

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: P677324

Luminaire Tested: **CCW-SA-2D-827-U-SLL-HSS**

Issue Date: 04/25/2023



Test Information

Test Method: LM-79-08
Report Number: P677324
Test Lab: INNOVATION CENTER(G1)
Issue Date: 04/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-SA-2D-827-U-SLL-HSS
Description: INVUE CLEAR CURVE Wall Pack MOUNT Light Square Luminaire @800mA w/
SLL distribution lens and House Side Shield
Light Source: (32) 2700K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

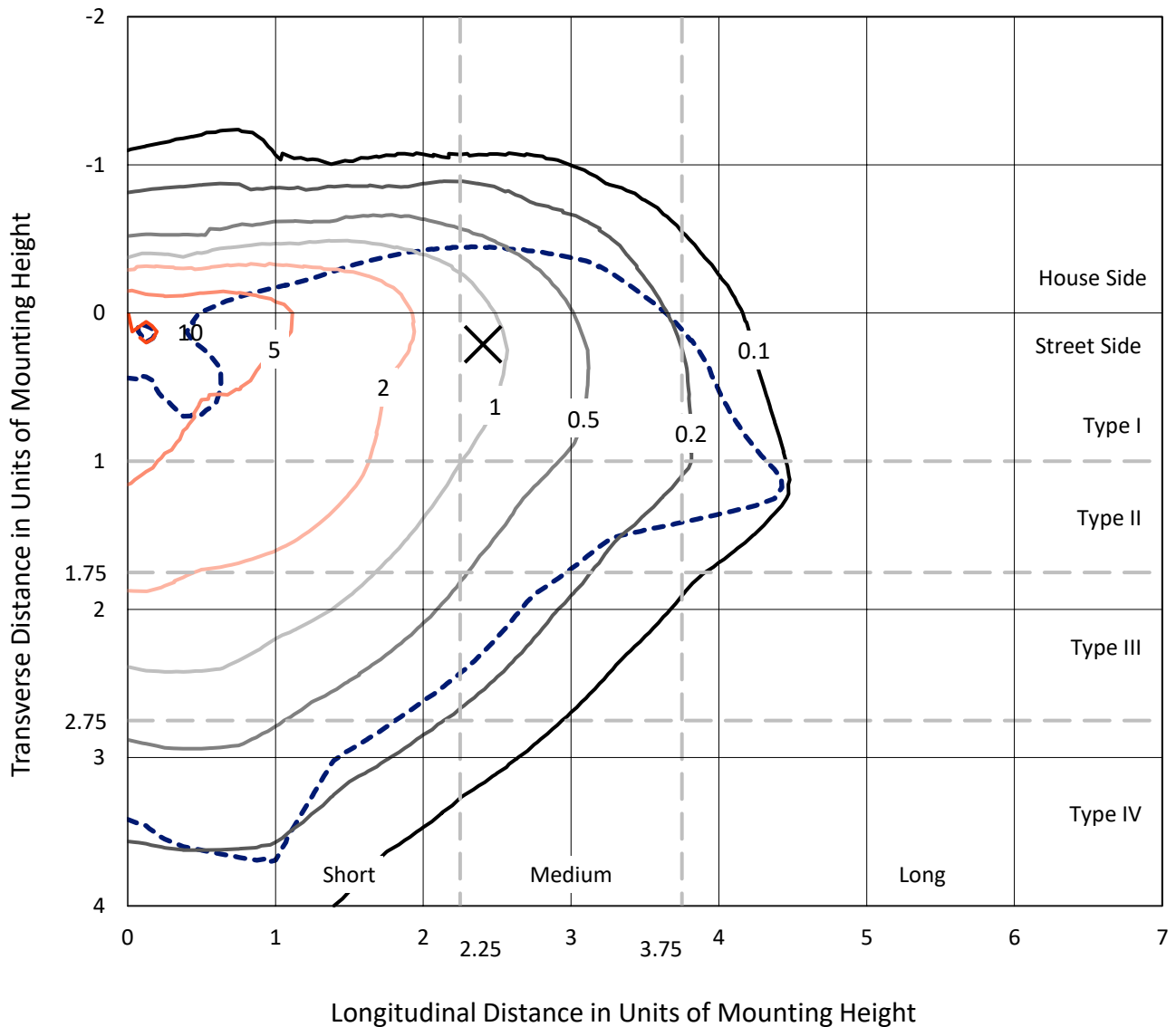
Lumens per Lamp: N/A
Luminaire Lumens: 5948.3 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

Input Watts (W): 80.8
Input Voltage (V): 120
Input Current (A_{in}): 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

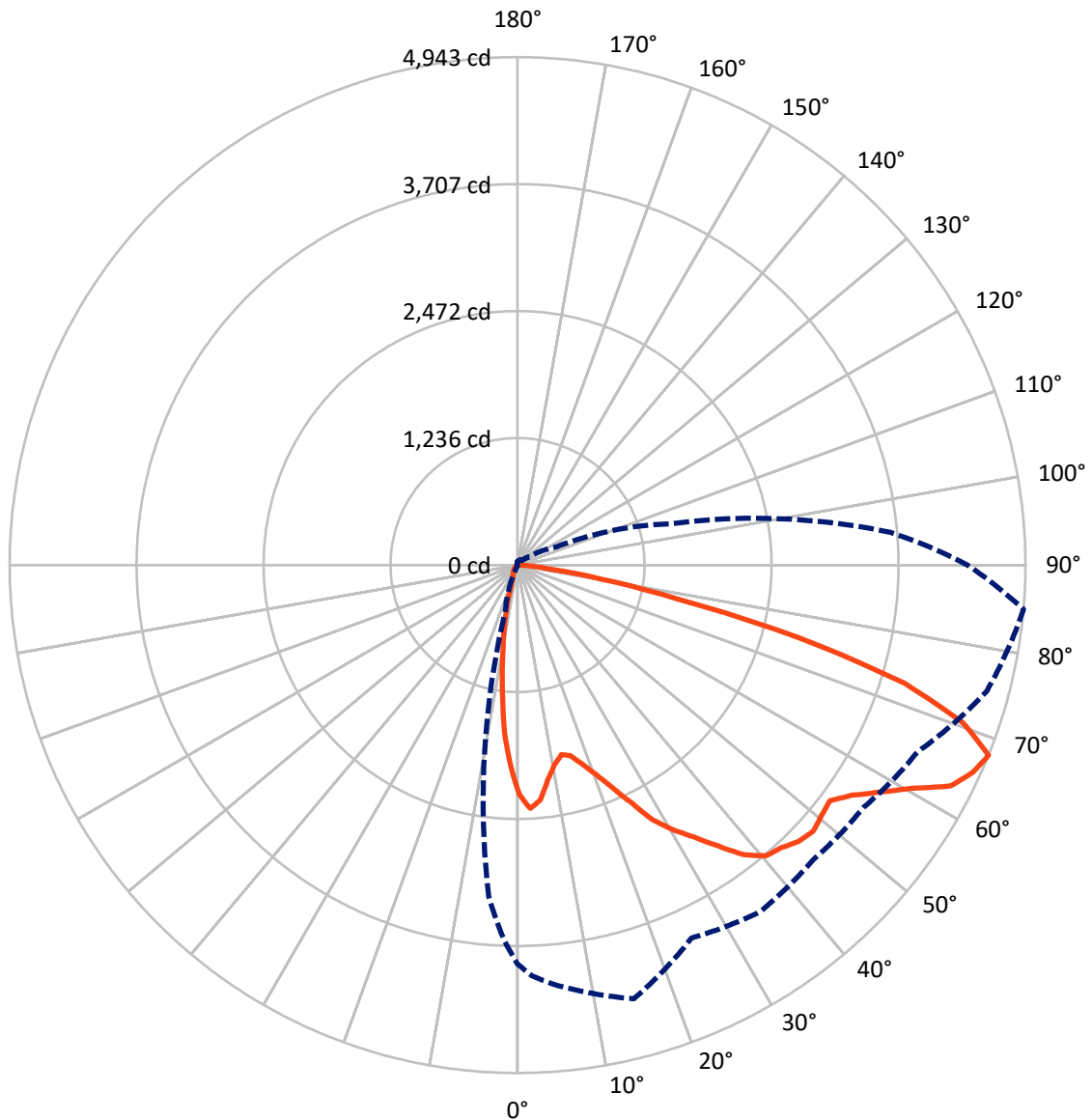
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 11.2 fc
 Type III - Medium - N/A

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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	1032.8	0.0	1032.8
	% Fixture	17.4	0.0	17.4
Street Side	Lumens	4915.5	0.0	4915.5
	% Fixture	82.6	0.0	82.6
Total	Lumens	5948.3	0.0	5948.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.9	2.9
10°-20°	333.2	5.6
20°-30°	461.1	7.8
30°-40°	651.6	11.0
40°-50°	887.2	14.9
50°-60°	1175.0	19.8
60°-70°	1364.3	22.9
70°-80°	772.6	13.0
80°-90°	133.5	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°	5948.3	100.0
0°-180°	5948.3	100.0



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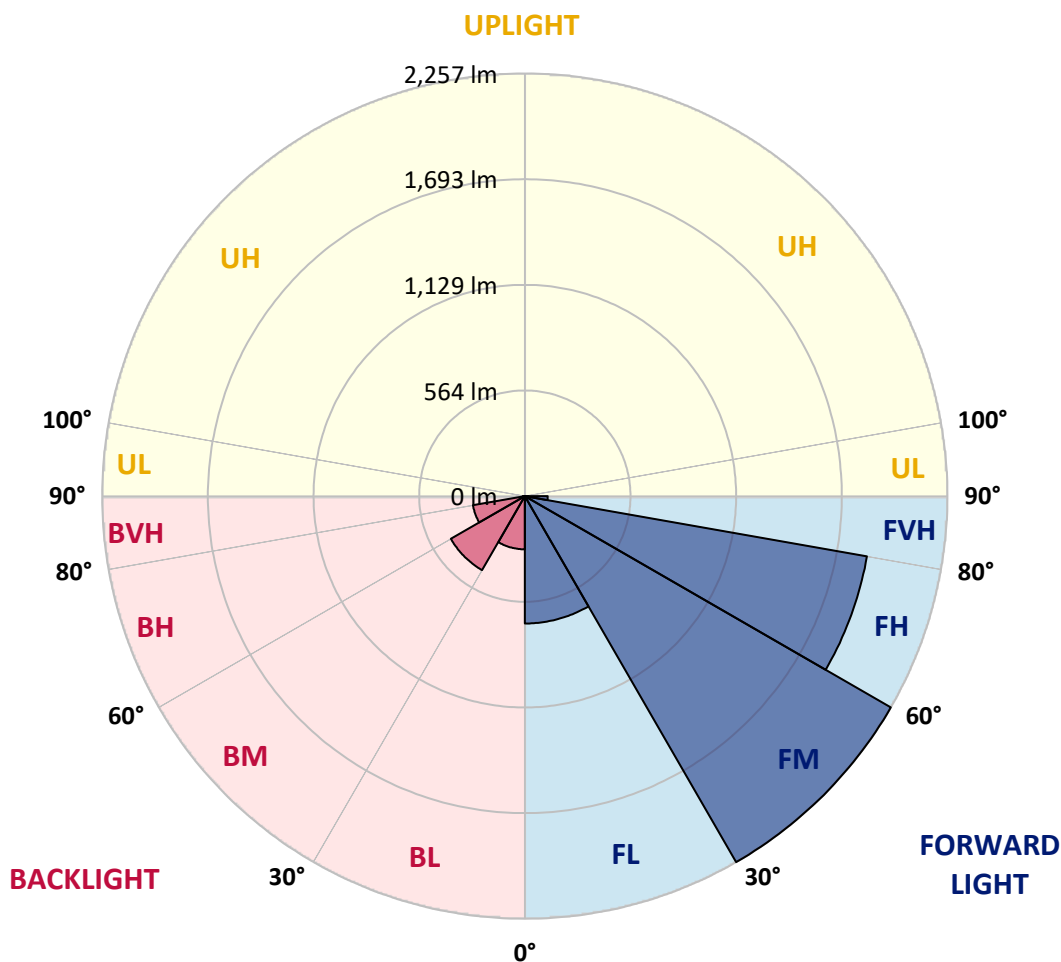
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	680.2	11.4			
FM (30°-60°)	2257.4	38.0			
FH (60°-80°)	1855.6	31.2			G2/5000
FVH (80°-90°)	122.2	2.1			G2/225
BL (0°-30°)	283.9	4.8	B1/500		
BM (30°-60°)	456.4	7.7	B1/1000		
BH (60°-80°)	281.3	4.7	B1/500		G1/500
BVH (80°-90°)	11.2	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-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5
2.5°	2323.9	2373.1	2374.7	2396.9	2419.2	2419.2	2471.6	2458.9	2412.8	2404.9	2371.5
5°	2341.3	2358.8	2371.5	2484.3	2579.6	2570.1	2598.7	2579.6	2490.7	2376.3	2298.5
7.5°	2190.4	2209.5	2260.3	2452.5	2581.2	2624.1	2678.1	2559.0	2465.2	2258.7	2109.4
10°	1990.3	2026.8	2120.6	2339.8	2498.6	2635.2	2635.2	2539.9	2358.8	2157.1	1974.4
12.5°	1879.1	1952.2	2003.0	2225.4	2431.9	2525.6	2522.4	2471.6	2354.1	2099.9	1893.4
15°	1898.2	1918.8	2026.8	2200.0	2336.6	2331.8	2389.0	2373.1	2290.5	2150.7	1923.6
17.5°	1985.5	2017.3	2111.0	2200.0	2265.1	2246.0	2244.5	2320.7	2325.5	2236.5	2036.4
20°	2128.5	2222.2	2266.7	2293.7	2214.3	2133.3	2123.7	2230.2	2312.8	2346.1	2171.4
22.5°	2357.2	2419.2	2509.7	2371.5	2165.0	2063.4	2044.3	2161.9	2328.6	2476.4	2346.1
25°	2581.2	2628.9	2716.2	2538.3	2220.6	2049.1	2015.7	2117.4	2389.0	2657.4	2557.4
27.5°	2817.9	2859.2	2868.7	2660.6	2250.8	2020.5	1980.8	2117.4	2439.8	2752.7	2809.9
30°	2962.4	3011.7	3021.2	2768.6	2300.0	2044.3	2025.2	2126.9	2474.8	2833.8	2991.0
32.5°	3124.4	3137.1	3129.2	2787.7	2354.1	2114.2	2034.8	2190.4	2514.5	2930.7	3156.2
35°	3318.2	3340.5	3259.5	2875.1	2474.8	2158.7	2130.1	2268.3	2582.8	2975.1	3356.4
37.5°	3466.0	3535.8	3353.2	2908.4	2498.6	2252.4	2257.2	2430.3	2630.4	3029.1	3577.1
40°	3743.9	3626.4	3512.0	3022.8	2589.1	2411.2	2385.8	2597.1	2790.9	3064.1	3721.7
42.5°	3896.4	3834.5	3574.0	3033.9	2728.9	2630.4	2636.8	2786.1	2875.1	3162.6	3761.4
45°	3934.5	3869.4	3658.2	3041.8	2867.1	2889.4	2999.0	3027.5	2999.0	3227.7	3836.1
47.5°	4031.4	3890.1	3648.6	3148.3	3091.1	3176.9	3316.6	3378.6	3167.3	3203.9	3871.0
50°	4012.4	3931.4	3628.0	3192.7	3364.3	3591.4	3685.2	3659.7	3354.8	3154.6	3832.9
52.5°	3933.0	3845.6	3691.5	3313.5	3620.0	3894.8	4025.1	3961.5	3521.5	3265.8	3807.5
55°	4048.9	3982.2	3774.1	3477.1	3812.2	4161.7	4253.8	4206.2	3726.5	3369.1	3952.0
57.5°	4174.4	4160.1	3998.1	3669.3	4039.4	4436.5	4436.5	4377.7	3904.4	3518.4	4166.5
60°	4355.5	4387.2	4163.3	3796.3	4117.2	4420.6	4650.9	4582.6	4083.9	3780.5	4409.5
62.5°	4296.7	4398.4	4376.1	4069.6	4206.2	4498.4	4623.9	4674.7	4306.2	4099.7	4733.5
65°	4107.7	4215.7	4374.5	4249.0	4139.4	4309.4	4372.9	4527.0	4417.4	4399.9	4866.9
67.5°	3882.1	3999.7	4098.1	4369.8	4004.4	4117.2	4061.6	4110.9	4296.7	4728.8	4943.2
70°	3389.7	3502.5	3658.2	4101.3	3647.0	3545.4	3531.1	3507.3	3796.3	4611.2	4596.9
72.5°	2787.7	2840.1	3097.4	3334.1	2698.7	2679.7	2701.9	2674.9	3010.1	4174.4	3937.7
75°	2087.2	2139.6	2285.7	2560.5	1837.8	1728.2	1855.3	1980.8	2298.5	3240.4	2829.0
77.5°	1569.4	1636.1	1728.2	1915.6	1348.6	1177.0	1194.5	1313.6	1661.5	2595.5	1585.3
80°	1018.2	1010.2	1188.1	1318.4	1015.0	1046.8	1002.3	1089.7	1204.0	1388.3	810.1
82.5°	587.7	595.7	670.3	756.1	706.9	808.5	583.0	973.7	859.3	565.5	301.8
85°	330.4	344.7	413.0	524.2	443.2	297.0	243.0	482.9	540.1	231.9	146.1
87.5°	33.4	28.6	55.6	198.6	120.7	49.2	73.1	116.0	130.3	87.4	42.9
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°	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5
2.5°	2323.9	2323.9	2284.2	2217.4	2190.4	2142.8	2077.7	2098.3	2076.1	1995.1	1974.4
5°	2228.6	2152.3	2069.7	1968.1	1909.3	1788.6	1750.4	1682.1	1693.3	1625.0	1628.1
7.5°	2030.0	1969.7	1829.9	1696.4	1580.5	1475.7	1327.9	1272.3	1218.3	1191.3	1223.1
10°	1914.1	1801.3	1610.7	1435.9	1281.9	1188.1	1089.7	1013.4	943.5	891.1	880.0
12.5°	1829.9	1729.8	1499.5	1286.6	1165.9	1089.7	999.1	894.3	826.0	735.4	708.4
15°	1804.5	1682.1	1439.1	1227.9	1110.3	984.8	881.6	778.3	689.4	594.1	560.7
17.5°	1891.8	1750.4	1437.5	1180.2	1015.0	880.0	737.0	621.1	530.5	443.2	422.5
20°	2039.5	1823.5	1483.6	1151.6	924.5	743.4	581.4	465.4	363.8	306.6	292.3
22.5°	2207.9	1947.4	1488.4	1075.4	833.9	606.8	424.1	306.6	249.4	222.4	214.4
25°	2414.4	2146.0	1545.5	1013.4	727.5	460.6	301.8	235.1	201.7	185.8	182.7
27.5°	2584.4	2284.2	1607.5	948.3	622.7	341.5	236.7	192.2	174.7	158.8	157.3
30°	2760.7	2443.0	1625.0	908.6	532.1	281.2	203.3	170.0	150.9	143.0	141.4
32.5°	2914.8	2616.1	1680.6	843.5	446.3	247.8	184.3	152.5	139.8	127.1	125.5
35°	3113.3	2716.2	1707.6	808.5	414.6	224.0	168.4	139.8	120.7	112.8	109.6
37.5°	3326.2	2813.1	1725.0	781.5	387.6	209.7	158.8	131.8	114.4	103.2	100.1
40°	3524.7	2949.7	1699.6	748.2	366.9	192.2	152.5	122.3	106.4	95.3	90.5
42.5°	3677.2	3083.1	1691.7	716.4	344.7	185.8	144.5	117.5	100.1	87.4	85.8
45°	3763.0	3173.7	1636.1	691.0	327.2	189.0	141.4	111.2	95.3	84.2	77.8
47.5°	3742.3	3243.6	1650.4	683.0	303.4	176.3	139.8	106.4	87.4	77.8	73.1
50°	3856.7	3384.9	1626.6	657.6	285.9	158.8	152.5	106.4	85.8	74.7	69.9
52.5°	3875.8	3513.6	1677.4	611.5	258.9	146.1	150.9	104.8	82.6	71.5	65.1
55°	4034.6	3662.9	1775.9	586.1	236.7	127.1	138.2	101.7	74.7	65.1	61.9
57.5°	4250.6	3972.7	1839.4	562.3	206.5	111.2	116.0	100.1	68.3	60.4	55.6
60°	4458.7	4096.6	1844.2	519.4	177.9	100.1	90.5	100.1	63.5	54.0	49.2
62.5°	4614.4	4096.6	1812.4	482.9	155.7	89.0	79.4	95.3	57.2	47.7	44.5
65°	4530.2	3987.0	1729.8	452.7	141.4	77.8	68.3	73.1	50.8	41.3	38.1
67.5°	4379.3	3645.4	1547.1	416.2	139.8	68.3	58.8	54.0	44.5	36.5	33.4
70°	4137.9	3184.8	1288.2	374.9	136.6	61.9	52.4	46.1	39.7	31.8	28.6
72.5°	3334.1	2630.4	1057.9	351.0	133.4	54.0	44.5	39.7	33.4	27.0	23.8
75°	2309.6	1680.6	814.9	300.2	130.3	49.2	41.3	34.9	28.6	22.2	20.6
77.5°	1385.1	1123.0	525.8	225.6	85.8	39.7	34.9	27.0	23.8	19.1	17.5
80°	648.1	530.5	212.8	87.4	41.3	28.6	23.8	20.6	19.1	15.9	14.3
82.5°	254.1	224.0	103.2	50.8	33.4	22.2	19.1	17.5	15.9	12.7	11.1
85°	136.6	120.7	49.2	34.9	23.8	15.9	15.9	14.3	12.7	11.1	9.5
87.5°	30.2	22.2	20.6	20.6	17.5	12.7	12.7	11.1	9.5	7.9	6.4
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°	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5
2.5°	1963.3	1987.1	1949.0	1972.8	1939.5	1964.9	1968.1	1944.2	1950.6	1982.4	1996.7
5°	1672.6	1656.7	1621.8	1610.7	1612.3	1591.6	1599.5	1610.7	1628.1	1637.7	1666.3
7.5°	1205.6	1242.2	1240.6	1267.6	1269.2	1266.0	1243.7	1196.1	1212.0	1199.3	1215.1
10°	862.5	878.4	908.6	926.1	957.8	940.4	889.5	870.5	860.9	859.3	875.2
12.5°	689.4	651.3	648.1	654.4	670.3	649.7	624.3	602.0	613.1	635.4	652.8
15°	533.7	501.9	460.6	454.3	457.5	447.9	420.9	392.3	400.3	422.5	435.2
17.5°	409.8	373.3	344.7	325.6	319.3	285.9	246.2	222.4	216.0	214.4	225.6
20°	276.4	270.0	265.3	241.4	241.4	193.8	160.4	143.0	143.0	146.1	147.7
22.5°	206.5	198.6	200.1	195.4	182.7	144.5	127.1	122.3	122.3	125.5	125.5
25°	179.5	168.4	165.2	163.6	150.9	123.9	111.2	106.4	106.4	109.6	109.6
27.5°	152.5	149.3	144.5	138.2	127.1	106.4	98.5	93.7	95.3	96.9	95.3
30°	139.8	131.8	125.5	125.5	112.8	95.3	89.0	85.8	82.6	85.8	87.4
32.5°	123.9	119.1	116.0	111.2	96.9	84.2	77.8	74.7	73.1	73.1	74.7
35°	106.4	106.4	103.2	96.9	84.2	76.2	68.3	65.1	63.5	65.1	65.1
37.5°	95.3	90.5	92.1	85.8	74.7	66.7	58.8	55.6	55.6	54.0	55.6
40°	89.0	81.0	76.2	73.1	66.7	57.2	50.8	47.7	46.1	46.1	46.1
42.5°	79.4	73.1	63.5	61.9	60.4	49.2	41.3	39.7	38.1	36.5	36.5
45°	74.7	65.1	57.2	49.2	49.2	41.3	34.9	31.8	30.2	28.6	30.2
47.5°	68.3	58.8	49.2	41.3	39.7	33.4	27.0	23.8	22.2	22.2	22.2
50°	65.1	52.4	42.9	34.9	30.2	27.0	20.6	17.5	15.9	15.9	15.9
52.5°	60.4	49.2	38.1	30.2	23.8	20.6	15.9	12.7	11.1	11.1	11.1
55°	54.0	44.5	33.4	25.4	20.6	15.9	11.1	7.9	6.4	6.4	6.4
57.5°	50.8	39.7	28.6	22.2	15.9	11.1	6.4	4.8	4.8	3.2	4.8
60°	46.1	34.9	23.8	17.5	12.7	7.9	4.8	1.6	1.6	1.6	1.6
62.5°	39.7	30.2	20.6	14.3	9.5	4.8	1.6	0.0	0.0	0.0	0.0
65°	33.4	23.8	15.9	11.1	6.4	1.6	0.0	0.0	0.0	0.0	0.0
67.5°	28.6	20.6	12.7	7.9	4.8	0.0	0.0	0.0	0.0	0.0	0.0
70°	25.4	17.5	9.5	6.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	20.6	14.3	7.9	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	17.5	11.1	4.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	14.3	7.9	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	11.1	6.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	9.5	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	6.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.8	1.6	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°	358°	360°
0°	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5	2236.5
2.5°	2017.3	2007.8	2055.4	2133.3	2173.0	2250.8	2269.9	2319.1	2306.4	2323.9
5°	1669.4	1688.5	1758.4	1872.8	1914.1	2026.8	2133.3	2239.7	2308.0	2341.3
7.5°	1239.0	1302.5	1388.3	1493.1	1599.5	1747.3	1928.4	2052.3	2119.0	2190.4
10°	922.9	991.2	1089.7	1192.9	1366.0	1531.2	1712.3	1866.4	1923.6	1990.3
12.5°	725.9	832.3	946.7	1057.9	1161.1	1318.4	1542.4	1766.3	1828.3	1879.1
15°	505.1	635.4	799.0	943.5	1088.1	1224.7	1456.6	1728.2	1812.4	1898.2
17.5°	279.6	382.8	570.2	773.6	986.4	1196.1	1485.2	1798.1	1925.2	1985.5
20°	162.0	203.3	336.7	578.2	859.3	1134.1	1499.5	1929.9	2098.3	2128.5
22.5°	133.4	147.7	190.6	362.2	703.7	1094.4	1572.5	2114.2	2285.7	2357.2
25°	114.4	125.5	147.7	217.6	532.1	1010.2	1618.6	2344.5	2503.4	2581.2
27.5°	101.7	112.8	130.3	160.4	362.2	894.3	1694.9	2552.6	2711.4	2817.9
30°	89.0	98.5	116.0	136.6	251.0	764.0	1760.0	2705.1	2929.1	2962.4
32.5°	79.4	87.4	100.1	117.5	185.8	579.8	1812.4	2862.3	3051.4	3124.4
35°	68.3	77.8	85.8	100.1	141.4	436.8	1780.6	2984.7	3230.9	3318.2
37.5°	60.4	66.7	74.7	84.2	119.1	341.5	1715.5	3130.8	3384.9	3466.0
40°	50.8	55.6	65.1	74.7	108.0	263.7	1640.8	3307.1	3601.0	3743.9
42.5°	42.9	47.7	54.0	69.9	89.0	195.4	1489.9	3443.7	3775.7	3896.4
45°	33.4	39.7	49.2	69.9	71.5	144.5	1334.3	3545.4	3874.2	3934.5
47.5°	25.4	31.8	47.7	60.4	57.2	100.1	1150.0	3661.3	3975.8	4031.4
50°	19.1	25.4	54.0	52.4	47.7	76.2	1034.1	3742.3	3982.2	4012.4
52.5°	12.7	19.1	44.5	39.7	39.7	66.7	1002.3	3739.2	3998.1	3933.0
55°	9.5	14.3	25.4	28.6	34.9	58.8	973.7	3858.3	4002.8	4048.9
57.5°	6.4	11.1	17.5	22.2	30.2	50.8	914.9	4001.3	4150.6	4174.4
60°	3.2	7.9	12.7	17.5	25.4	44.5	832.3	4106.1	4330.1	4355.5
62.5°	1.6	4.8	9.5	14.3	20.6	34.9	746.6	3939.3	4252.2	4296.7
65°	0.0	3.2	6.4	9.5	12.7	25.4	606.8	3556.5	3944.1	4107.7
67.5°	0.0	0.0	3.2	6.4	7.9	19.1	457.5	3235.6	3659.7	3882.1
70°	0.0	0.0	1.6	1.6	4.8	14.3	292.3	2679.7	3267.4	3389.7
72.5°	0.0	0.0	0.0	0.0	1.6	9.5	170.0	1990.3	2560.5	2787.7
75°	0.0	0.0	0.0	0.0	0.0	7.9	85.8	1280.3	1782.2	2087.2
77.5°	0.0	0.0	0.0	0.0	0.0	6.4	46.1	826.0	1313.6	1569.4
80°	0.0	0.0	0.0	0.0	0.0	1.6	27.0	479.7	840.3	1018.2
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	11.1	235.1	501.9	587.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	3.2	125.5	251.0	330.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	17.5	33.4
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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