

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: P401833

Luminaire Tested: **ENT-SA1F-735-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401833
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-SA1F-735-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 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: 5499 lumens
Efficiency: N/A
Efficacy: 83.2 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

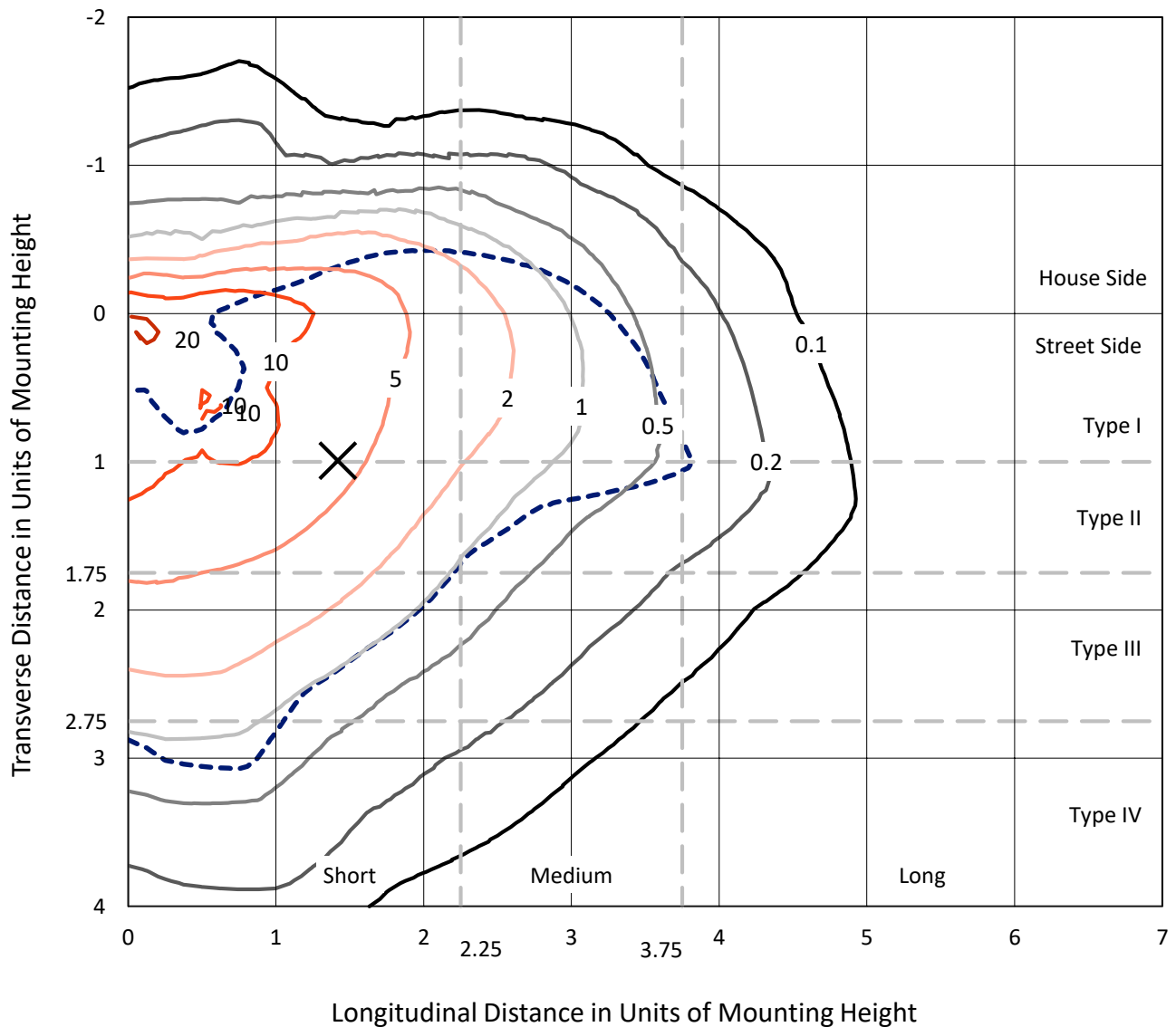


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

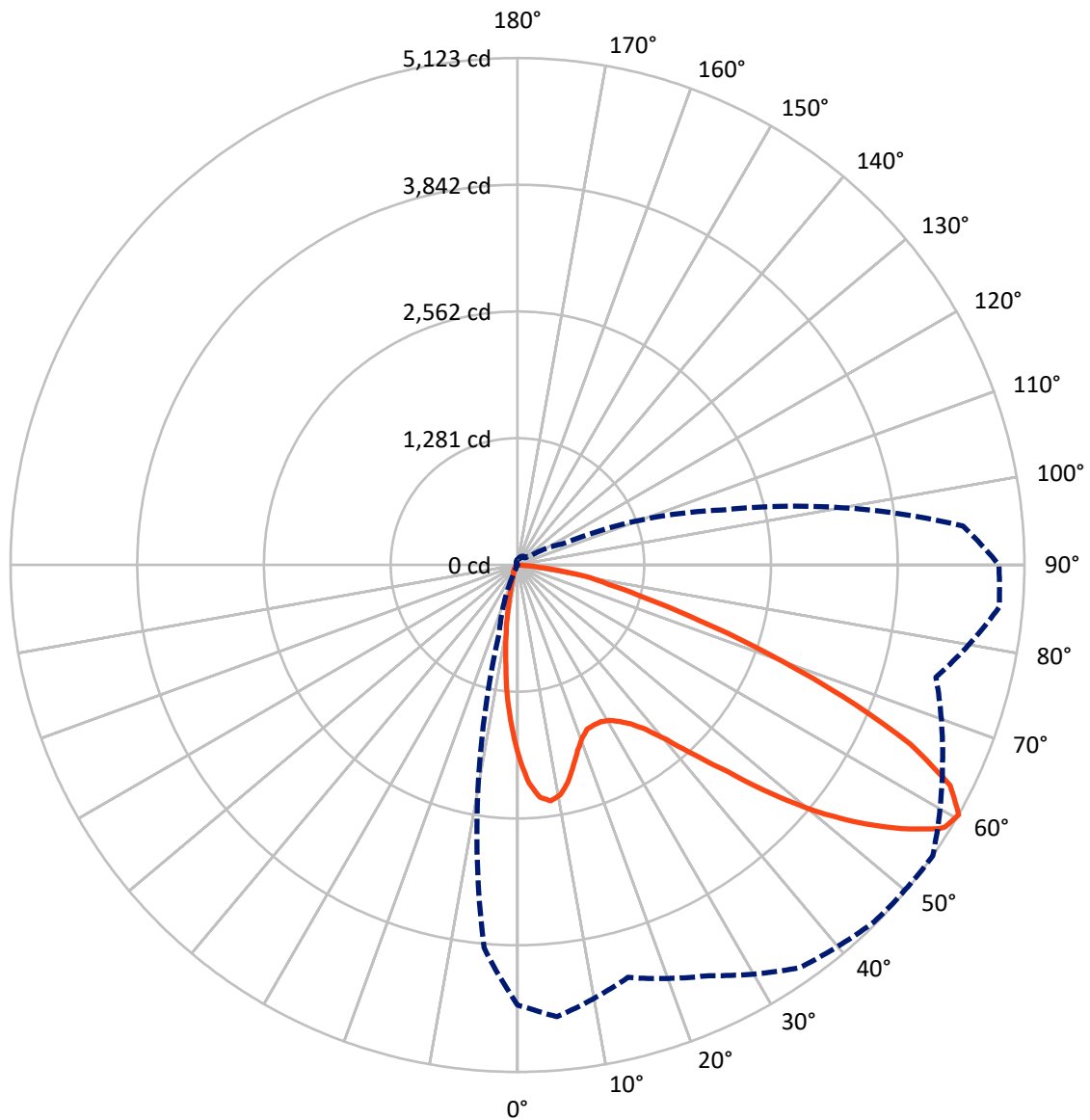


Based on 10 foot mounting height. Maximum calculated value = 22.9 fc
 Type III - Short - Semi-Cutoff

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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	973.8	0.0	973.8
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4525.2	0.0	4525.2
	% Fixture	82.3	0.0	82.3
Total	Lumens	5499.0	0.0	5499.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.1	2.7
10°-20°	277.9	5.1
20°-30°	396.5	7.2
30°-40°	581.6	10.6
40°-50°	857.5	15.6
50°-60°	1270.3	23.1
60°-70°	1353.7	24.6
70°-80°	561.5	10.2
80°-90°	54.0	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°	5499.0	100.0
0°-180°	5499.0	100.0



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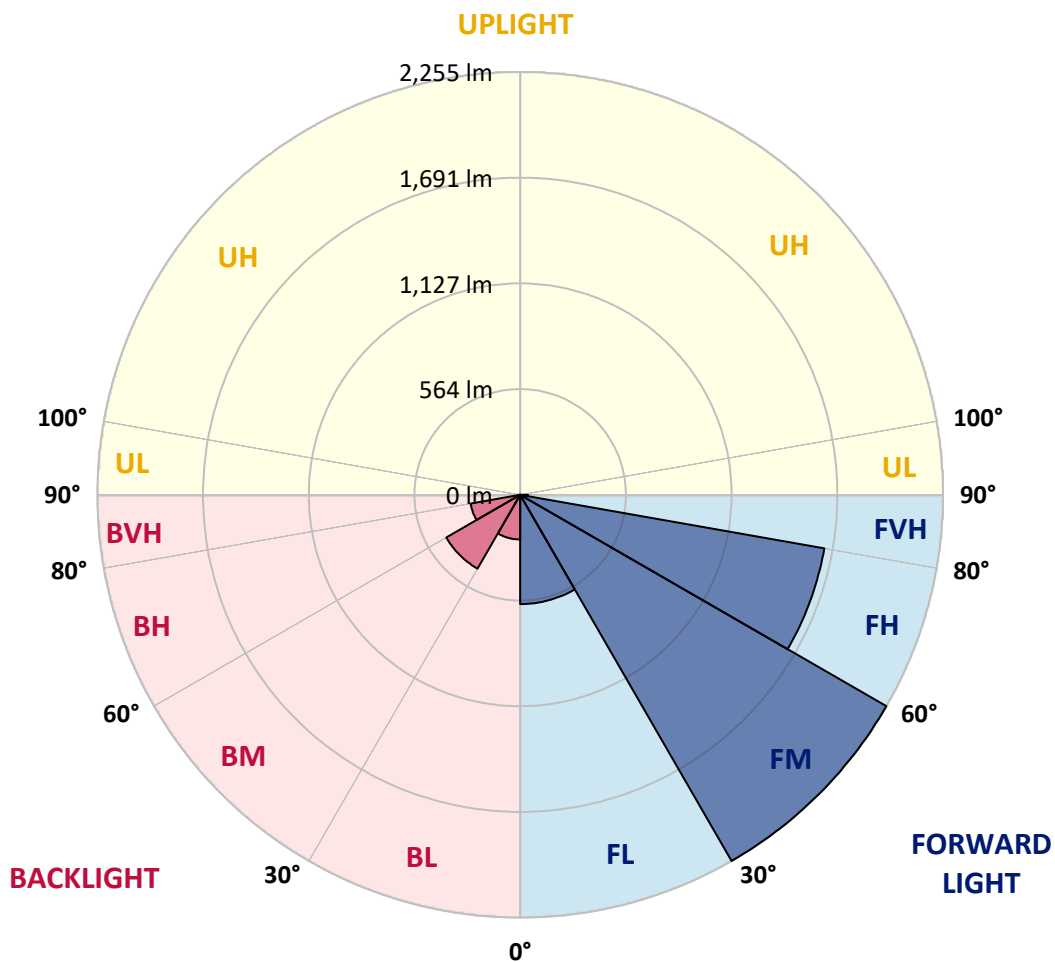
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	582.5	10.6			
FM	(30°-60°)	2254.6	41.0			
FH	(60°-80°)	1646.8	29.9			G1/1800
FVH	(80°-90°)	41.3	0.8			G1/100
BL	(0°-30°)	238.1	4.3	B1/500		
BM	(30°-60°)	454.6	8.3	B1/1000		
BH	(60°-80°)	268.4	4.9	B1/500		G1/500
BVH	(80°-90°)	12.6	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°	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0
2.5°	2028.3	2025.2	2054.3	2114.6	2152.0	2174.9	2179.0	2202.9	2179.0	2166.6	2121.9
5°	1969.0	1968.0	2024.1	2156.2	2264.3	2345.4	2384.9	2357.8	2316.3	2234.1	2134.3
7.5°	1804.8	1804.8	1910.8	2087.5	2268.4	2408.8	2456.6	2406.7	2307.9	2142.6	1963.8
10°	1670.7	1683.1	1785.0	1996.1	2196.7	2350.6	2403.6	2365.1	2236.2	2022.0	1812.0
12.5°	1590.6	1597.9	1711.2	1923.3	2110.4	2235.2	2267.4	2256.0	2162.4	1929.5	1707.0
15°	1597.9	1608.3	1738.2	1911.8	2033.5	2083.4	2094.8	2109.4	2070.9	1892.1	1672.7
17.5°	1712.2	1719.5	1850.5	1962.8	1957.6	1942.0	1946.2	1970.1	2015.8	1923.3	1742.4
20°	1895.2	1913.9	2046.0	2048.0	1918.1	1845.3	1826.6	1866.1	1989.8	2005.4	1891.1
22.5°	2130.2	2137.4	2271.6	2191.5	1922.2	1778.8	1756.9	1801.6	1998.1	2138.5	2096.9
25°	2402.5	2428.5	2501.3	2377.6	1982.5	1769.4	1754.9	1792.3	2028.3	2279.9	2309.0
27.5°	2586.6	2607.4	2677.0	2504.4	2036.6	1774.6	1747.6	1793.3	2064.7	2412.9	2535.6
30°	2750.8	2765.4	2791.4	2571.0	2097.9	1800.6	1756.9	1822.4	2084.4	2441.0	2682.2
32.5°	2905.7	2923.4	2907.8	2651.0	2165.5	1849.5	1774.6	1883.8	2127.0	2497.2	2810.1
35°	3105.3	3106.4	3053.3	2731.1	2242.4	1907.7	1826.6	1971.1	2210.2	2584.5	2947.3
37.5°	3342.4	3344.4	3210.3	2813.2	2329.8	2005.4	1949.3	2106.3	2330.8	2685.3	3143.8
40°	3549.2	3557.6	3379.8	2907.8	2436.9	2195.7	2190.5	2320.4	2485.7	2819.4	3354.8
42.5°	3729.1	3753.0	3535.7	2986.8	2588.6	2487.8	2500.3	2618.8	2673.9	2931.7	3485.8
45°	3911.0	3910.0	3663.6	3065.8	2842.3	2864.1	2982.7	2977.5	2887.0	2992.0	3588.7
47.5°	4024.3	4019.1	3741.6	3194.7	3184.3	3393.3	3519.1	3450.5	3123.0	3056.5	3717.7
50°	4068.0	4065.9	3802.9	3359.0	3532.6	3872.6	4052.4	3915.2	3412.0	3164.6	3871.5
52.5°	4191.7	4181.3	3944.3	3546.1	3847.6	4334.1	4482.8	4330.0	3700.0	3359.0	4050.3
55°	4385.1	4388.2	4187.6	3765.5	4100.2	4659.5	4841.5	4705.3	3994.2	3626.2	4295.7
57.5°	4515.0	4524.4	4456.8	4009.8	4370.5	4887.2	5064.0	5025.5	4386.1	3945.3	4583.7
58°	4527.5	4534.8	4499.4	4056.6	4411.1	4913.2	5094.1	5067.1	4472.4	4047.2	4652.3
60°	4447.5	4469.3	4582.6	4314.4	4578.5	4968.3	5099.3	5123.2	4739.6	4377.8	4887.2
62.5°	4230.2	4237.5	4443.3	4603.4	4692.8	4832.1	4844.6	4907.0	4849.8	4765.6	5097.2
65°	3964.0	3964.0	4186.5	4616.9	4396.5	4373.7	4300.9	4363.3	4528.6	5008.9	5082.7
67.5°	3501.4	3504.5	3788.4	4112.7	3644.9	3565.9	3519.1	3542.0	3894.4	4806.1	4799.9
70°	2829.8	2827.7	3119.9	3329.9	2705.1	2637.5	2693.6	2686.4	3163.5	4270.7	4190.7
72.5°	2001.3	2018.9	2319.4	2572.0	1837.0	1583.3	1830.8	1926.4	2379.7	3600.2	3242.6
75°	1126.9	1150.9	1396.2	1787.1	1159.2	1070.8	1197.6	1333.8	1720.6	2866.2	2178.0
77.5°	565.5	574.9	715.3	859.8	702.8	816.1	808.8	938.8	1180.0	1933.7	1245.5
80°	326.4	345.2	393.0	443.9	393.0	517.7	600.9	706.9	726.7	1000.1	694.5
82.5°	131.0	146.6	184.0	209.0	163.2	153.9	105.0	330.6	437.7	483.4	266.1
85°	0.0	0.0	1.0	2.1	3.1	3.1	5.2	58.2	107.1	23.9	43.7
87.5°	0.0	0.0	1.0	1.0	2.1	3.1	4.2	7.3	9.4	11.4	39.5
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0
2.5°	2105.2	2093.8	2055.3	1997.1	1960.7	1904.6	1881.7	1828.7	1801.6	1756.9	1756.9
5°	2084.4	2037.6	1941.0	1815.2	1725.8	1632.2	1602.0	1539.7	1495.0	1441.9	1420.1
7.5°	1895.2	1829.7	1679.0	1532.4	1390.0	1295.4	1201.8	1138.4	1078.1	1034.4	1040.7
10°	1721.6	1628.0	1462.7	1276.6	1129.0	1030.3	946.0	872.2	809.9	748.5	739.2
12.5°	1608.3	1501.2	1303.7	1104.1	993.9	921.1	843.1	762.0	685.1	617.5	590.5
15°	1560.5	1444.0	1223.6	1035.5	934.6	841.0	750.6	650.8	562.4	481.3	459.5
17.5°	1612.4	1473.1	1216.3	989.7	849.4	731.9	606.1	496.9	393.0	334.8	317.1
20°	1753.8	1572.9	1240.3	944.0	754.8	603.0	449.1	325.4	267.2	231.8	220.4
22.5°	1958.6	1738.2	1280.8	899.3	659.1	449.1	309.8	235.0	200.6	181.9	176.7
25°	2181.1	1951.4	1355.7	861.8	563.5	333.7	229.8	192.3	171.5	158.0	152.8
27.5°	2431.7	2162.4	1447.1	833.8	475.1	267.2	197.5	169.5	152.8	143.5	139.3
30°	2588.6	2314.2	1516.8	783.9	414.8	243.3	188.2	160.1	142.4	135.1	132.0
32.5°	2733.1	2433.7	1583.3	726.7	369.1	215.2	183.0	168.4	147.6	133.1	126.8
35°	2892.2	2556.4	1615.6	692.4	338.9	187.1	150.7	131.0	119.6	117.5	114.4
37.5°	3129.2	2702.0	1636.4	673.7	320.2	170.5	140.3	118.5	105.0	92.5	87.3
40°	3353.8	2852.7	1646.7	656.0	310.8	160.1	134.1	112.3	97.7	86.3	81.1
42.5°	3529.5	2989.9	1653.0	643.5	294.2	153.9	128.9	108.1	92.5	81.1	75.9
45°	3673.0	3149.0	1647.8	639.4	280.7	158.0	126.8	105.0	88.4	76.9	71.7
47.5°	3813.3	3321.6	1667.5	634.2	267.2	151.8	127.9	104.0	85.2	73.8	68.6
50°	3997.3	3530.5	1739.3	619.6	257.8	142.4	138.3	105.0	84.2	71.7	67.6
52.5°	4235.4	3819.5	1869.2	604.0	246.4	134.1	144.5	105.0	82.1	69.7	64.5
55°	4524.4	4143.9	2012.7	581.1	226.6	123.7	138.3	105.0	80.1	68.6	62.4
57.5°	4760.4	4432.9	2126.0	554.1	190.2	111.2	126.8	100.8	74.9	64.5	59.3
58°	4781.2	4466.2	2141.6	546.8	186.1	109.2	123.7	99.8	72.8	63.4	58.2
60°	4865.4	4520.2	2147.8	507.3	154.9	104.0	107.1	96.7	68.6	59.3	55.1
62.5°	4836.3	4341.4	2015.8	437.7	138.3	94.6	89.4	98.8	63.4	54.1	49.9
65°	4691.8	3990.0	1766.3	391.9	139.3	84.2	76.9	86.3	58.2	48.9	44.7
67.5°	4347.7	3456.7	1434.7	367.0	145.5	74.9	66.5	64.5	52.0	43.7	40.5
70°	3708.3	2832.9	1087.4	345.2	153.9	66.5	61.3	57.2	47.8	40.5	36.4
72.5°	2731.1	2097.9	791.1	323.3	149.7	59.3	57.2	52.0	43.7	36.4	34.3
75°	1703.9	1218.4	541.6	264.1	134.1	52.0	53.0	48.9	39.5	34.3	31.2
77.5°	994.9	855.6	267.2	196.5	92.5	45.7	46.8	44.7	40.5	32.2	30.1
80°	595.7	532.3	114.4	84.2	50.9	40.5	39.5	41.6	38.5	30.1	28.1
82.5°	257.8	230.8	55.1	46.8	41.6	35.3	34.3	35.3	33.3	25.0	23.9
85°	14.6	38.5	26.0	34.3	31.2	26.0	26.0	27.0	23.9	19.8	19.8
87.5°	13.5	29.1	16.6	20.8	22.9	19.8	20.8	20.8	19.8	17.7	16.6
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0
2.5°	1733.0	1721.6	1687.3	1674.8	1620.8	1634.3	1638.4	1633.2	1635.3	1639.5	1655.1
5°	1435.7	1417.0	1372.3	1343.2	1327.6	1317.2	1268.3	1269.4	1276.6	1248.6	1285.0
7.5°	1019.9	1040.7	1044.8	1017.8	1001.1	965.8	921.1	896.1	853.5	877.4	882.6
10°	729.8	719.4	739.2	729.8	703.8	690.3	642.5	638.3	634.2	631.0	661.2
12.5°	556.2	525.0	502.1	507.3	487.6	454.3	446.0	447.0	451.2	451.2	459.5
15°	440.8	393.0	356.6	334.8	337.9	304.6	295.3	264.1	259.9	250.5	252.6
17.5°	308.8	289.0	267.2	242.2	231.8	201.7	165.3	148.7	136.2	138.3	144.5
20°	213.1	204.8	198.6	186.1	175.7	140.3	117.5	110.2	109.2	111.2	113.3
22.5°	171.5	163.2	157.0	152.8	139.3	113.3	100.8	95.6	95.6	95.6	96.7
25°	147.6	139.3	131.0	131.0	118.5	98.8	89.4	85.2	84.2	83.2	85.2
27.5°	137.2	125.8	117.5	112.3	102.9	87.3	79.0	74.9	73.8	73.8	74.9
30°	126.8	115.4	107.1	99.8	89.4	78.0	69.7	66.5	64.5	64.5	65.5
32.5°	120.6	109.2	98.8	89.4	78.0	68.6	61.3	57.2	55.1	56.1	57.2
35°	107.1	97.7	88.4	79.0	68.6	60.3	53.0	48.9	47.8	47.8	48.9
37.5°	84.2	76.9	74.9	69.7	60.3	52.0	44.7	40.5	39.5	39.5	40.5
40°	75.9	66.5	62.4	60.3	55.1	44.7	36.4	32.2	32.2	31.2	33.3
42.5°	69.7	60.3	53.0	50.9	47.8	38.5	29.1	26.0	25.0	25.0	26.0
45°	65.5	55.1	45.7	40.5	40.5	31.2	23.9	19.8	18.7	18.7	19.8
47.5°	63.4	52.0	40.5	33.3	32.2	26.0	18.7	14.6	13.5	13.5	13.5
50°	61.3	47.8	36.4	28.1	25.0	21.8	14.6	11.4	10.4	10.4	10.4
52.5°	58.2	45.7	33.3	25.0	19.8	16.6	11.4	8.3	7.3	6.2	7.3
55°	56.1	42.6	32.2	22.9	16.6	12.5	8.3	6.2	5.2	5.2	5.2
57.5°	53.0	39.5	29.1	21.8	15.6	9.4	6.2	4.2	3.1	3.1	4.2
58°	52.0	39.5	28.1	20.8	14.6	9.4	6.2	4.2	3.1	3.1	4.2
60°	48.9	36.4	27.0	18.7	13.5	8.3	5.2	3.1	2.1	2.1	3.1
62.5°	45.7	33.3	23.9	16.6	11.4	7.3	4.2	2.1	1.0	1.0	1.0
65°	40.5	30.1	20.8	15.6	9.4	5.2	3.1	1.0	0.0	0.0	0.0
67.5°	36.4	28.1	18.7	13.5	8.3	4.2	2.1	0.0	0.0	0.0	0.0
70°	33.3	26.0	16.6	11.4	7.3	3.1	1.0	0.0	0.0	0.0	0.0
72.5°	31.2	23.9	15.6	10.4	5.2	3.1	1.0	0.0	0.0	0.0	0.0
75°	30.1	22.9	15.6	9.4	5.2	3.1	2.1	1.0	0.0	0.0	1.0
77.5°	29.1	22.9	15.6	9.4	6.2	3.1	3.1	2.1	2.1	1.0	3.1
80°	27.0	20.8	13.5	8.3	5.2	4.2	3.1	2.1	0.0	0.0	0.0
82.5°	22.9	16.6	11.4	8.3	5.2	3.1	1.0	0.0	0.0	0.0	0.0
85°	18.7	13.5	9.4	5.2	3.1	1.0	0.0	0.0	0.0	0.0	0.0
87.5°	16.6	10.4	7.3	4.2	2.1	1.0	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	0.0



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0	1942.0
2.5°	1668.6	1716.4	1736.2	1802.7	1831.8	1892.1	1944.1	1988.8	2010.6	2028.3
5°	1294.3	1340.1	1388.9	1487.7	1572.9	1664.4	1778.8	1897.3	1931.6	1969.0
7.5°	903.4	971.0	1053.1	1141.5	1263.1	1401.4	1565.7	1712.2	1786.1	1804.8
10°	701.7	781.8	869.1	956.4	1057.3	1204.9	1370.2	1559.4	1638.4	1670.7
12.5°	527.1	634.2	738.1	841.0	928.4	1056.2	1236.1	1461.7	1549.0	1590.6
15°	317.1	437.7	565.5	703.8	825.5	975.2	1177.9	1440.9	1551.1	1597.9
17.5°	158.0	216.2	333.7	541.6	721.5	907.6	1176.8	1515.8	1651.9	1712.2
20°	117.5	133.1	177.8	337.9	599.9	851.4	1189.3	1643.6	1844.3	1895.2
22.5°	100.8	112.3	127.9	197.5	449.1	799.5	1233.0	1813.1	2062.6	2130.2
25°	88.4	97.7	110.2	136.2	307.7	738.1	1315.1	2052.2	2310.0	2402.5
27.5°	78.0	86.3	96.7	114.4	205.8	622.7	1361.9	2252.8	2509.6	2586.6
30°	68.6	74.9	85.2	97.7	151.8	481.3	1405.6	2429.6	2690.5	2750.8
32.5°	60.3	65.5	73.8	83.2	115.4	364.9	1407.6	2581.4	2848.5	2905.7
35°	50.9	57.2	63.4	71.7	91.5	284.9	1365.0	2732.1	3035.7	3105.3
37.5°	42.6	47.8	55.1	62.4	83.2	220.4	1276.6	2908.8	3263.3	3342.4
40°	36.4	41.6	47.8	56.1	73.8	160.1	1135.3	3068.9	3476.5	3549.2
42.5°	29.1	34.3	41.6	55.1	61.3	115.4	992.8	3222.8	3661.5	3729.1
45°	22.9	29.1	38.5	53.0	50.9	81.1	870.2	3359.0	3820.6	3911.0
47.5°	16.6	23.9	38.5	47.8	41.6	58.2	807.8	3490.0	3963.0	4024.3
50°	12.5	19.8	41.6	40.5	35.3	49.9	817.1	3635.5	4028.5	4068.0
52.5°	9.4	16.6	32.2	29.1	30.1	43.7	853.5	3827.9	4163.7	4191.7
55°	8.3	12.5	19.8	21.8	27.0	41.6	844.2	4009.8	4336.2	4385.1
57.5°	7.3	10.4	15.6	17.7	23.9	39.5	791.1	4089.8	4447.5	4515.0
58°	6.2	10.4	14.6	17.7	23.9	38.5	777.6	4068.0	4442.3	4527.5
60°	5.2	9.4	13.5	15.6	20.8	34.3	712.1	3883.0	4327.9	4447.5
62.5°	4.2	6.2	10.4	11.4	16.6	28.1	586.3	3583.5	4082.6	4230.2
65°	2.1	4.2	6.2	8.3	11.4	20.8	416.9	3229.0	3819.5	3964.0
67.5°	0.0	2.1	4.2	5.2	7.3	15.6	240.2	2740.4	3387.1	3501.4
70°	0.0	1.0	2.1	3.1	4.2	10.4	126.8	2011.7	2624.0	2829.8
72.5°	1.0	1.0	1.0	0.0	2.1	8.3	56.1	1193.5	1789.2	2001.3
75°	1.0	1.0	0.0	0.0	0.0	4.2	23.9	629.0	1026.1	1126.9
77.5°	4.2	2.1	0.0	0.0	0.0	1.0	11.4	338.9	532.3	565.5
80°	1.0	0.0	0.0	0.0	0.0	0.0	4.2	113.3	319.2	326.4
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	137.2	131.0
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)