

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: P401860

Luminaire Tested: **ENV-SA1F-740-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401860
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-7)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1F-740-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6885 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

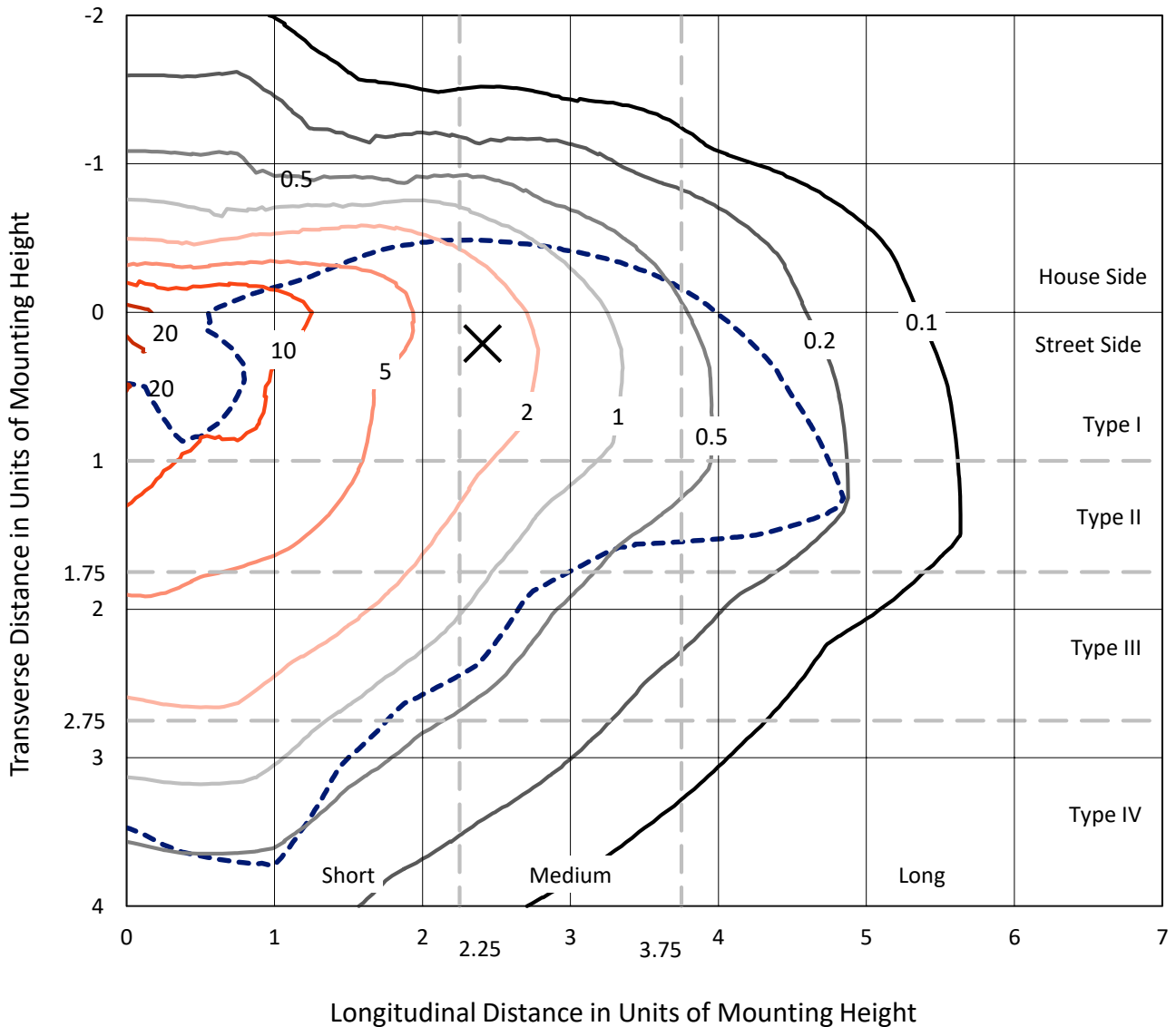
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

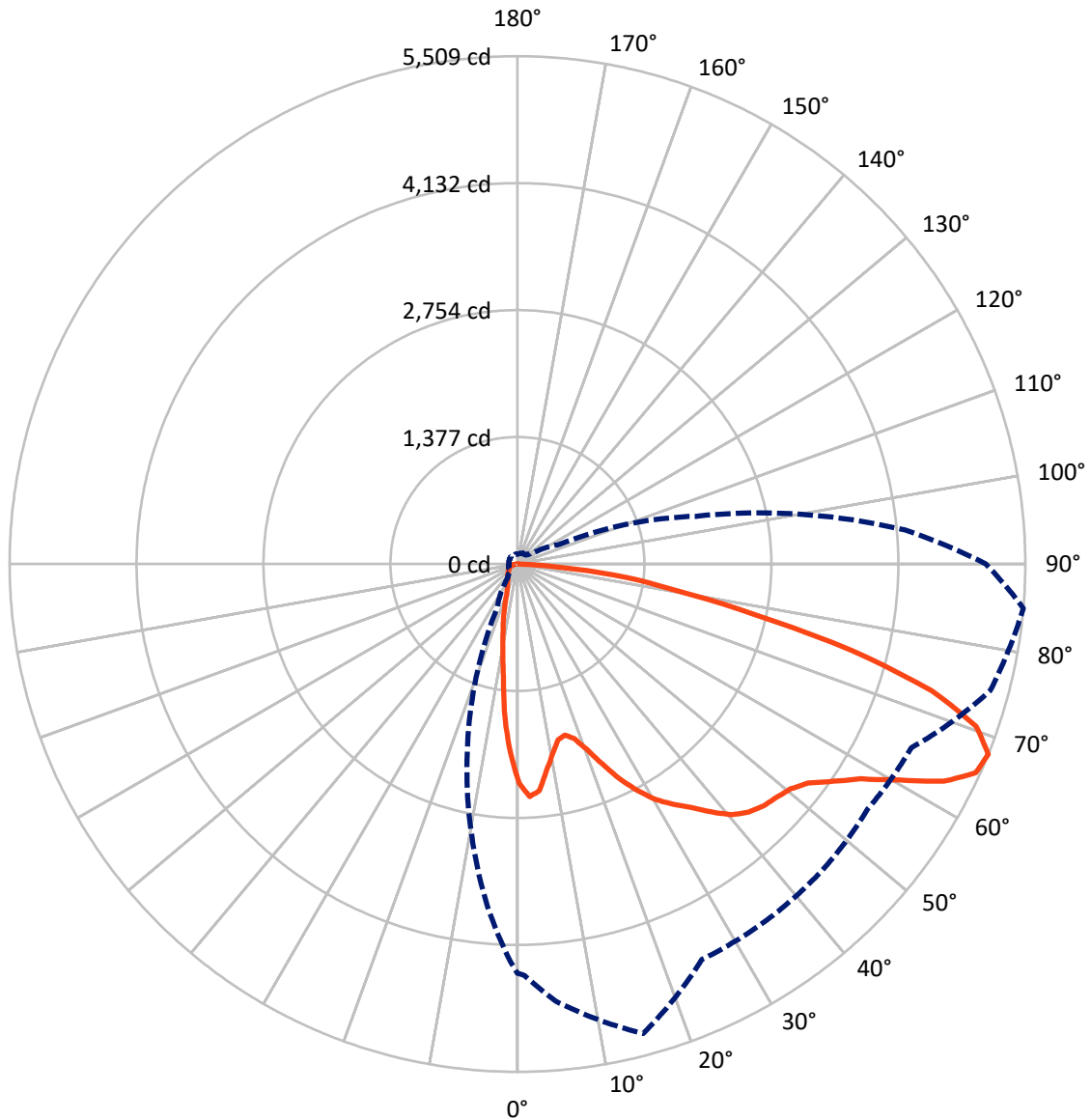
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 25.4 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 85-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1387.2	0.0	1387.2
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	5497.8	0.0	5497.8
	% Fixture	79.9	0.0	79.9
Total	Lumens	6885.0	0.0	6885.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.9	2.6
10°-20°	356.7	5.2
20°-30°	498.3	7.2
30°-40°	702.5	10.2
40°-50°	973.4	14.1
50°-60°	1367.8	19.9
60°-70°	1672.2	24.3
70°-80°	982.7	14.3
80°-90°	150.5	2.2
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°	6885.0	100.0
0°-180°	6885.0	100.0



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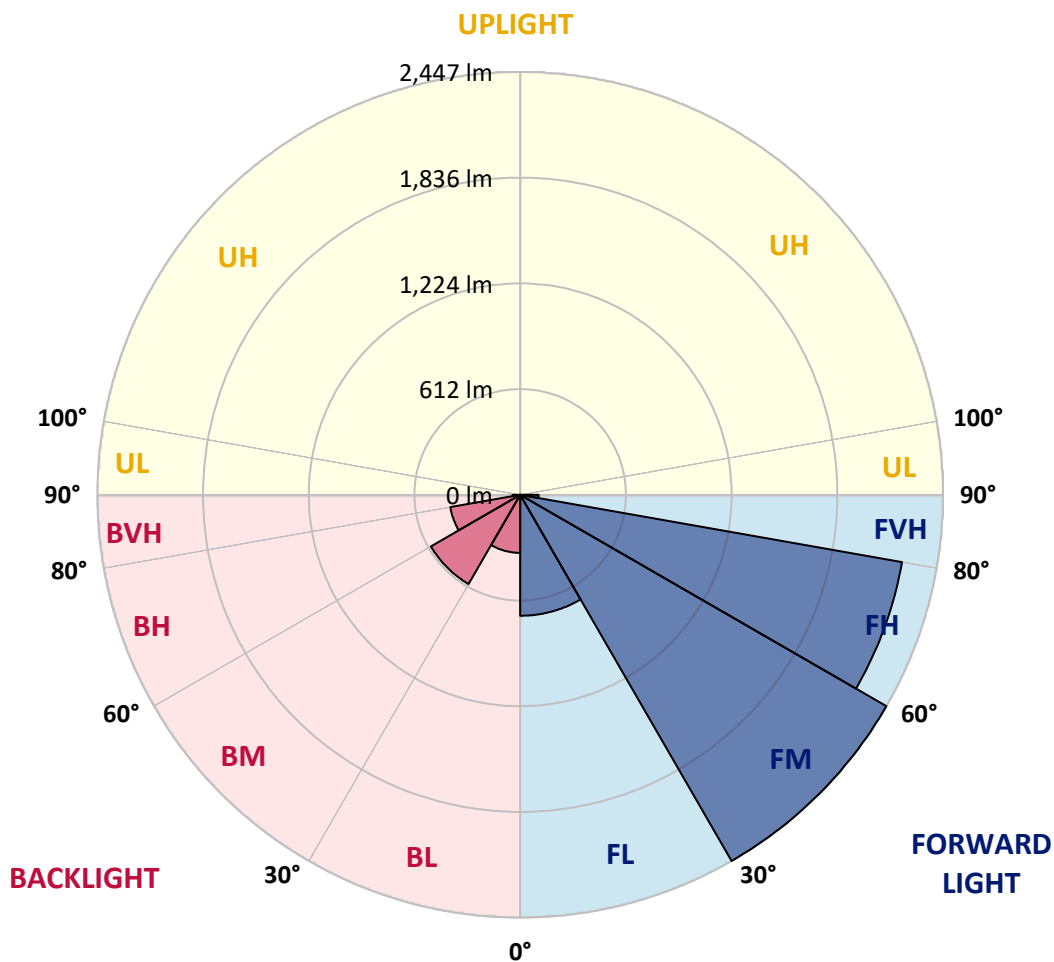
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	699.9	10.2			
FM	(30°-60°)	2447.3	35.5			
FH	(60°-80°)	2244.0	32.6			G2/5000
FVH	(80°-90°)	106.5	1.5			G2/225
BL	(0°-30°)	336.0	4.9	B1/500		
BM	(30°-60°)	596.4	8.7	B1/1000		
BH	(60°-80°)	410.9	6.0	B1/500		G1/500
BVH	(80°-90°)	44.0	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6
2.5°	2443.9	2432.9	2470.5	2525.8	2563.5	2590.0	2598.9	2597.8	2590.0	2569.0	2524.7
5°	2335.5	2325.5	2401.9	2524.7	2632.1	2709.6	2731.7	2700.7	2662.0	2580.1	2471.6
7.5°	2129.6	2145.1	2242.5	2415.2	2587.8	2710.7	2740.6	2691.9	2612.2	2445.0	2262.4
10°	1973.5	1981.3	2090.9	2298.9	2482.7	2608.9	2660.9	2617.7	2513.7	2302.3	2090.9
12.5°	1877.2	1885.0	1991.2	2183.8	2379.7	2478.3	2493.8	2492.6	2406.3	2201.5	1956.9
15°	1890.5	1900.5	2006.7	2166.1	2276.8	2320.0	2321.1	2333.3	2307.8	2151.7	1924.8
17.5°	2018.9	2018.9	2120.7	2217.0	2191.6	2160.6	2183.8	2206.0	2250.2	2181.6	1990.1
20°	2221.5	2230.3	2324.4	2307.8	2152.8	2075.4	2047.7	2086.4	2223.7	2271.3	2144.0
22.5°	2440.6	2463.9	2562.4	2440.6	2146.2	1995.7	1964.7	2006.7	2227.0	2413.0	2355.4
25°	2683.0	2711.8	2778.2	2595.6	2166.1	1951.4	1930.4	1970.2	2235.9	2543.6	2583.4
27.5°	2904.4	2906.6	2971.9	2726.2	2218.1	1955.8	1920.4	1972.4	2260.2	2646.5	2784.9
30°	3061.6	3061.6	3090.3	2792.6	2282.3	1983.5	1929.3	2005.6	2294.5	2702.9	2967.5
32.5°	3205.5	3213.2	3198.8	2862.3	2343.2	2023.3	1950.3	2072.0	2348.8	2749.4	3108.1
35°	3388.1	3387.0	3322.8	2917.7	2399.7	2066.5	2002.3	2156.2	2427.3	2818.1	3242.0
37.5°	3613.9	3602.8	3466.7	2967.5	2468.3	2140.7	2100.8	2271.3	2532.5	2898.9	3411.3
40°	3818.7	3801.0	3598.4	3014.0	2522.5	2284.6	2261.3	2414.1	2665.3	2999.6	3576.3
42.5°	3978.0	3951.5	3710.2	3047.2	2604.4	2510.4	2530.3	2670.8	2799.2	3089.2	3679.2
45°	4112.0	4084.3	3794.3	3063.8	2802.6	2832.4	2871.2	2988.5	2942.0	3113.6	3742.3
47.5°	4208.3	4162.9	3830.8	3112.5	3070.4	3208.8	3328.3	3336.1	3143.5	3112.5	3781.0
50°	4264.7	4214.9	3865.1	3233.1	3381.5	3636.0	3763.3	3703.5	3352.7	3132.4	3836.4
52.5°	4378.7	4326.7	4007.9	3429.0	3700.2	4068.8	4137.4	4041.1	3569.6	3235.3	3947.1
55°	4665.4	4642.2	4284.6	3692.5	4013.5	4418.6	4449.6	4353.3	3796.5	3413.6	4158.5
57.5°	4989.7	4938.8	4658.8	4023.4	4313.4	4692.0	4741.8	4609.0	4034.5	3663.7	4394.2
60°	5080.5	5070.5	4975.3	4409.7	4623.3	4984.2	4987.5	4818.2	4312.3	3961.4	4754.0
62.5°	4947.7	4979.8	5107.0	4767.2	4883.5	5180.1	5152.4	4976.4	4603.4	4435.2	5191.2
65°	4716.3	4761.7	5017.4	5104.8	4943.2	5141.4	5082.7	4970.9	4787.2	4945.4	5462.3
67.5°	4438.5	4462.9	4760.6	5273.1	4734.0	4715.2	4687.5	4636.6	4714.1	5308.5	5508.8
70°	4149.6	4170.6	4445.1	5041.7	4106.4	3890.6	3867.4	3823.1	4125.3	5304.1	5280.8
72.5°	3497.7	3484.4	3737.9	4208.3	3135.7	2842.4	3039.4	2943.1	3337.2	4765.0	4704.1
75°	2172.8	2245.8	2563.5	2950.9	2148.4	1947.0	2219.3	2194.9	2709.6	4103.1	3745.6
77.5°	1323.8	1338.2	1517.5	1839.6	1293.9	1349.3	1426.7	1577.3	2008.9	3326.1	2611.1
80°	692.9	644.2	775.9	1009.5	768.2	905.4	1046.0	1212.0	1275.1	2168.3	1745.5
82.5°	200.3	199.2	262.3	422.8	364.2	445.0	528.0	761.5	835.7	1289.5	1195.4
85°	1.1	1.1	1.1	2.2	3.3	5.5	23.2	195.9	259.0	597.7	491.4
87.5°	0.0	0.0	1.1	2.2	2.2	4.4	6.6	8.9	11.1	13.3	48.7
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6
2.5°	2510.4	2493.8	2458.3	2410.7	2377.5	2320.0	2307.8	2271.3	2234.7	2204.9	2206.0
5°	2419.6	2363.1	2276.8	2177.2	2082.0	1996.8	1980.2	1930.4	1916.0	1901.6	1861.7
7.5°	2181.6	2115.2	1994.6	1847.3	1727.8	1647.0	1560.7	1508.6	1462.2	1409.0	1422.3
10°	1999.0	1903.8	1737.8	1565.1	1415.7	1307.2	1212.0	1163.3	1095.8	1047.1	1040.4
12.5°	1858.4	1755.5	1556.2	1353.7	1213.1	1150.0	1089.1	1012.8	937.5	873.3	840.1
15°	1811.9	1695.7	1464.4	1262.9	1152.2	1075.9	990.6	903.2	811.3	742.7	716.1
17.5°	1866.2	1728.9	1463.3	1224.2	1085.8	974.0	867.8	769.3	660.8	592.2	571.1
20°	2015.6	1844.0	1494.3	1187.7	1005.0	853.4	704.0	597.7	487.0	438.3	416.2
22.5°	2223.7	2000.1	1541.9	1143.4	915.4	706.2	537.9	404.0	349.8	325.4	319.9
25°	2437.3	2198.2	1609.4	1105.8	816.9	562.3	386.3	323.2	297.7	286.7	286.7
27.5°	2672.0	2396.3	1682.4	1060.4	715.0	418.4	314.3	284.5	271.2	264.5	263.4
30°	2862.3	2557.9	1765.4	1007.2	623.2	343.1	278.9	259.0	246.8	243.5	243.5
32.5°	2999.6	2678.6	1852.9	954.1	539.0	309.9	259.0	241.3	228.0	225.8	225.8
35°	3160.1	2793.7	1892.7	924.2	488.1	288.9	244.6	226.9	214.7	209.2	209.2
37.5°	3352.7	2931.0	1914.9	895.4	466.0	269.0	234.7	214.7	202.6	195.9	195.9
40°	3597.3	3087.0	1938.1	866.7	452.7	252.4	223.6	203.7	193.7	186.0	186.0
42.5°	3772.2	3230.9	1955.8	842.3	429.5	244.6	214.7	195.9	183.7	177.1	176.0
45°	3864.0	3364.8	1963.6	827.9	402.9	251.3	208.1	189.3	174.9	168.2	167.1
47.5°	3926.0	3475.5	1973.5	816.9	381.9	239.1	207.0	182.6	168.2	159.4	159.4
50°	4024.5	3621.6	1999.0	795.8	369.7	223.6	223.6	179.3	160.5	152.7	151.6
52.5°	4200.5	3830.8	2067.6	772.6	356.4	208.1	230.2	180.4	155.0	146.1	143.9
55°	4466.2	4164.0	2181.6	739.4	337.6	189.3	214.7	181.5	149.4	141.7	138.4
57.5°	4811.5	4566.9	2314.4	712.8	305.5	173.8	195.9	176.0	142.8	136.1	133.9
60°	5044.0	4835.9	2398.6	678.5	260.1	163.8	168.2	170.5	136.1	128.4	127.3
62.5°	5169.0	4840.3	2399.7	630.9	218.1	155.0	150.5	173.8	130.6	120.6	119.5
65°	5177.9	4604.5	2279.0	570.0	203.7	145.0	138.4	153.9	125.1	115.1	114.0
67.5°	5081.6	4220.4	2003.4	500.3	209.2	137.3	128.4	129.5	118.4	109.6	108.5
70°	4736.2	3723.5	1607.2	445.0	210.3	127.3	120.6	117.3	111.8	104.0	101.8
72.5°	4086.5	3111.4	1217.5	427.2	213.6	119.5	111.8	108.5	104.0	97.4	95.2
75°	3083.7	2427.3	914.3	398.5	215.8	110.7	101.8	99.6	95.2	88.5	87.4
77.5°	2130.7	1799.8	635.3	336.5	192.6	100.7	91.9	89.7	86.3	79.7	78.6
80°	1438.9	1234.1	389.6	252.4	146.1	88.5	79.7	79.7	76.4	69.7	69.7
82.5°	1001.7	922.0	224.7	164.9	106.3	73.1	69.7	69.7	66.4	59.8	58.7
85°	418.4	557.9	100.7	89.7	74.2	57.6	57.6	58.7	55.3	49.8	48.7
87.5°	14.4	59.8	39.8	42.1	44.3	39.8	44.3	44.3	43.2	38.7	37.6
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°	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6
2.5°	2173.9	2159.5	2115.2	2109.7	2076.5	2074.3	2088.6	2064.3	2066.5	2096.4	2092.0
5°	1870.6	1837.4	1836.3	1799.8	1758.8	1748.8	1713.4	1700.1	1694.6	1682.4	1726.7
7.5°	1463.3	1447.8	1461.1	1456.6	1419.0	1398.0	1322.7	1265.1	1236.4	1248.5	1251.9
10°	1040.4	1063.7	1099.1	1133.4	1106.9	1037.1	1005.0	958.5	953.0	949.7	971.8
12.5°	824.6	798.0	814.6	826.8	801.4	771.5	758.2	738.3	749.3	774.8	789.2
15°	685.1	638.7	617.6	603.2	609.9	592.2	598.8	592.2	599.9	607.7	634.2
17.5°	541.3	524.7	484.8	466.0	467.1	459.3	461.6	460.5	456.0	473.7	494.8
20°	407.3	402.9	394.0	380.8	383.0	377.4	374.1	355.3	347.6	353.1	370.8
22.5°	317.7	323.2	328.7	327.6	333.2	318.8	305.5	288.9	286.7	287.8	292.2
25°	284.5	286.7	291.1	296.6	300.0	286.7	267.9	257.9	256.8	259.0	259.0
27.5°	264.5	262.3	267.9	274.5	278.9	262.3	246.8	238.0	235.8	233.5	232.4
30°	243.5	243.5	247.9	254.6	257.9	243.5	230.2	221.4	215.8	212.5	211.4
32.5°	228.0	229.1	231.3	235.8	241.3	226.9	215.8	208.1	198.1	194.8	192.6
35°	210.3	214.7	218.1	219.2	223.6	213.6	202.6	190.4	181.5	178.2	178.2
37.5°	195.9	199.2	204.8	203.7	207.0	200.3	188.2	174.9	170.5	169.3	168.2
40°	184.8	184.8	189.3	193.7	198.1	186.0	171.6	164.9	161.6	159.4	160.5
42.5°	174.9	173.8	173.8	181.5	189.3	171.6	159.4	155.0	153.9	151.6	152.7
45°	166.0	164.9	161.6	164.9	176.0	157.2	149.4	146.1	145.0	145.0	145.0
47.5°	158.3	156.1	151.6	152.7	160.5	146.1	139.5	138.4	137.3	137.3	138.4
50°	149.4	147.2	143.9	142.8	145.0	138.4	132.8	130.6	130.6	130.6	132.8
52.5°	141.7	140.6	136.1	135.0	136.1	131.7	126.2	125.1	125.1	125.1	128.4
55°	136.1	133.9	131.7	129.5	131.7	126.2	121.8	119.5	119.5	121.8	124.0
57.5°	130.6	128.4	127.3	125.1	127.3	121.8	117.3	115.1	116.2	117.3	117.3
60°	125.1	122.9	121.8	119.5	122.9	117.3	112.9	111.8	111.8	110.7	110.7
62.5°	119.5	118.4	116.2	114.0	118.4	111.8	108.5	106.3	105.2	105.2	105.2
65°	112.9	111.8	110.7	109.6	111.8	106.3	102.9	101.8	99.6	98.5	99.6
67.5°	107.4	107.4	105.2	102.9	106.3	99.6	97.4	96.3	93.0	91.9	93.0
70°	100.7	100.7	98.5	97.4	101.8	93.0	90.8	89.7	87.4	86.3	86.3
72.5°	94.1	94.1	91.9	90.8	96.3	86.3	84.1	83.0	79.7	78.6	78.6
75°	87.4	86.3	85.2	84.1	90.8	79.7	76.4	74.2	70.8	69.7	68.6
77.5°	79.7	78.6	76.4	77.5	81.9	70.8	66.4	65.3	62.0	60.9	59.8
80°	69.7	68.6	67.5	69.7	69.7	62.0	56.4	54.2	50.9	48.7	47.6
82.5°	59.8	58.7	58.7	60.9	57.6	54.2	47.6	43.2	37.6	34.3	33.2
85°	48.7	50.9	48.7	50.9	43.2	43.2	33.2	25.5	17.7	14.4	13.3
87.5°	37.6	38.7	37.6	38.7	29.9	28.8	15.5	8.9	1.1	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°	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6	2378.6
2.5°	2125.2	2127.4	2175.0	2222.6	2251.3	2323.3	2358.7	2398.6	2419.6	2443.9
5°	1705.7	1747.7	1786.5	1881.7	1930.4	2044.4	2127.4	2260.2	2302.3	2335.5
7.5°	1288.4	1351.5	1399.1	1517.5	1609.4	1751.0	1896.0	2054.3	2099.7	2129.6
10°	1023.8	1081.4	1171.1	1264.0	1367.0	1538.5	1695.7	1859.5	1939.2	1973.5
12.5°	860.0	951.9	1057.0	1143.4	1225.3	1351.5	1550.7	1757.7	1840.7	1877.2
15°	709.5	812.4	919.8	1026.1	1127.9	1270.7	1479.9	1748.8	1854.0	1890.5
17.5°	563.4	647.5	756.0	884.4	1032.7	1214.2	1493.2	1842.9	1971.3	2018.9
20°	400.7	482.6	593.3	751.6	927.5	1155.6	1524.1	1984.6	2167.2	2221.5
22.5°	302.2	347.6	449.4	605.5	833.5	1109.1	1572.8	2178.3	2391.9	2440.6
25°	265.6	281.1	333.2	483.7	739.4	1067.0	1637.0	2370.9	2629.9	2683.0
27.5°	235.8	244.6	271.2	388.5	669.6	1023.8	1713.4	2579.0	2834.7	2904.4
30°	212.5	223.6	245.7	325.4	602.1	961.9	1783.1	2766.0	3008.4	3061.6
32.5°	194.8	207.0	226.9	294.4	544.6	915.4	1823.0	2905.5	3156.8	3205.5
35°	182.6	193.7	213.6	266.8	493.7	883.3	1835.2	3043.9	3338.3	3388.1
37.5°	171.6	182.6	200.3	239.1	458.2	841.2	1854.0	3208.8	3548.6	3613.9
40°	163.8	172.7	189.3	220.3	409.5	795.8	1876.1	3401.4	3753.4	3818.7
42.5°	156.1	166.0	180.4	221.4	360.8	757.1	1890.5	3549.7	3916.1	3978.0
45°	149.4	160.5	177.1	216.9	324.3	721.7	1883.9	3673.7	4064.4	4112.0
47.5°	142.8	156.1	186.0	208.1	313.2	689.6	1889.4	3793.2	4170.6	4208.3
50°	138.4	155.0	199.2	194.8	315.5	675.2	1942.5	3936.0	4250.3	4264.7
52.5°	135.0	158.3	188.2	176.0	315.5	668.5	2044.4	4166.2	4388.7	4378.7
55°	129.5	157.2	176.0	159.4	302.2	671.9	2140.7	4470.6	4720.7	4665.4
57.5°	125.1	150.5	158.3	147.2	271.2	673.0	2283.4	4727.4	4982.0	4989.7
60°	119.5	161.6	137.3	137.3	232.4	667.4	2409.6	4723.0	5029.6	5080.5
62.5°	114.0	158.3	122.9	127.3	205.9	646.4	2486.0	4447.4	4853.6	4947.7
65°	107.4	125.1	112.9	118.4	194.8	594.4	2377.5	4105.3	4615.6	4716.3
67.5°	99.6	102.9	102.9	109.6	190.4	515.8	2104.1	3727.9	4316.7	4438.5
70°	90.8	91.9	94.1	104.0	177.1	443.9	1713.4	3326.1	3995.8	4149.6
72.5°	81.9	83.0	83.0	94.1	166.0	383.0	1213.1	2635.4	3336.1	3497.7
75°	71.9	73.1	71.9	81.9	145.0	286.7	720.6	1666.9	1990.1	2172.8
77.5°	60.9	60.9	58.7	64.2	99.6	181.5	394.0	1012.8	1210.9	1323.8
80°	49.8	45.4	37.6	38.7	54.2	104.0	176.0	581.1	664.1	692.9
82.5°	33.2	25.5	15.5	14.4	17.7	28.8	41.0	230.2	211.4	200.3
85°	6.6	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
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

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