.5°	1342.1	1380.5	1396.4	1450.0	1473.4	1521.9	1563.7	1599.6	1617.2	1631.4
5°	1041.1	1077.8	1117.2	1196.6	1265.2	1338.7	1430.7	1526.0	1553.6	1583.7
7.5°	726.6	781.0	847.1	918.1	1016.0	1127.2	1259.3	1377.2	1436.6	1451.6
10°	564.4	628.8	699.1	769.3	850.4	969.1	1102.1	1254.3	1317.8	1343.8
12.5°	423.9	510.1	593.7	676.5	746.7	849.6	994.2	1175.7	1245.9	1279.4
15°	255.0	352.0	454.9	566.1	663.9	784.3	947.4	1159.0	1247.6	1285.2
17.5°	127.1	173.9	268.4	435.7	580.3	730.0	946.6	1219.2	1328.7	1377.2
20°	94.5	107.0	143.0	271.8	482.5	684.8	956.6	1322.0	1483.4	1524.4
22.5°	81.1	90.3	102.9	158.9	361.2	643.0	991.7	1458.3	1659.0	1713.4
25°	71.1	78.6	88.6	109.5	247.5	593.7	1057.8	1650.6	1858.0	1932.4
27.5°	62.7	69.4	77.8	92.0	165.6	500.9	1095.4	1812.0	2018.6	2080.4
30°	55.2	60.2	68.6	78.6	122.1	387.2	1130.5	1954.2	2164.1	2212.6
32.5°	48.5	52.7	59.4	66.9	92.8	293.5	1132.2	2076.3	2291.2	2337.2
35°	41.0	46.0	51.0	57.7	73.6	229.1	1097.9	2197.5	2441.7	2497.7
37.5°	34.3	38.5	44.3	50.2	66.9	177.3	1026.8	2339.7	2624.8	2688.4
40°	29.3	33.4	38.5	45.2	59.4	128.8	913.1	2468.4	2796.2	2854.8
42.5°	23.4	27.6	33.4	44.3	49.3	92.8	798.6	2592.2	2945.1	2999.4
45°	18.4	23.4	30.9	42.6	41.0	65.2	699.9	2701.7	3073.0	3145.7
47.5°	13.4	19.2	30.9	38.5	33.4	46.8	649.7	2807.1	3187.6	3236.9
50°	10.0	15.9	33.4	32.6	28.4	40.1	657.2	2924.2	3240.2	3272.0
52.5°	7.5	13.4	25.9	23.4	24.2	35.1	686.5	3078.9	3348.9	3371.5
55°	6.7	10.0	15.9	17.6	21.7	33.4	679.0	3225.2	3487.7	3527.1
57.5°	5.9	8.4	12.5	14.2	19.2	31.8	636.3	3289.6	3577.2	3631.6
58°	5.0	8.4	11.7	14.2	19.2	30.9	625.5	3272.0	3573.0	3641.6
60°	4.2	7.5	10.9	12.5	16.7	27.6	572.8	3123.2	3481.1	3577.2
62.5°	3.3	5.0	8.4	9.2	13.4	22.6	471.6	2882.3	3283.7	3402.5
65°	1.7	3.3	5.0	6.7	9.2	16.7	335.3	2597.2	3072.2	3188.4
67.5°	0.0	1.7	3.3	4.2	5.9	12.5	193.2	2204.2	2724.3	2816.3
70°	0.0	0.8	1.7	2.5	3.3	8.4	102.0	1618.0	2110.5	2276.1
72.5°	0.8	0.8	0.8	0.0	1.7	6.7	45.2	959.9	1439.1	1609.7
75°	0.8	0.8	0.0	0.0	0.0	3.3	19.2	505.9	825.3	906.4
77.5°	3.3	1.7	0.0	0.0	0.0	0.8	9.2	272.6	428.1	454.9
80°	0.8	0.0	0.0	0.0	0.0	0.0	3.3	91.1	256.7	262.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	110.4	105.4
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)