

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: P401889

Luminaire Tested: **ENT-SA1F-750-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401889
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-10)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-750-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 5000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5854 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-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

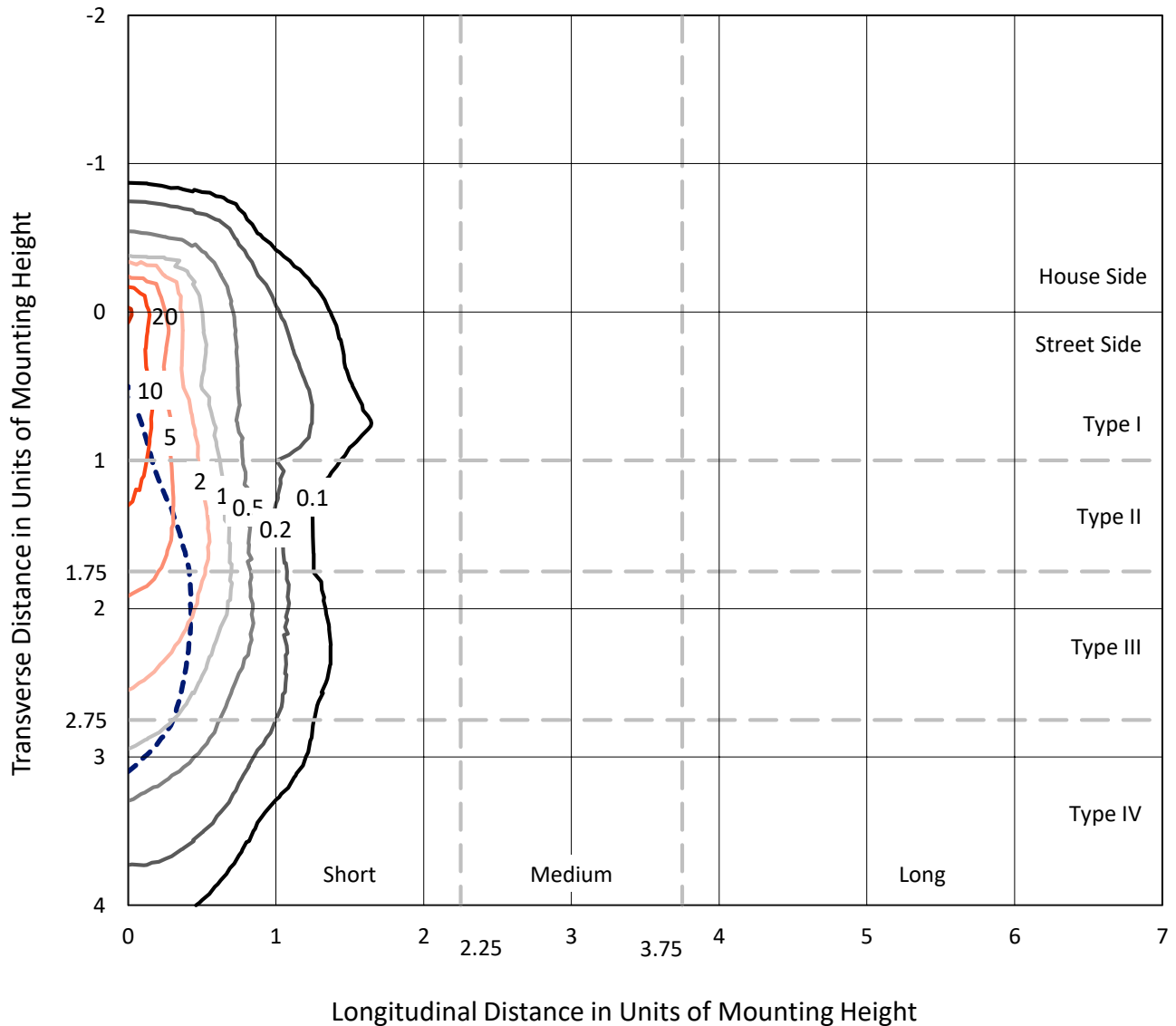


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

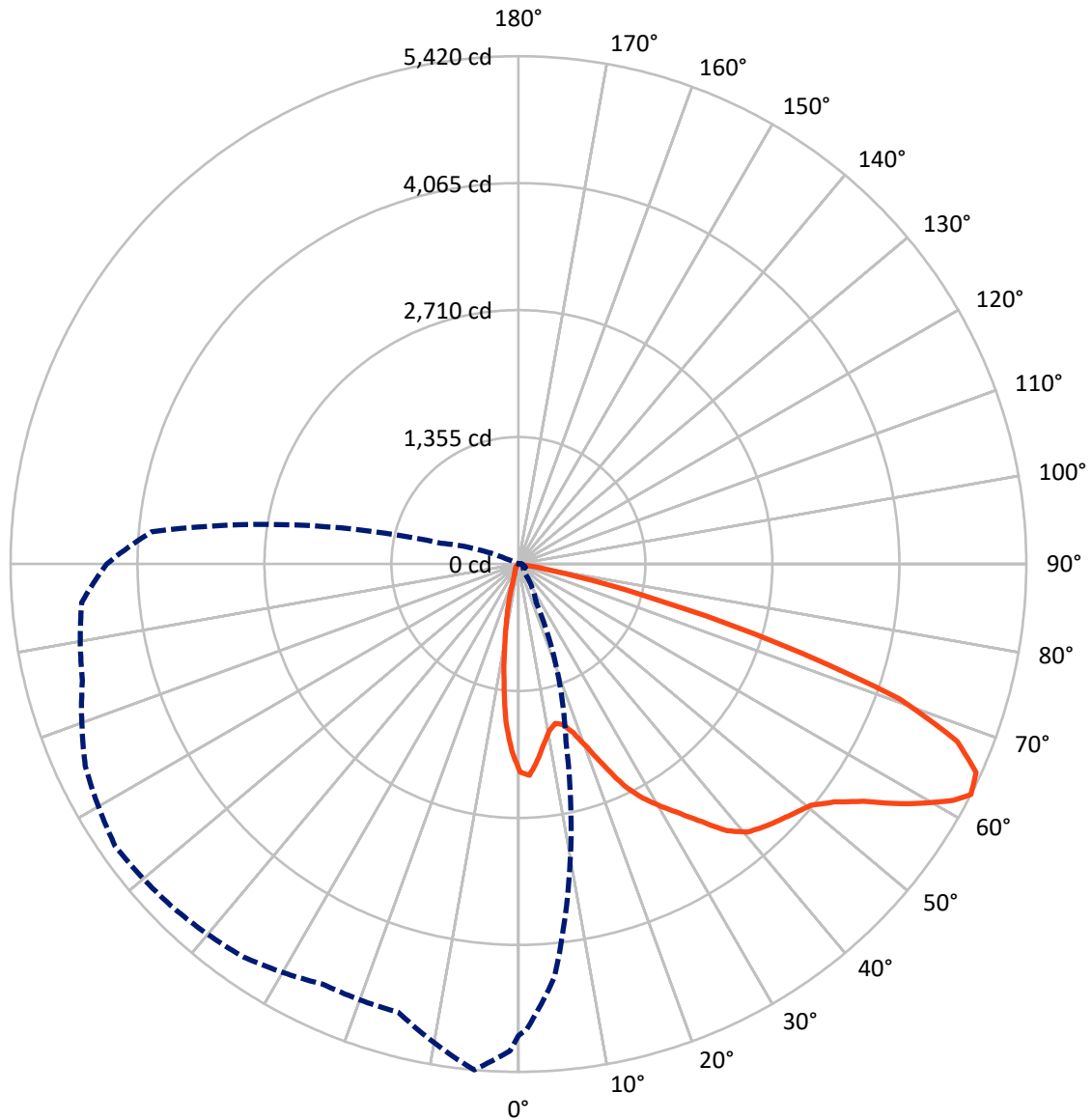


Based on 10 foot mounting height. Maximum calculated value = 22.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	823.4	0.0	823.4
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	5030.6	0.0	5030.6
	% Fixture	85.9	0.0	85.9
Total	Lumens	5854.0	0.0	5854.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.5	2.8
10°-20°	316.5	5.4
20°-30°	440.4	7.5
30°-40°	636.9	10.9
40°-50°	913.3	15.6
50°-60°	1325.0	22.6
60°-70°	1433.5	24.5
70°-80°	579.0	9.9
80°-90°	42.9	0.7
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°	5854.0	100.0
0°-180°	5854.0	100.0



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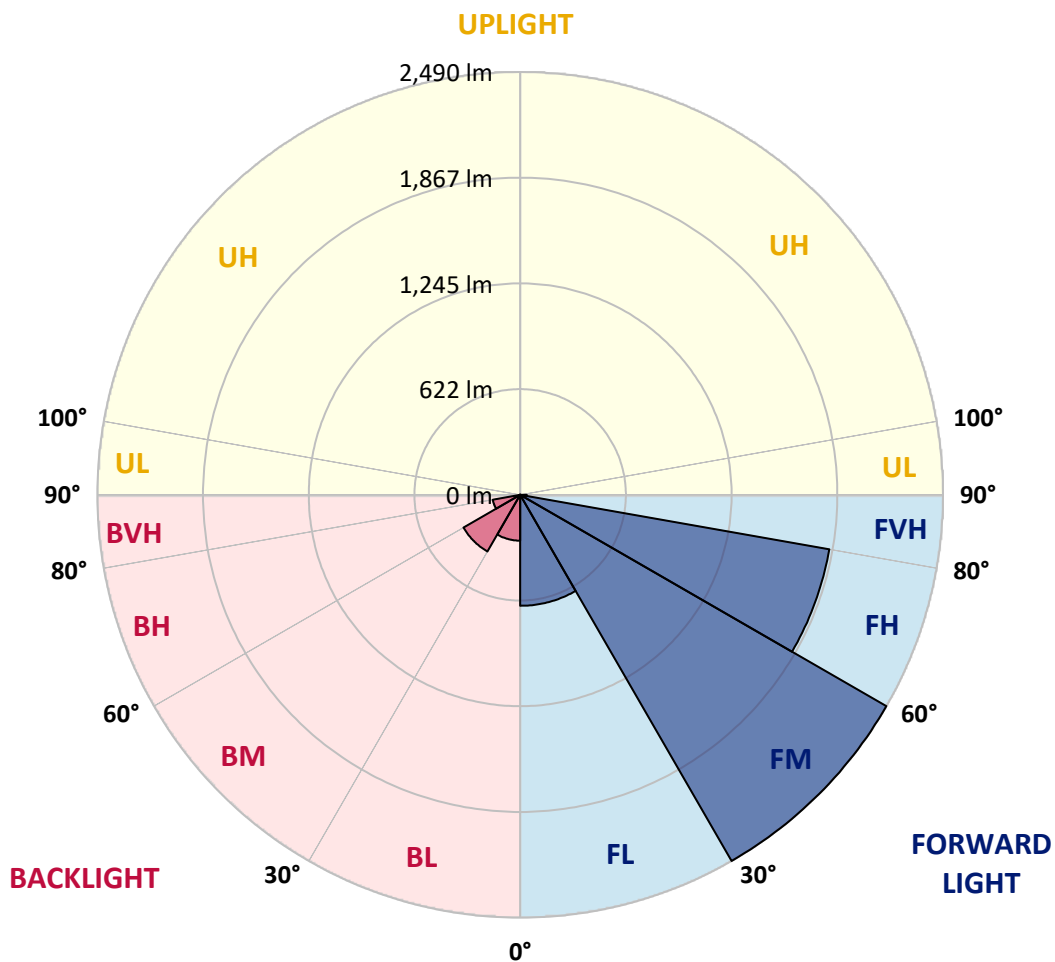
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	653.5	11.2			
FM	(30°-60°)	2489.9	42.5			
FH	(60°-80°)	1848.7	31.6			G2/5000
FVH	(80°-90°)	38.5	0.7			G1/100
BL	(0°-30°)	270.0	4.6	B1/500		
BM	(30°-60°)	385.3	6.6	B1/1000		
BH	(60°-80°)	163.8	2.8	B1/500		G1/500
BVH	(80°-90°)	4.4	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5
2.5°	2229.8	2220.5	2199.7	2154.5	2089.7	2048.0	2021.3	1986.6	1950.7	1939.1	1915.9
5°	2035.2	2020.2	1991.2	1877.7	1775.7	1673.8	1600.8	1531.3	1508.2	1461.8	1489.6
7.5°	1847.6	1840.6	1773.4	1626.3	1464.1	1333.3	1249.9	1147.9	1117.8	1070.3	1032.1
10°	1700.4	1694.7	1613.6	1421.3	1246.4	1137.5	1071.5	1005.4	939.4	872.2	818.9
12.5°	1626.3	1613.6	1519.7	1312.4	1150.2	1059.9	990.4	902.3	831.7	741.3	676.5
15°	1637.9	1626.3	1518.6	1295.0	1103.9	978.8	875.7	771.5	671.8	582.6	518.9
17.5°	1730.6	1725.9	1595.0	1310.1	1048.3	882.7	744.8	604.7	486.5	390.4	335.9
20°	1911.3	1897.4	1707.4	1342.5	990.4	771.5	582.6	410.1	311.6	245.6	222.4
22.5°	2134.8	2103.6	1884.6	1390.0	934.8	652.1	421.6	275.7	222.4	196.9	180.7
25°	2397.8	2398.9	2104.7	1453.7	879.2	540.9	295.4	218.9	187.7	169.1	155.2
27.5°	2610.9	2594.7	2302.8	1517.4	818.9	443.6	247.9	191.1	164.5	144.8	136.7
30°	2768.4	2744.1	2433.7	1561.4	741.3	375.3	222.4	181.9	155.2	133.2	122.8
32.5°	2930.6	2900.5	2551.8	1585.8	695.0	342.9	196.9	158.7	139.0	129.7	115.8
35°	3120.6	3093.9	2682.7	1583.5	670.7	324.3	178.4	143.6	118.2	103.1	93.8
37.5°	3332.6	3278.1	2818.2	1573.0	653.3	315.1	162.2	133.2	110.0	93.8	82.2
40°	3514.4	3460.0	2943.4	1559.1	641.7	305.8	152.9	126.3	104.3	86.9	75.3
42.5°	3656.9	3604.8	3060.3	1541.8	635.9	286.1	157.5	121.6	99.6	82.2	69.5
45°	3779.7	3726.4	3199.3	1539.4	633.6	272.2	155.2	120.5	97.3	76.5	64.9
47.5°	3922.2	3894.4	3382.4	1577.7	624.3	261.8	142.5	129.7	96.1	74.1	61.4
50°	4133.0	4108.6	3622.1	1691.2	610.4	251.4	129.7	142.5	96.1	71.8	57.9
52.5°	4428.3	4400.5	3999.8	1839.4	597.7	239.8	117.0	137.8	97.3	68.3	55.6
55°	4734.1	4729.5	4356.5	1997.0	586.1	214.3	103.1	123.9	95.0	63.7	52.1
57.5°	4973.9	4970.5	4624.1	2103.6	564.1	172.6	93.8	103.1	88.0	57.9	47.5
60°	5072.4	5043.4	4653.1	2103.6	513.1	142.5	85.7	81.1	89.2	52.1	41.7
61°	5072.4	5035.3	4600.9	2072.3	487.7	135.5	81.1	75.3	91.5	49.8	39.4
62.5°	5033.0	4971.6	4422.6	1959.9	447.1	135.5	74.1	67.2	83.4	47.5	35.9
65°	4858.1	4757.3	4004.4	1703.9	405.4	139.0	63.7	56.8	60.2	40.5	31.3
67.5°	4426.0	4312.5	3462.3	1348.3	371.8	147.1	53.3	49.8	46.3	35.9	27.8
70°	3646.5	3550.3	2825.2	1010.1	345.2	149.4	46.3	41.7	39.4	31.3	24.3
72.5°	2330.6	2171.9	1764.2	684.6	276.8	129.7	38.2	39.4	35.9	25.5	19.7
75°	1125.9	1169.9	1026.3	345.2	186.5	84.6	30.1	32.4	29.0	23.2	17.4
77.5°	503.9	494.6	490.0	88.0	47.5	29.0	18.5	22.0	23.2	20.9	15.1
80°	52.1	70.7	41.7	26.6	17.4	12.7	10.4	11.6	13.9	15.1	8.1
82.5°	2.3	1.2	1.2	3.5	3.5	2.3	0.0	0.0	2.3	2.3	1.2
85°	0.0	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	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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5
2.5°	1895.0	1926.3	1912.4	1908.9	1927.5	1918.2	1946.0	1947.2	1968.0	1995.8	2013.2
5°	1489.6	1465.3	1514.0	1546.4	1586.9	1574.2	1622.8	1617.0	1643.7	1687.7	1670.3
7.5°	1034.4	1037.9	1063.4	1092.3	1201.2	1223.2	1239.4	1252.2	1251.0	1261.4	1280.0
10°	791.1	771.5	754.1	794.6	837.5	885.0	891.9	909.3	861.8	881.5	890.8
12.5°	647.5	624.3	586.1	565.3	575.7	603.5	615.1	625.5	597.7	598.9	619.7
15°	491.1	459.9	444.8	417.0	406.6	404.3	410.1	395.0	391.5	378.8	386.9
17.5°	319.7	310.4	302.3	296.5	288.4	286.1	265.3	229.4	208.5	203.9	203.9
20°	213.1	206.2	206.2	217.8	214.3	205.0	177.2	147.1	132.1	127.4	129.7
22.5°	174.9	170.3	163.3	163.3	168.0	161.0	135.5	113.5	103.1	103.1	103.1
25°	151.7	149.4	142.5	135.5	137.8	132.1	110.0	96.1	89.2	88.0	89.2
27.5°	133.2	132.1	123.9	117.0	117.0	112.4	95.0	82.2	77.6	75.3	76.5
30°	120.5	118.2	108.9	103.1	101.9	97.3	81.1	71.8	67.2	66.0	66.0
32.5°	111.2	106.6	98.5	92.7	89.2	82.2	70.7	61.4	56.8	55.6	55.6
35°	89.2	89.2	85.7	82.2	77.6	67.2	59.1	51.0	46.3	45.2	45.2
37.5°	77.6	73.0	67.2	68.3	66.0	56.8	48.7	40.5	37.1	35.9	35.9
40°	70.7	64.9	56.8	53.3	54.4	49.8	40.5	31.3	26.6	27.8	26.6
42.5°	63.7	59.1	49.8	41.7	40.5	41.7	31.3	22.0	18.5	18.5	18.5
45°	59.1	54.4	44.0	34.8	29.0	32.4	24.3	15.1	11.6	11.6	11.6
47.5°	55.6	51.0	39.4	29.0	20.9	22.0	17.4	9.3	7.0	4.6	5.8
50°	53.3	47.5	35.9	23.2	15.1	12.7	11.6	4.6	1.2	1.2	0.0
52.5°	49.8	45.2	32.4	19.7	11.6	8.1	5.8	1.2	0.0	0.0	0.0
55°	47.5	41.7	29.0	17.4	9.3	4.6	1.2	0.0	0.0	0.0	0.0
57.5°	42.9	38.2	25.5	13.9	7.0	2.3	0.0	0.0	0.0	0.0	0.0
60°	38.2	34.8	22.0	10.4	4.6	0.0	0.0	0.0	0.0	0.0	0.0
61°	35.9	32.4	20.9	9.3	3.5	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	33.6	30.1	18.5	7.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
65°	29.0	25.5	16.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	25.5	23.2	13.9	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	22.0	19.7	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	18.5	17.4	8.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	16.2	13.9	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	12.7	11.6	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	7.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	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	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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5
2.5°	2029.4	2070.0	2108.2	2156.8	2183.5	2256.5	2308.6	2352.6	2387.3	2394.3	2422.1
5°	1716.7	1773.4	1810.5	1912.4	1969.2	2090.8	2184.6	2295.8	2395.5	2449.9	2499.7
7.5°	1292.7	1320.5	1384.2	1486.2	1620.5	1725.9	1884.6	2024.8	2204.3	2302.8	2395.5
10°	912.8	938.3	1032.1	1138.7	1261.4	1438.7	1630.9	1815.1	1997.0	2123.2	2232.1
12.5°	641.7	725.1	817.8	953.3	1073.8	1203.5	1408.5	1624.0	1851.0	1971.5	2089.7
15°	421.6	495.8	624.3	794.6	945.2	1071.5	1262.6	1515.1	1803.5	1937.9	2050.3
17.5°	208.5	262.9	376.5	559.5	759.9	959.1	1189.6	1495.4	1864.9	2016.7	2122.1
20°	130.9	147.1	188.8	316.2	546.7	841.0	1135.2	1534.8	2031.7	2199.7	2268.0
22.5°	105.4	110.0	126.3	168.0	333.6	695.0	1087.7	1588.1	2214.8	2419.8	2490.4
25°	90.4	93.8	103.1	123.9	193.4	521.3	1029.8	1681.9	2427.9	2675.8	2693.1
27.5°	77.6	81.1	89.2	105.4	137.8	351.0	946.4	1792.0	2682.7	2900.5	2888.9
30°	66.0	70.7	78.8	90.4	108.9	237.5	791.1	1903.2	2870.4	3045.3	3026.8
32.5°	56.8	60.2	67.2	77.6	90.4	163.3	594.2	1976.1	3026.8	3182.0	3141.4
35°	46.3	49.8	55.6	64.9	73.0	115.8	449.4	1978.5	3187.8	3351.1	3249.2
37.5°	37.1	39.4	45.2	53.3	60.2	90.4	330.1	1940.2	3387.0	3571.2	3371.9
40°	27.8	31.3	37.1	44.0	51.0	76.5	246.7	1847.6	3581.6	3791.3	3520.2
42.5°	18.5	23.2	29.0	35.9	48.7	61.4	173.8	1693.5	3739.1	3987.0	3665.0
45°	11.6	15.1	22.0	30.1	49.8	48.7	115.8	1509.3	3851.5	4136.4	3763.5
47.5°	5.8	9.3	16.2	29.0	44.0	35.9	71.8	1333.3	3953.4	4223.3	3808.6
50°	1.2	3.5	11.6	35.9	37.1	26.6	47.5	1223.2	4006.7	4201.3	3804.0
52.5°	0.0	0.0	8.1	34.8	26.6	20.9	37.1	1207.0	4090.1	4230.3	3883.9
55°	0.0	0.0	3.5	15.1	15.1	17.4	32.4	1185.0	4238.4	4402.9	4124.9
57.5°	0.0	0.0	0.0	7.0	9.3	13.9	30.1	1127.1	4394.8	4585.9	4417.9
60°	0.0	0.0	0.0	3.5	5.8	11.6	26.6	995.0	4251.1	4587.0	4661.2
61°	0.0	0.0	0.0	3.5	4.6	10.4	24.3	948.7	4122.5	4512.9	4691.3
62.5°	0.0	0.0	0.0	1.2	3.5	8.1	20.9	857.2	3930.3	4393.6	4677.4
65°	0.0	0.0	0.0	0.0	1.2	4.6	16.2	692.7	3609.4	4093.6	4517.5
67.5°	0.0	0.0	0.0	0.0	0.0	1.2	10.4	487.7	3148.4	3754.2	4175.8
70°	0.0	0.0	0.0	0.0	0.0	0.0	4.6	282.6	2536.8	3178.5	3577.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.3	128.6	1646.0	2454.5	2821.7
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.4	1013.6	1773.4	2108.2
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.3	686.9	1180.4	1419.0
80°	0.0	2.3	1.2	0.0	0.0	0.0	0.0	9.3	422.8	736.7	800.4
82.5°	0.0	1.2	1.2	0.0	0.0	0.0	0.0	0.0	218.9	520.1	530.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91.5	110.0
87.5°	0.0	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	0.0



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5	2220.5
2.5°	2447.6	2454.5	2459.2	2451.1	2401.2	2373.4	2317.8	2256.5	2235.6	2229.8
5°	2590.1	2629.4	2622.5	2569.2	2482.3	2375.8	2243.7	2107.0	2054.9	2035.2
7.5°	2562.3	2665.3	2685.0	2629.4	2482.3	2295.8	2104.7	1942.5	1867.2	1847.6
10°	2420.9	2550.7	2613.2	2595.8	2458.0	2242.6	2007.4	1808.2	1725.9	1700.4
12.5°	2284.3	2409.4	2448.7	2462.6	2387.3	2200.9	1958.8	1744.5	1658.7	1626.3
15°	2192.7	2270.4	2268.0	2293.5	2287.7	2184.6	1990.0	1776.9	1680.8	1637.9
17.5°	2162.6	2139.5	2109.3	2130.2	2170.7	2189.3	2092.0	1892.7	1780.4	1730.6
20°	2181.2	2067.6	2001.6	2000.5	2086.2	2227.5	2241.4	2083.9	1978.5	1911.3
22.5°	2276.1	2031.7	1929.8	1932.1	2037.5	2284.3	2414.0	2334.1	2218.2	2134.8
25°	2416.3	2038.7	1902.0	1915.9	2032.9	2334.1	2600.5	2619.0	2470.7	2397.8
27.5°	2558.8	2098.9	1903.2	1918.2	2052.6	2360.7	2707.0	2828.7	2701.3	2610.9
30°	2658.4	2173.1	1924.0	1940.2	2083.9	2381.6	2747.6	3001.3	2869.2	2768.4
32.5°	2752.2	2249.5	1957.6	1973.8	2146.4	2424.4	2824.0	3175.0	3030.2	2930.6
35°	2843.7	2324.8	2020.2	2049.1	2247.2	2502.0	2901.7	3378.9	3258.4	3120.6
37.5°	2922.5	2408.2	2127.9	2189.3	2383.9	2621.3	3007.1	3610.6	3486.6	3332.6
40°	2988.5	2506.7	2350.3	2418.6	2592.4	2747.6	3124.1	3762.3	3680.1	3514.4
42.5°	3041.8	2680.4	2668.8	2765.0	2886.6	2892.4	3157.6	3835.3	3804.0	3656.9
45°	3131.0	2992.0	3087.0	3244.5	3236.4	3066.1	3148.4	3902.5	3904.8	3779.7
47.5°	3277.0	3382.4	3656.9	3763.5	3709.0	3303.6	3157.6	3968.5	4020.6	3922.2
50°	3485.5	3824.9	4183.9	4325.3	4166.6	3542.2	3239.9	4047.3	4204.8	4133.0
52.5°	3663.8	4159.6	4670.4	4796.7	4580.1	3797.0	3432.2	4217.5	4451.5	4428.3
55°	3918.7	4448.0	5016.8	5114.1	4940.3	4085.5	3690.5	4467.7	4722.6	4734.1
57.5°	4179.3	4708.7	5242.7	5341.1	5209.1	4444.6	4057.7	4826.8	4977.4	4973.9
60°	4468.9	4951.9	5344.6	5399.0	5323.7	4803.7	4452.7	5155.8	5152.3	5072.4
61°	4634.5	5029.5	5337.6	5353.9	5280.9	4909.1	4656.5	5282.0	5177.8	5072.4
62.5°	4817.6	5100.2	5251.9	5197.5	5118.7	4946.1	4951.9	5419.9	5195.2	5033.0
65°	5002.9	4923.0	4856.9	4596.3	4522.2	4605.6	5201.0	5367.8	5089.8	4858.1
67.5°	4685.5	4218.7	4076.2	3814.4	3521.4	3861.9	4964.7	5049.2	4734.1	4426.0
70°	3829.5	3099.7	2930.6	2921.3	2710.5	3084.7	4378.5	4317.1	3929.1	3646.5
72.5°	3001.3	2115.1	1884.6	1937.9	1896.2	2299.3	3581.6	2897.0	2519.4	2330.6
75°	2352.6	1503.5	1297.3	1288.1	1242.9	1566.1	2622.5	1526.7	1260.3	1125.9
77.5°	1552.2	1083.1	1079.6	997.3	962.6	849.1	1176.9	611.6	499.2	503.9
80°	894.2	663.7	778.4	617.4	618.6	498.1	476.1	89.2	71.8	52.1
82.5°	513.1	318.5	240.9	95.0	199.2	199.2	38.2	1.2	1.2	2.3
85°	49.8	15.1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	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

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