

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: P401816

Luminaire Tested: **ENV-SA1F-730-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401816
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-730-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K, 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: 6270 lumens
Efficiency: N/A
Efficacy: 94.9 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

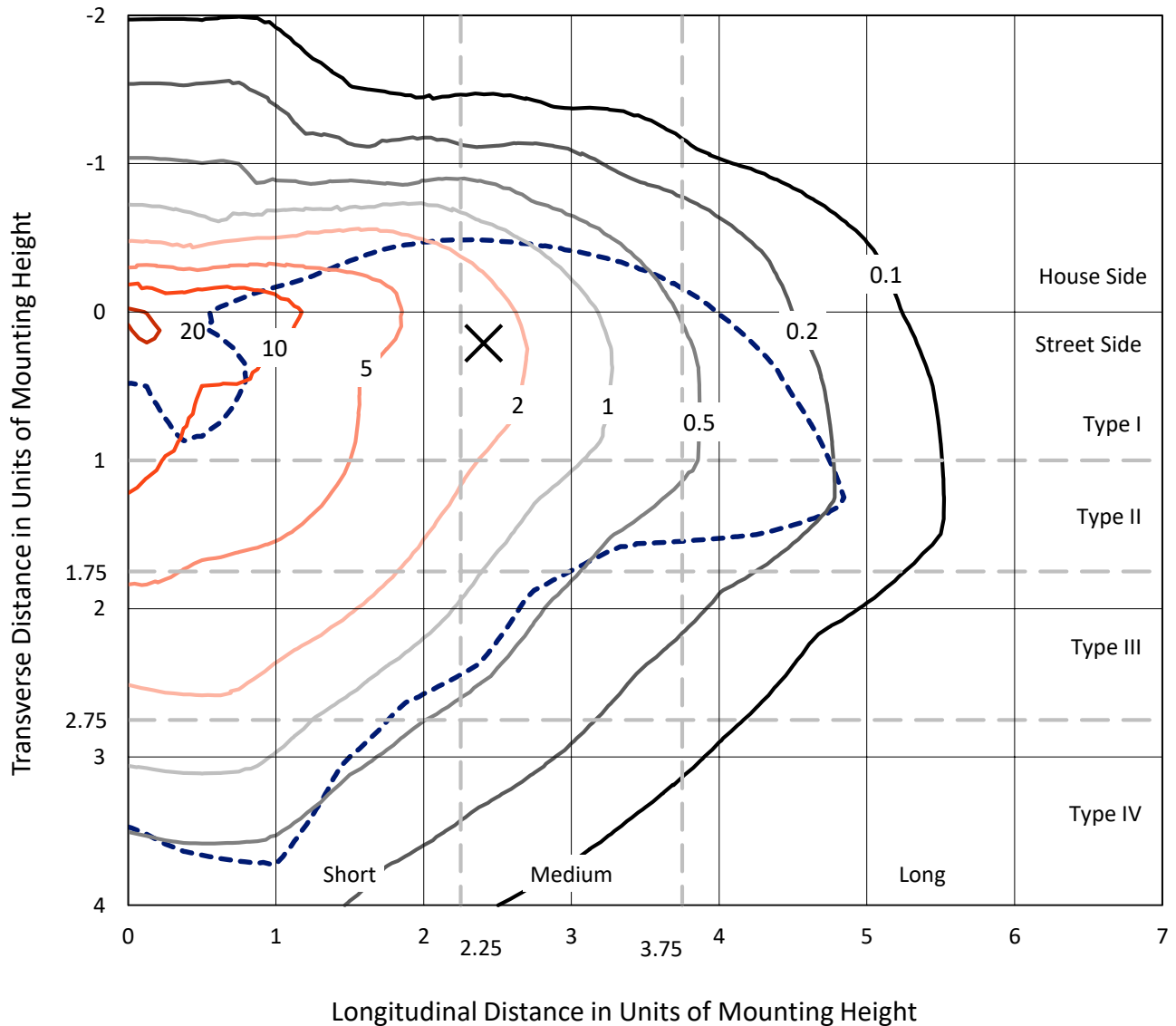
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

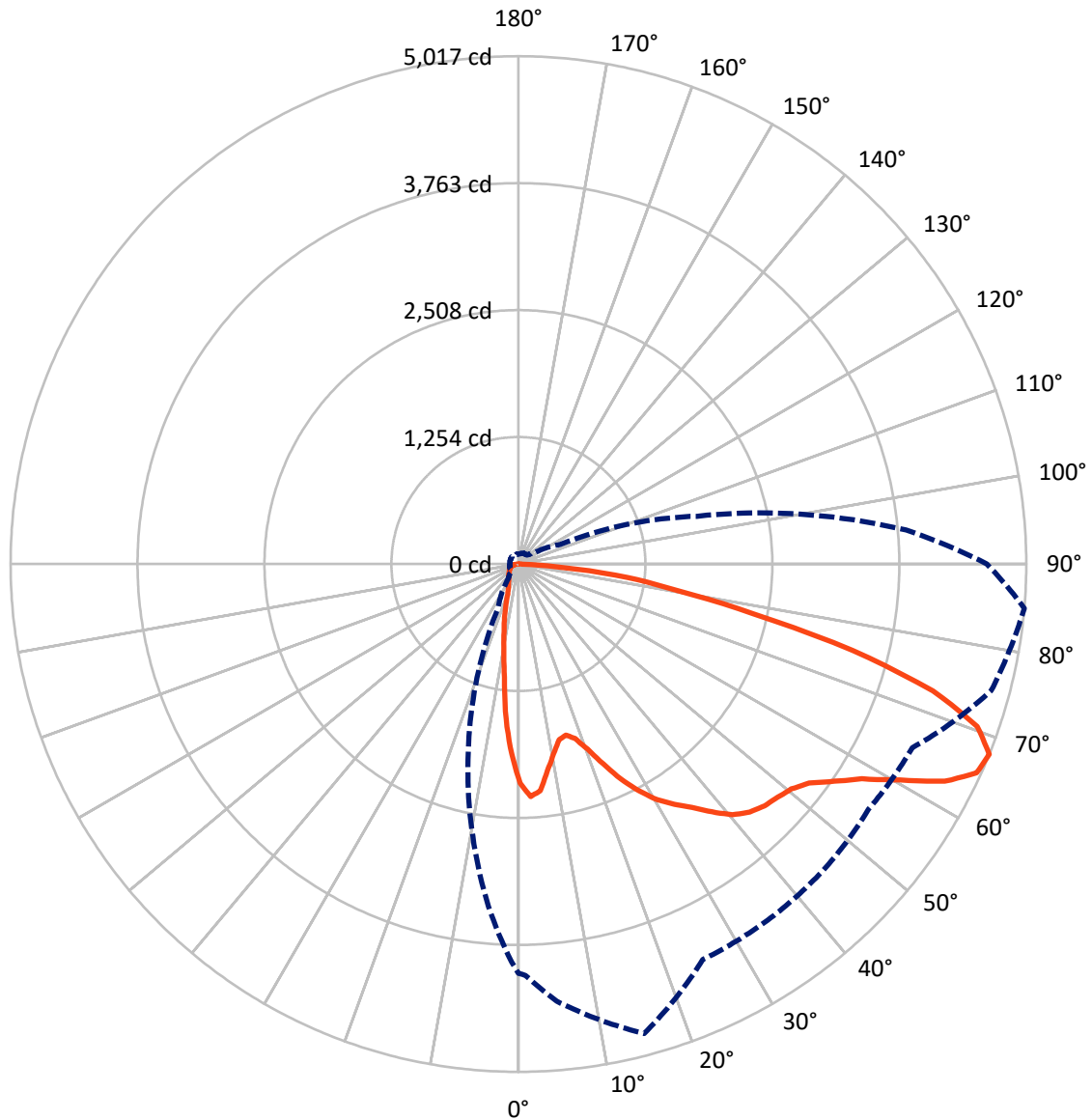
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.1 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	1263.3	0.0	1263.3
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	5006.7	0.0	5006.7
	% Fixture	79.9	0.0	79.9
Total	Lumens	6270.0	0.0	6270.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.7	2.6
10°-20°	324.8	5.2
20°-30°	453.8	7.2
30°-40°	639.7	10.2
40°-50°	886.5	14.1
50°-60°	1245.6	19.9
60°-70°	1522.8	24.3
70°-80°	895.0	14.3
80°-90°	137.0	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°	6270.0	100.0
0°-180°	6270.0	100.0



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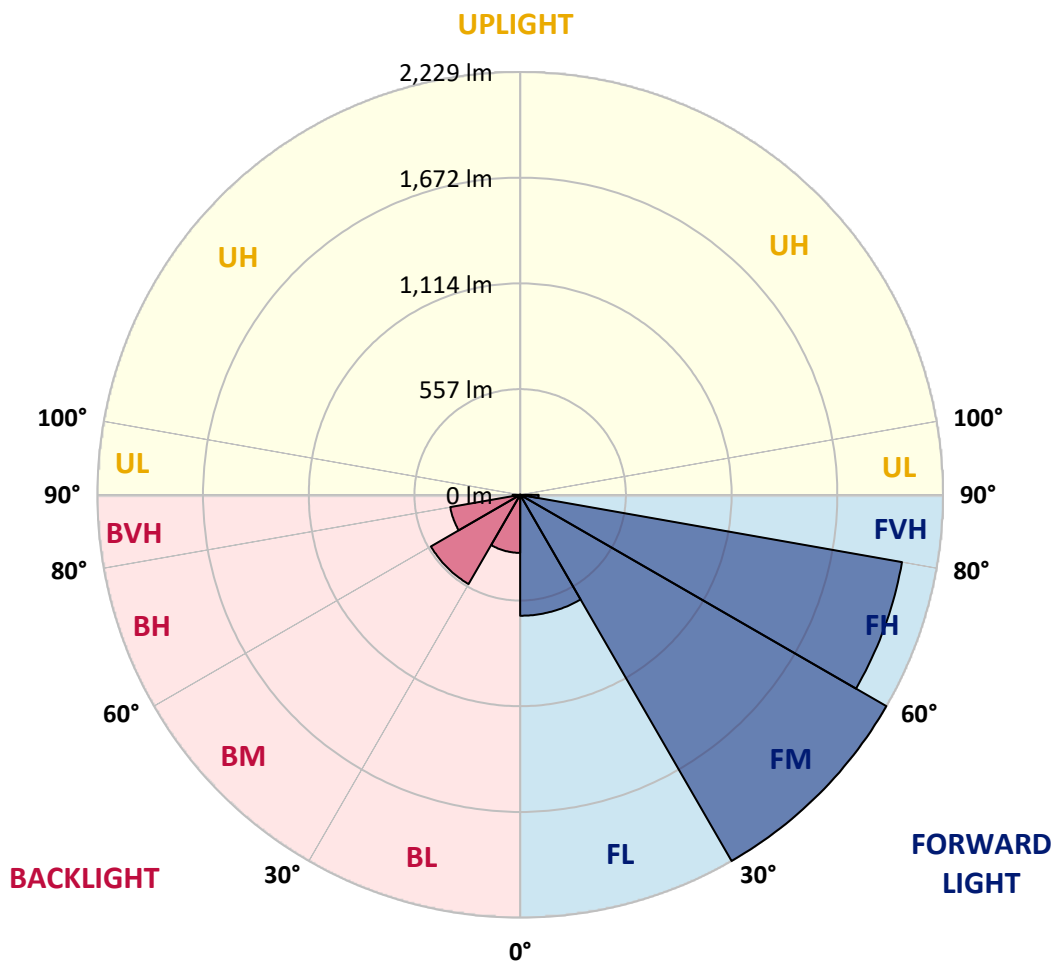
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	637.4	10.2			
FM	(30°-60°)	2228.7	35.5			
FH	(60°-80°)	2043.6	32.6			G2/5000
FVH	(80°-90°)	97.0	1.5			G1/100
BL	(0°-30°)	306.0	4.9	B1/500		
BM	(30°-60°)	543.1	8.7	B1/1000		
BH	(60°-80°)	374.2	6.0	B1/500		G1/500
BVH	(80°-90°)	40.1	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°	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2
2.5°	2225.6	2215.6	2249.8	2300.2	2334.5	2358.7	2366.8	2365.7	2358.7	2339.5	2299.2
5°	2126.9	2117.8	2187.3	2299.2	2397.0	2467.6	2487.7	2459.5	2424.2	2349.6	2250.8
7.5°	1939.4	1953.5	2042.2	2199.4	2356.7	2468.6	2495.8	2451.4	2378.9	2226.6	2060.3
10°	1797.2	1804.3	1904.1	2093.6	2260.9	2375.8	2423.2	2383.9	2289.1	2096.6	1904.1
12.5°	1709.5	1716.6	1813.4	1988.8	2167.2	2256.9	2271.0	2270.0	2191.4	2004.9	1782.1
15°	1721.6	1730.7	1827.5	1972.6	2073.4	2112.7	2113.8	2124.8	2101.7	1959.5	1752.9
17.5°	1838.6	1838.6	1931.3	2019.0	1995.8	1967.6	1988.8	2008.9	2049.2	1986.7	1812.4
20°	2023.0	2031.1	2116.8	2101.7	1960.5	1890.0	1864.8	1900.1	2025.0	2068.4	1952.5
22.5°	2222.6	2243.8	2333.5	2222.6	1954.5	1817.4	1789.2	1827.5	2028.1	2197.4	2145.0
25°	2443.4	2469.6	2530.1	2363.7	1972.6	1777.1	1757.9	1794.2	2036.1	2316.4	2352.6
27.5°	2645.0	2647.0	2706.4	2482.7	2020.0	1781.1	1748.9	1796.2	2058.3	2410.1	2536.1
30°	2788.1	2788.1	2814.3	2543.2	2078.5	1806.3	1756.9	1826.5	2089.6	2461.5	2702.4
32.5°	2919.1	2926.2	2913.1	2606.7	2133.9	1842.6	1776.1	1887.0	2139.0	2503.8	2830.4
35°	3085.5	3084.4	3026.0	2657.1	2185.3	1881.9	1823.5	1963.6	2210.5	2566.3	2952.4
37.5°	3291.1	3281.0	3157.0	2702.4	2247.8	1949.4	1913.2	2068.4	2306.3	2639.9	3106.6
40°	3477.6	3461.4	3277.0	2744.8	2297.2	2080.5	2059.3	2198.4	2427.2	2731.6	3256.8
42.5°	3622.7	3598.5	3378.8	2775.0	2371.8	2286.1	2304.3	2432.3	2549.2	2813.3	3350.6
45°	3744.7	3719.5	3455.4	2790.1	2552.2	2579.4	2614.7	2721.6	2679.2	2835.5	3408.0
47.5°	3832.4	3791.0	3488.6	2834.5	2796.2	2922.2	3031.0	3038.1	2862.7	2834.5	3443.3
50°	3883.8	3838.4	3519.9	2944.3	3079.4	3311.2	3427.2	3372.7	3053.2	2852.6	3493.7
52.5°	3987.6	3940.2	3649.9	3122.7	3369.7	3705.4	3767.9	3680.2	3250.8	2946.3	3594.5
55°	4248.7	4227.5	3901.9	3362.6	3655.0	4023.9	4052.1	3964.4	3457.4	3108.6	3787.0
57.5°	4544.0	4497.6	4242.6	3664.0	3928.1	4272.9	4318.2	4197.3	3674.1	3336.4	4001.7
60°	4626.7	4617.6	4530.9	4015.8	4210.4	4539.0	4542.0	4387.8	3927.1	3607.6	4329.3
62.5°	4505.7	4534.9	4650.9	4341.4	4447.2	4717.4	4692.2	4531.9	4192.2	4039.0	4727.5
65°	4295.0	4336.4	4569.2	4648.8	4501.7	4682.1	4628.7	4526.9	4359.5	4503.7	4974.4
67.5°	4042.0	4064.2	4335.4	4802.1	4311.2	4294.0	4268.8	4222.5	4293.0	4834.3	5016.8
70°	3778.9	3798.1	4048.1	4591.4	3739.6	3543.1	3521.9	3481.6	3756.8	4830.3	4809.1
72.5°	3185.2	3173.1	3404.0	3832.4	2855.6	2588.5	2767.9	2680.2	3039.1	4339.4	4284.0
75°	1978.7	2045.2	2334.5	2687.3	1956.5	1773.1	2021.0	1998.8	2467.6	3736.6	3411.0
77.5°	1205.6	1218.7	1382.0	1675.3	1178.3	1228.7	1299.3	1436.4	1829.5	3029.0	2377.8
80°	631.0	586.6	706.6	919.3	699.5	824.5	952.5	1103.7	1161.2	1974.6	1589.6
82.5°	182.4	181.4	238.9	385.1	331.6	405.2	480.8	693.5	761.0	1174.3	1088.6
85°	1.0	1.0	1.0	2.0	3.0	5.0	21.2	178.4	235.9	544.3	447.5
87.5°	0.0	0.0	1.0	2.0	2.0	4.0	6.0	8.1	10.1	12.1	44.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2
2.5°	2286.1	2271.0	2238.7	2195.4	2165.2	2112.7	2101.7	2068.4	2035.1	2007.9	2008.9
5°	2203.5	2152.1	2073.4	1982.7	1896.0	1818.4	1803.3	1757.9	1744.8	1731.7	1695.4
7.5°	1986.7	1926.3	1816.4	1682.3	1573.5	1499.9	1421.3	1373.9	1331.6	1283.2	1295.3
10°	1820.4	1733.7	1582.5	1425.3	1289.2	1190.4	1103.7	1059.4	997.9	953.6	947.5
12.5°	1692.4	1598.7	1417.2	1232.8	1104.8	1047.3	991.9	922.3	853.8	795.3	765.1
15°	1650.1	1544.2	1333.6	1150.1	1049.3	979.8	902.1	822.5	738.9	676.4	652.2
17.5°	1699.5	1574.5	1332.6	1114.8	988.8	887.0	790.3	700.6	601.8	539.3	520.1
20°	1835.5	1679.3	1360.8	1081.6	915.3	777.2	641.1	544.3	443.5	399.2	379.0
22.5°	2025.0	1821.4	1404.1	1041.3	833.6	643.1	489.9	367.9	318.5	296.3	291.3
25°	2219.6	2001.9	1465.6	1007.0	743.9	512.1	351.8	294.3	271.1	261.1	261.1
27.5°	2433.3	2182.3	1532.1	965.7	651.2	381.0	286.3	259.1	247.0	240.9	239.9
30°	2606.7	2329.5	1607.7	917.3	567.5	312.5	254.0	235.9	224.8	221.8	221.8
32.5°	2731.6	2439.3	1687.4	868.9	490.9	282.2	235.9	219.7	207.6	205.6	205.6
35°	2877.8	2544.2	1723.7	841.7	444.5	263.1	222.8	206.6	195.5	190.5	190.5
37.5°	3053.2	2669.2	1743.8	815.5	424.4	244.9	213.7	195.5	184.5	178.4	178.4
40°	3276.0	2811.3	1765.0	789.3	412.3	229.8	203.6	185.5	176.4	169.3	169.3
42.5°	3435.2	2942.3	1781.1	767.1	391.1	222.8	195.5	178.4	167.3	161.3	160.3
45°	3518.9	3064.3	1788.2	754.0	366.9	228.8	189.5	172.4	159.3	153.2	152.2
47.5°	3575.3	3165.1	1797.2	743.9	347.8	217.7	188.5	166.3	153.2	145.2	145.2
50°	3665.0	3298.1	1820.4	724.7	336.7	203.6	203.6	163.3	146.2	139.1	138.1
52.5°	3825.3	3488.6	1882.9	703.6	324.6	189.5	209.7	164.3	141.1	133.1	131.0
55°	4067.2	3792.1	1986.7	673.3	307.4	172.4	195.5	165.3	136.1	129.0	126.0
57.5°	4381.7	4159.0	2107.7	649.1	278.2	158.3	178.4	160.3	130.0	124.0	122.0
60°	4593.4	4403.9	2184.3	617.9	236.9	149.2	153.2	155.2	124.0	116.9	115.9
62.5°	4707.3	4407.9	2185.3	574.6	198.6	141.1	137.1	158.3	118.9	109.9	108.9
65°	4715.4	4193.2	2075.4	519.1	185.5	132.0	126.0	140.1	113.9	104.8	103.8
67.5°	4627.7	3843.5	1824.5	455.6	190.5	125.0	116.9	117.9	107.9	99.8	98.8
70°	4313.2	3390.9	1463.6	405.2	191.5	115.9	109.9	106.8	101.8	94.8	92.7
72.5°	3721.5	2833.5	1108.8	389.1	194.5	108.9	101.8	98.8	94.8	88.7	86.7
75°	2808.3	2210.5	832.6	362.9	196.6	100.8	92.7	90.7	86.7	80.6	79.6
77.5°	1940.4	1639.0	578.6	306.4	175.4	91.7	83.7	81.6	78.6	72.6	71.6
80°	1310.4	1123.9	354.8	229.8	133.1	80.6	72.6	72.6	69.6	63.5	63.5
82.5°	912.2	839.7	204.6	150.2	96.8	66.5	63.5	63.5	60.5	54.4	53.4
85°	381.0	508.0	91.7	81.6	67.5	52.4	52.4	53.4	50.4	45.4	44.4
87.5°	13.1	54.4	36.3	38.3	40.3	36.3	40.3	40.3	39.3	35.3	34.3
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°	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2
2.5°	1979.7	1966.6	1926.3	1921.2	1891.0	1889.0	1902.1	1879.9	1881.9	1909.1	1905.1
5°	1703.5	1673.3	1672.3	1639.0	1601.7	1592.6	1560.4	1548.3	1543.2	1532.1	1572.5
7.5°	1332.6	1318.4	1330.5	1326.5	1292.2	1273.1	1204.5	1152.1	1125.9	1137.0	1140.0
10°	947.5	968.7	1000.9	1032.2	1008.0	944.5	915.3	872.9	867.9	864.9	885.0
12.5°	751.0	726.8	741.9	753.0	729.8	702.6	690.5	672.3	682.4	705.6	718.7
15°	623.9	581.6	562.5	549.4	555.4	539.3	545.3	539.3	546.3	553.4	577.6
17.5°	492.9	477.8	441.5	424.4	425.4	418.3	420.3	419.3	415.3	431.4	450.6
20°	370.9	366.9	358.8	346.7	348.8	343.7	340.7	323.6	316.5	321.5	337.7
22.5°	289.3	294.3	299.4	298.4	303.4	290.3	278.2	263.1	261.1	262.1	266.1
25°	259.1	261.1	265.1	270.1	273.2	261.1	243.9	234.9	233.9	235.9	235.9
27.5°	240.9	238.9	243.9	250.0	254.0	238.9	224.8	216.7	214.7	212.7	211.7
30°	221.8	221.8	225.8	231.8	234.9	221.8	209.7	201.6	196.6	193.5	192.5
32.5°	207.6	208.7	210.7	214.7	219.7	206.6	196.6	189.5	180.4	177.4	175.4
35°	191.5	195.5	198.6	199.6	203.6	194.5	184.5	173.4	165.3	162.3	162.3
37.5°	178.4	181.4	186.5	185.5	188.5	182.4	171.4	159.3	155.2	154.2	153.2
40°	168.3	168.3	172.4	176.4	180.4	169.3	156.2	150.2	147.2	145.2	146.2
42.5°	159.3	158.3	158.3	165.3	172.4	156.2	145.2	141.1	140.1	138.1	139.1
45°	151.2	150.2	147.2	150.2	160.3	143.1	136.1	133.1	132.0	132.0	132.0
47.5°	144.1	142.1	138.1	139.1	146.2	133.1	127.0	126.0	125.0	125.0	126.0
50°	136.1	134.1	131.0	130.0	132.0	126.0	121.0	118.9	118.9	118.9	121.0
52.5°	129.0	128.0	124.0	123.0	124.0	120.0	114.9	113.9	113.9	113.9	116.9
55°	124.0	122.0	120.0	117.9	120.0	114.9	110.9	108.9	108.9	110.9	112.9
57.5°	118.9	116.9	115.9	113.9	115.9	110.9	106.8	104.8	105.8	106.8	106.8
60°	113.9	111.9	110.9	108.9	111.9	106.8	102.8	101.8	101.8	100.8	100.8
62.5°	108.9	107.9	105.8	103.8	107.9	101.8	98.8	96.8	95.8	95.8	95.8
65°	102.8	101.8	100.8	99.8	101.8	96.8	93.7	92.7	90.7	89.7	90.7
67.5°	97.8	97.8	95.8	93.7	96.8	90.7	88.7	87.7	84.7	83.7	84.7
70°	91.7	91.7	89.7	88.7	92.7	84.7	82.7	81.6	79.6	78.6	78.6
72.5°	85.7	85.7	83.7	82.7	87.7	78.6	76.6	75.6	72.6	71.6	71.6
75°	79.6	78.6	77.6	76.6	82.7	72.6	69.6	67.5	64.5	63.5	62.5
77.5°	72.6	71.6	69.6	70.6	74.6	64.5	60.5	59.5	56.4	55.4	54.4
80°	63.5	62.5	61.5	63.5	63.5	56.4	51.4	49.4	46.4	44.4	43.3
82.5°	54.4	53.4	53.4	55.4	52.4	49.4	43.3	39.3	34.3	31.2	30.2
85°	44.4	46.4	44.4	46.4	39.3	39.3	30.2	23.2	16.1	13.1	12.1
87.5°	34.3	35.3	34.3	35.3	27.2	26.2	14.1	8.1	1.0	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°	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2	2166.2
2.5°	1935.3	1937.4	1980.7	2024.0	2050.2	2115.8	2148.0	2184.3	2203.5	2225.6
5°	1553.3	1591.6	1626.9	1713.6	1757.9	1861.8	1937.4	2058.3	2096.6	2126.9
7.5°	1173.3	1230.8	1274.1	1382.0	1465.6	1594.6	1726.7	1870.8	1912.2	1939.4
10°	932.4	984.8	1066.5	1151.1	1244.9	1401.1	1544.2	1693.4	1766.0	1797.2
12.5°	783.2	866.9	962.6	1041.3	1115.8	1230.8	1412.2	1600.7	1676.3	1709.5
15°	646.1	739.9	837.6	934.4	1027.1	1157.2	1347.7	1592.6	1688.4	1721.6
17.5°	513.1	589.7	688.5	805.4	940.5	1105.8	1359.8	1678.3	1795.2	1838.6
20°	364.9	439.5	540.3	684.4	844.7	1052.3	1388.0	1807.3	1973.6	2023.0
22.5°	275.2	316.5	409.2	551.4	759.0	1010.0	1432.4	1983.7	2178.3	2222.6
25°	241.9	256.0	303.4	440.5	673.3	971.7	1490.8	2159.1	2395.0	2443.4
27.5°	214.7	222.8	247.0	353.8	609.8	932.4	1560.4	2348.6	2581.5	2645.0
30°	193.5	203.6	223.8	296.3	548.3	875.9	1623.9	2519.0	2739.7	2788.1
32.5°	177.4	188.5	206.6	268.1	495.9	833.6	1660.2	2646.0	2874.8	2919.1
35°	166.3	176.4	194.5	242.9	449.6	804.4	1671.2	2772.0	3040.1	3085.5
37.5°	156.2	166.3	182.4	217.7	417.3	766.1	1688.4	2922.2	3231.6	3291.1
40°	149.2	157.2	172.4	200.6	373.0	724.7	1708.5	3097.5	3418.1	3477.6
42.5°	142.1	151.2	164.3	201.6	328.6	689.5	1721.6	3232.6	3566.3	3622.7
45°	136.1	146.2	161.3	197.6	295.3	657.2	1715.6	3345.5	3701.3	3744.7
47.5°	130.0	142.1	169.3	189.5	285.3	628.0	1720.6	3454.4	3798.1	3832.4
50°	126.0	141.1	181.4	177.4	287.3	614.9	1769.0	3584.4	3870.7	3883.8
52.5°	123.0	144.1	171.4	160.3	287.3	608.8	1861.8	3794.1	3996.7	3987.6
55°	117.9	143.1	160.3	145.2	275.2	611.8	1949.4	4071.3	4299.1	4248.7
57.5°	113.9	137.1	144.1	134.1	247.0	612.9	2079.5	4305.1	4537.0	4544.0
60°	108.9	147.2	125.0	125.0	211.7	607.8	2194.4	4301.1	4580.3	4626.7
62.5°	103.8	144.1	111.9	115.9	187.5	588.7	2263.9	4050.1	4420.0	4505.7
65°	97.8	113.9	102.8	107.9	177.4	541.3	2165.2	3738.6	4203.3	4295.0
67.5°	90.7	93.7	93.7	99.8	173.4	469.7	1916.2	3394.9	3931.2	4042.0
70°	82.7	83.7	85.7	94.8	161.3	404.2	1560.4	3029.0	3638.8	3778.9
72.5°	74.6	75.6	75.6	85.7	151.2	348.8	1104.8	2400.0	3038.1	3185.2
75°	65.5	66.5	65.5	74.6	132.0	261.1	656.2	1518.0	1812.4	1978.7
77.5°	55.4	55.4	53.4	58.5	90.7	165.3	358.8	922.3	1102.7	1205.6
80°	45.4	41.3	34.3	35.3	49.4	94.8	160.3	529.2	604.8	631.0
82.5°	30.2	23.2	14.1	13.1	16.1	26.2	37.3	209.7	192.5	182.4
85°	6.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
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

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