

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: P676175

Luminaire Tested: **CCW-SA-1B-830-U-T1**

Issue Date: 04/25/2023



Test Information

Test Method: LM-79-08
Report Number: P676175
Test Lab: INNOVATION CENTER(G1)
Issue Date: 04/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-SA-1B-830-U-T1
Description: INVUE CLEAR CURVE Wall Pack MOUNT LIGHT SQUARE LUMINAIRE @450mA w/
T1 distribution lens
Light Source: (16) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

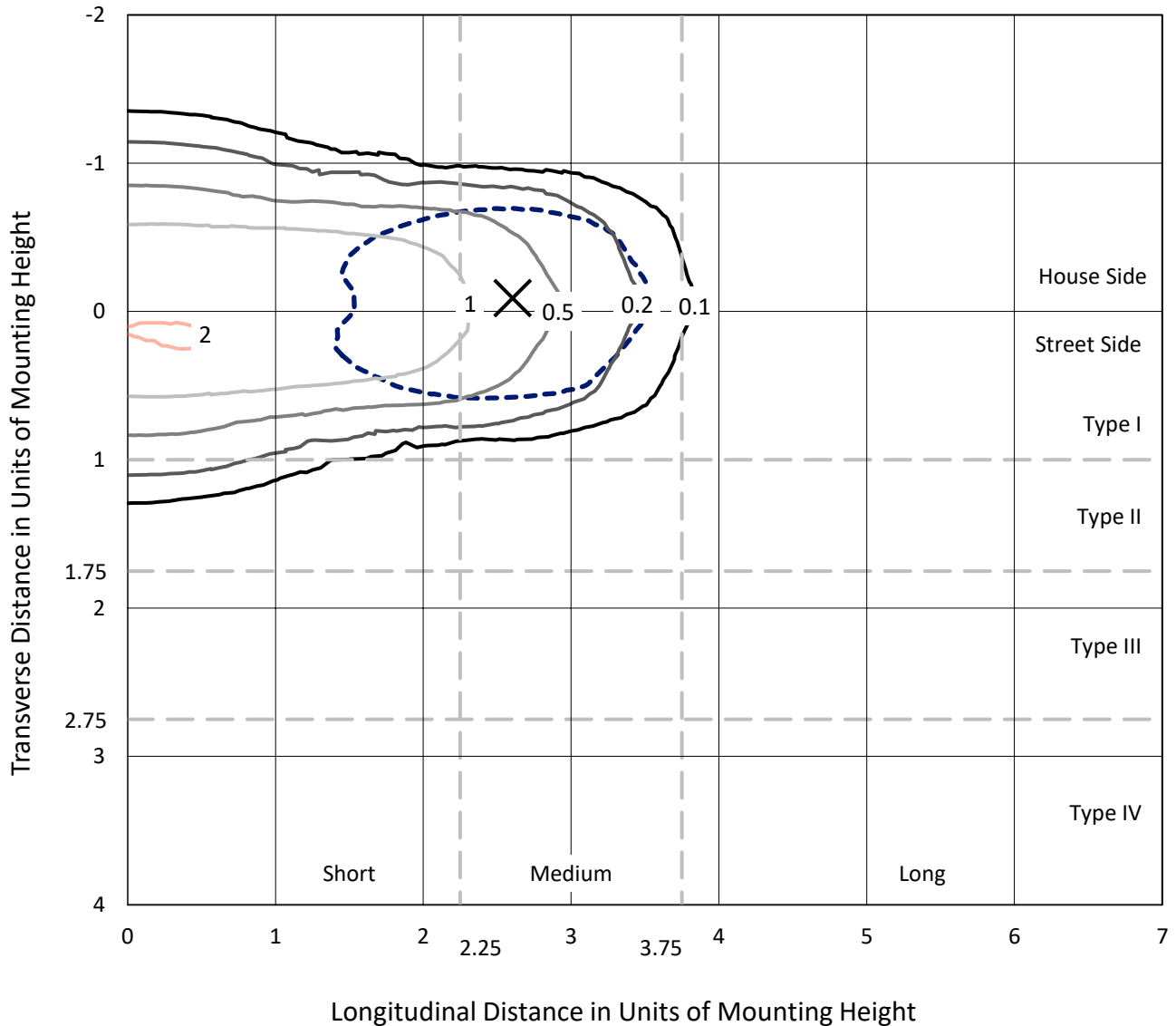
Lumens per Lamp: N/A
Luminaire Lumens: 2672.3 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type I - Short
BUG Rating: B2 - U0 - G2

Input Watts (W): 24
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

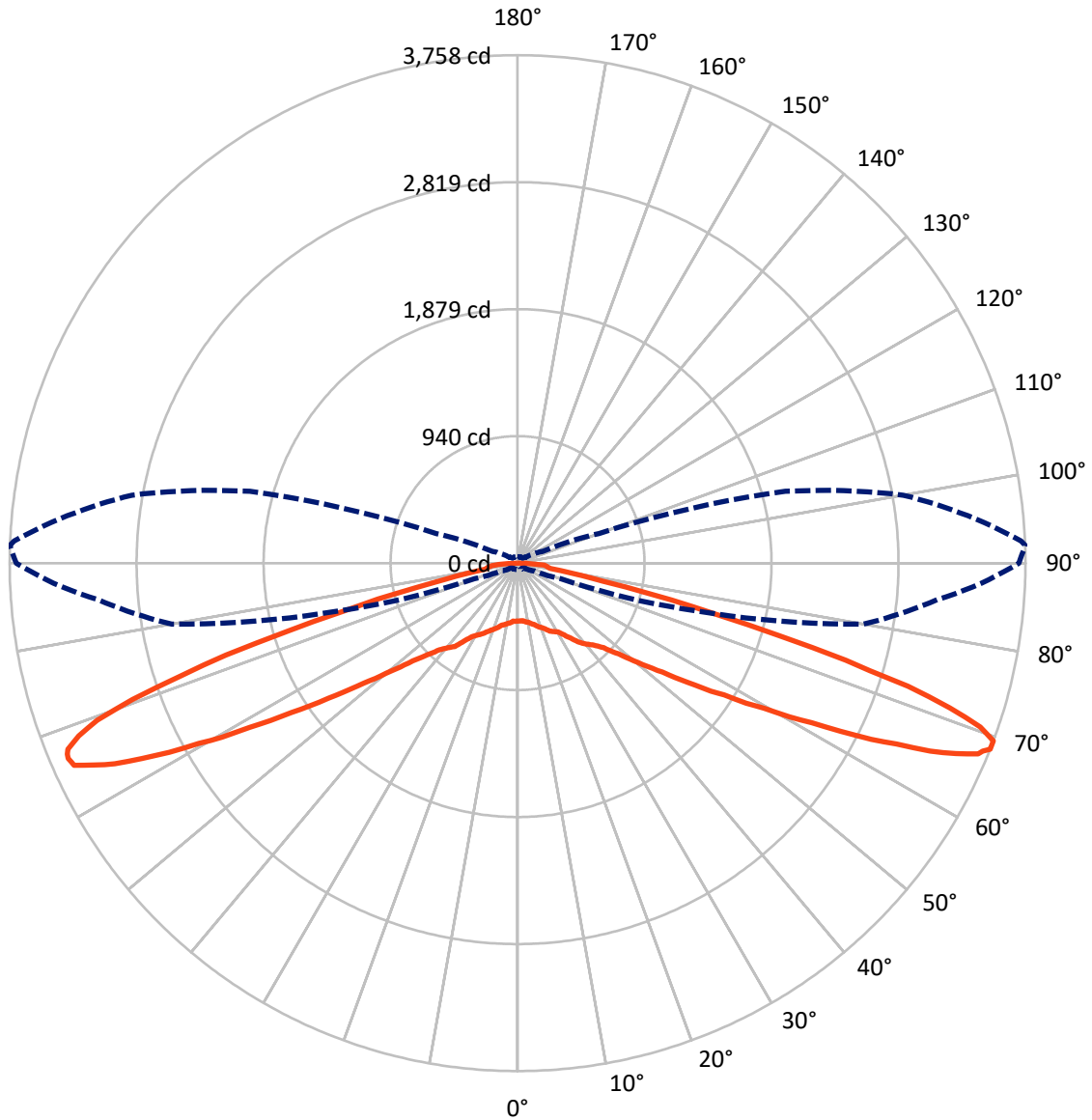
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.1 fc
 Type I - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 92-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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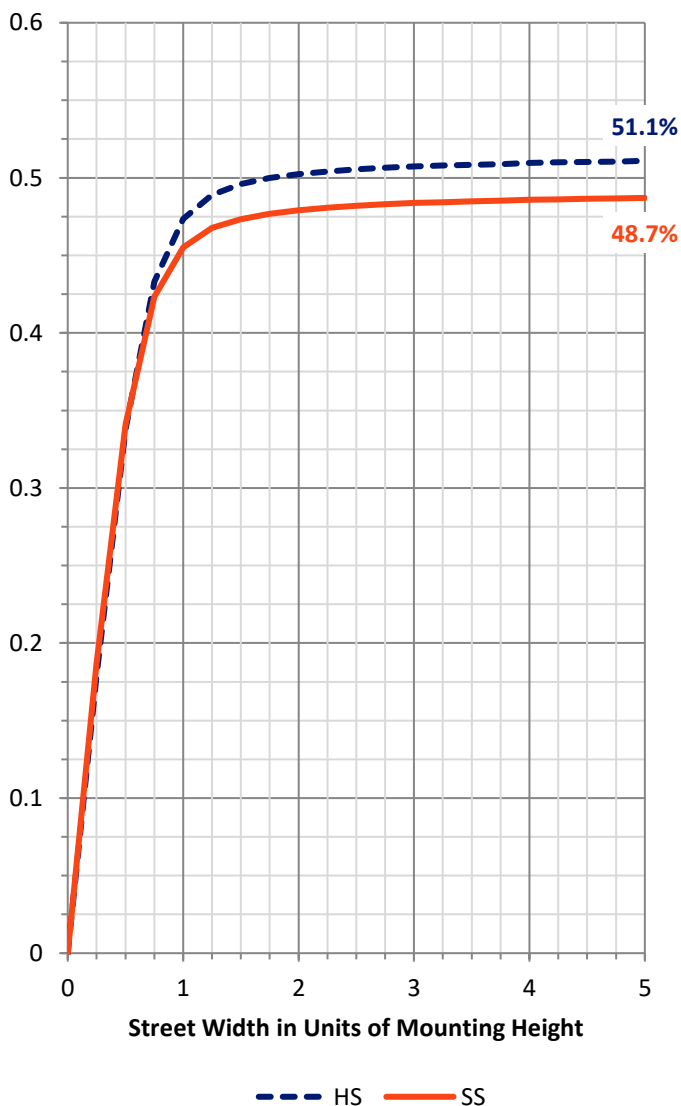
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1376.2	0.0	1376.2
	% Fixture	51.5	0.0	51.5
Street Side	Lumens	1296.1	0.0	1296.1
	% Fixture	48.5	0.0	48.5
Total	Lumens	2672.3	0.0	2672.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.8	1.6
10°-20°	138.6	5.2
20°-30°	236.6	8.9
30°-40°	330.3	12.4
40°-50°	420.2	15.7
50°-60°	531.3	19.9
60°-70°	655.2	24.5
70°-80°	286.2	10.7
80°-90°	31.0	1.2
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°	2672.3	100.0
0°-180°	2672.3	100.0



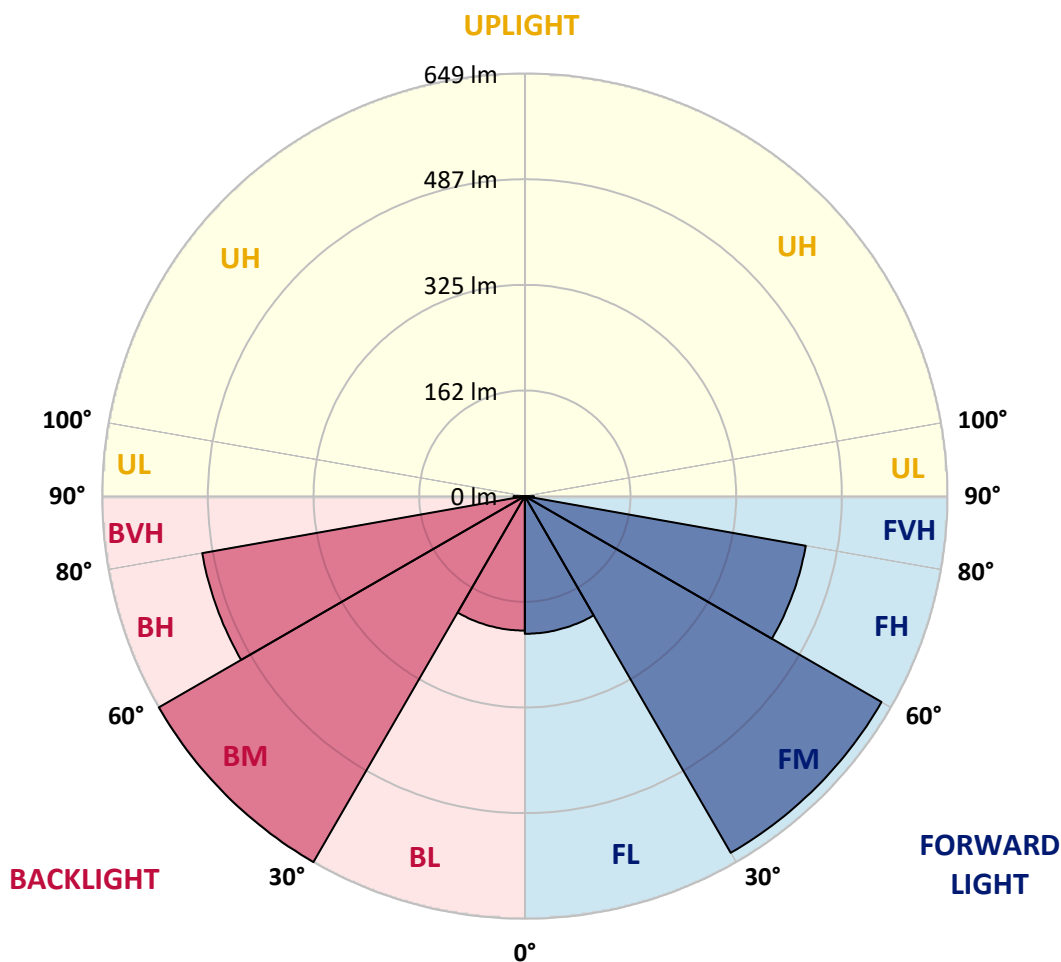
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	211.5	7.9			
FM (30°-60°)	632.6	23.7			
FH (60°-80°)	438.2	16.4			G0/660
FVH (80°-90°)	13.8	0.5			G1/100
BL (0°-30°)	206.5	7.7	B1/500		
BM (30°-60°)	649.1	24.3	B1/1000		
BH (60°-80°)	503.2	18.8	B2/1000		G2/1000
BVH (80°-90°)	17.3	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	427.3	427.3	427.3	427.3	427.3	427.3	427.3	427.3	427.3	427.3	427.3
2.5°	436.3	435.8	437.3	438.4	433.8	435.3	434.3	433.3	429.8	428.3	425.3
5°	448.4	449.9	454.9	450.4	452.4	449.9	441.9	444.4	439.9	438.9	435.8
7.5°	469.4	466.4	473.5	468.4	470.0	464.9	461.4	456.9	455.9	448.9	449.4
10°	474.0	480.0	483.0	482.0	483.0	485.5	479.0	472.0	462.4	460.4	453.4
12.5°	471.0	476.5	484.5	491.0	495.5	496.5	494.0	492.5	488.5	477.0	476.5
15°	467.9	463.9	468.9	491.5	506.6	516.6	520.1	511.6	512.6	497.5	491.5
17.5°	447.9	441.9	461.4	483.5	502.0	524.1	541.2	538.7	538.7	526.6	518.1
20°	421.3	431.3	441.4	469.4	503.6	536.7	569.3	567.8	561.7	558.2	539.7
22.5°	398.7	403.2	421.8	451.4	494.0	540.2	578.8	606.4	592.3	578.3	567.3
25°	383.2	379.2	402.7	433.3	485.0	534.1	596.8	625.4	633.0	622.4	601.4
27.5°	361.1	361.1	379.7	408.8	455.9	531.1	614.4	658.0	669.1	653.5	622.9
30°	336.0	339.0	355.1	388.2	434.3	509.1	621.4	695.6	704.7	691.1	659.5
32.5°	316.5	316.5	334.5	369.6	419.3	499.0	616.9	732.8	749.8	739.8	707.2
35°	295.4	293.9	306.9	345.6	395.2	479.5	615.4	762.4	800.5	801.0	766.9
37.5°	265.3	271.3	287.9	318.5	376.2	460.4	610.9	798.0	866.2	877.7	854.1
40°	245.3	247.8	262.8	296.4	346.6	437.9	604.4	827.1	909.8	949.4	916.8
42.5°	216.2	219.7	231.2	272.8	318.0	405.8	575.8	847.6	972.0	1017.1	989.6
45°	185.6	187.6	204.6	238.7	287.4	367.6	545.2	880.7	1032.2	1124.5	1108.4
47.5°	149.0	150.0	164.5	200.1	250.8	329.5	498.0	879.2	1080.8	1231.8	1276.9
50°	116.4	118.9	129.9	159.0	206.6	282.9	443.4	867.2	1142.0	1354.2	1443.0
52.5°	92.8	93.3	100.3	123.4	159.5	236.2	384.7	829.1	1199.7	1474.0	1646.6
55°	76.7	76.7	80.7	94.8	122.4	179.6	316.0	765.9	1206.7	1606.5	1868.8
56°	73.7	72.7	76.2	88.3	110.3	162.0	283.9	723.2	1216.8	1667.6	1980.1
57°	69.7	70.2	72.2	80.7	99.3	143.4	248.3	681.6	1209.7	1717.8	2062.4
58°	67.7	66.7	70.7	76.2	87.8	127.4	223.7	632.5	1198.7	1758.9	2182.2
59°	64.7	64.2	66.7	71.7	81.8	113.3	193.6	579.3	1177.1	1812.1	2271.5
60°	63.7	63.2	64.2	68.2	75.2	99.3	170.5	517.1	1119.5	1866.8	2382.4
61°	60.7	61.2	63.2	65.7	71.2	89.3	153.5	453.4	1081.8	1912.9	2504.7
62°	61.2	60.2	61.2	63.2	67.2	82.3	134.4	390.7	1014.6	1965.1	2596.5
63°	58.2	57.7	59.2	61.7	63.7	74.2	117.4	337.5	938.4	1977.1	2674.3
64°	57.2	56.7	57.2	60.7	61.2	69.7	103.8	288.4	828.1	1997.7	2774.1
65°	54.7	54.7	55.7	57.2	59.2	65.7	92.8	250.3	718.2	1943.5	2804.7
66°	52.7	53.2	53.2	55.7	57.2	61.2	85.3	212.7	612.9	1857.2	2834.2
67°	51.2	51.2	51.7	53.7	55.2	57.7	76.7	184.1	517.1	1754.4	2788.6
67.5°	50.2	50.7	50.7	52.7	54.2	57.7	73.2	174.5	462.4	1641.6	2754.5
68°	48.7	49.2	49.2	51.2	52.7	55.7	70.7	159.5	426.3	1568.3	2691.3
69°	47.6	47.1	47.1	49.2	51.2	53.2	65.7	139.4	339.0	1363.7	2599.0
70°	44.6	44.6	45.6	47.1	48.7	50.7	60.7	122.9	286.9	1129.0	2361.3
71°	43.1	42.6	43.1	44.6	46.1	48.7	55.7	108.8	234.7	937.4	2127.6
72°	40.1	41.1	41.1	42.6	44.1	45.6	52.2	94.8	197.1	749.3	1870.3
72.5°	39.6	39.6	40.1	41.6	42.6	45.1	50.2	90.8	180.1	660.5	1762.4
73°	38.1	38.1	38.6	40.1	41.1	43.6	48.7	81.8	164.0	587.8	1560.8
74°	36.6	36.1	36.1	38.1	38.6	41.1	45.6	72.2	137.4	442.9	1252.9
75°	34.1	34.1	34.6	35.6	36.1	38.1	42.1	64.2	115.9	343.6	980.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
77.5°	28.1	28.6	29.1	30.1	30.1	31.6	34.6	44.6	70.7	174.0	449.9
80°	20.6	21.6	23.1	24.6	24.1	24.1	27.1	32.1	42.1	78.2	172.5
82.5°	16.6	17.6	16.0	18.1	18.1	17.1	19.6	23.6	28.6	38.6	61.7
85°	11.0	11.5	9.5	11.0	10.5	10.5	13.0	14.0	17.6	21.6	30.6
87.5°	5.0	5.0	4.0	4.5	4.5	4.5	6.5	5.0	7.5	10.5	18.1
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):

	85°	87.5°	90°	92°	92.5°	95°	100°	105°	110°	115°	125°
0°	427.3	427.3	427.3	427.3	427.3	427.3	427.3	427.3	427.3	427.3	427.3
2.5°	428.3	430.3	430.3	428.3	426.8	428.3	427.3	424.8	427.3	428.3	428.8
5°	434.3	430.3	432.3	427.8	430.8	430.3	429.3	431.8	432.3	432.3	435.8
7.5°	440.9	445.9	439.4	439.9	441.4	435.3	437.3	438.4	436.3	440.4	443.4
10°	452.4	454.4	452.4	444.9	449.9	445.9	444.4	448.9	447.9	448.9	453.4
12.5°	462.9	466.4	460.9	460.4	457.9	454.4	456.4	455.9	462.9	463.9	469.4
15°	484.5	475.5	473.5	473.0	472.0	470.5	471.5	472.0	481.0	482.5	495.5
17.5°	503.1	501.5	490.5	494.5	494.5	488.5	486.0	494.5	501.5	509.1	518.1
20°	522.1	520.6	508.6	509.1	504.6	510.1	507.1	515.1	527.1	529.6	537.7
22.5°	544.7	538.2	529.6	530.6	532.1	528.1	526.1	537.2	549.2	556.2	556.7
25°	580.3	563.7	556.7	557.7	555.7	552.7	554.2	568.3	574.3	589.3	586.3
27.5°	599.3	589.8	584.8	573.3	573.8	569.3	575.3	596.3	608.4	619.9	596.8
30°	622.4	616.4	594.3	590.3	589.8	587.8	598.8	625.9	644.0	650.5	617.4
32.5°	667.6	643.5	638.0	634.5	626.4	628.9	634.5	670.1	698.7	697.2	636.5
35°	719.2	702.7	687.1	684.1	683.1	676.1	685.6	727.2	749.3	742.8	643.5
37.5°	802.0	776.9	755.8	744.3	742.3	737.3	759.8	792.9	821.5	796.0	649.0
40°	842.6	814.5	795.0	787.9	789.4	796.5	818.5	869.2	881.7	834.6	653.5
42.5°	900.8	870.2	831.6	828.1	823.5	827.1	869.7	937.9	948.4	886.7	636.5
45°	1004.1	958.0	913.3	893.3	894.3	903.8	970.0	1044.7	1025.2	922.8	609.4
47.5°	1134.5	1066.8	1030.7	1003.6	1016.6	1006.1	1111.4	1171.1	1104.4	968.5	576.3
50°	1330.6	1235.8	1186.7	1154.1	1159.6	1168.6	1275.4	1326.1	1192.2	990.6	525.6
52.5°	1577.9	1456.0	1383.8	1340.1	1344.1	1363.7	1501.6	1486.1	1292.5	1009.1	457.9
55°	1873.8	1748.4	1608.5	1590.4	1585.9	1632.5	1784.5	1653.6	1382.8	979.5	387.7
56°	2030.3	1896.9	1751.4	1714.3	1703.3	1735.9	1914.4	1737.4	1413.9	946.4	354.1
57°	2163.2	2035.8	1876.3	1813.1	1827.1	1888.3	2043.3	1816.1	1442.5	912.3	322.5
58°	2345.7	2200.3	2031.8	1983.6	1971.1	2019.7	2182.2	1895.3	1452.0	877.2	293.4
59°	2527.8	2353.3	2201.3	2113.5	2117.0	2205.8	2319.2	1989.6	1466.5	832.6	256.3
60°	2666.2	2578.5	2375.3	2309.6	2300.6	2429.0	2455.6	2052.8	1482.1	772.4	230.2
61°	2862.3	2748.0	2558.9	2474.1	2498.7	2601.5	2603.0	2132.1	1459.0	696.1	198.1
62°	3003.3	2973.2	2774.6	2693.8	2686.3	2822.7	2756.5	2201.8	1438.9	623.9	175.0
63°	3168.3	3168.3	2987.2	2924.0	2927.5	3035.4	2823.2	2271.5	1415.9	544.2	154.0
64°	3254.0	3361.9	3194.9	3106.1	3129.2	3222.4	2942.1	2317.2	1344.6	463.4	135.4
65°	3328.3	3490.3	3397.5	3356.4	3321.2	3376.4	3044.9	2359.8	1235.8	394.2	120.4
66°	3391.0	3611.1	3580.6	3536.4	3532.9	3520.4	3065.0	2358.3	1123.5	333.0	105.3
67°	3359.4	3613.7	3669.3	3687.9	3682.4	3550.0	3029.9	2304.6	979.5	281.4	93.8
67.5°	3330.8	3593.1	3722.5	3712.0	3735.0	3575.0	3035.9	2238.9	877.2	254.8	88.3
68°	3305.7	3565.5	3744.1	3757.6	3746.1	3578.0	3002.8	2186.7	807.5	239.2	83.3
69°	3115.6	3434.6	3709.4	3758.1	3728.5	3463.2	2897.4	2050.8	641.5	204.1	76.7
70°	2925.0	3265.1	3541.4	3630.7	3594.1	3241.0	2764.5	1834.7	529.1	174.5	69.2
71°	2661.2	2950.1	3317.7	3371.4	3327.3	2988.2	2489.7	1606.5	411.8	148.0	61.7
72°	2303.1	2548.4	2899.4	3029.3	2964.1	2624.6	2211.8	1327.6	333.5	124.4	56.2
72.5°	2125.6	2376.8	2715.4	2725.9	2738.5	2466.6	2094.0	1166.1	290.9	115.4	54.7
73°	1957.0	2203.3	2496.2	2533.3	2480.2	2200.3	1917.9	1042.7	265.8	105.3	52.7
74°	1585.9	1726.3	1969.1	2005.2	1958.5	1794.0	1567.3	799.5	211.7	90.8	48.1
75°	1247.9	1325.1	1544.8	1522.7	1453.0	1395.3	1215.3	610.9	171.5	79.7	44.6



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CANDELA DISTRIBUTION (continued):

	85°	87.5°	90°	92°	92.5°	95°	100°	105°	110°	115°	125°
77.5°	560.7	607.4	644.0	644.0	648.0	618.4	560.2	280.4	105.8	57.7	36.6
80°	213.7	239.2	247.3	247.8	251.3	260.3	242.2	137.9	62.7	41.1	29.6
82.5°	155.0	216.7	233.2	221.2	222.2	200.6	92.8	61.2	39.6	28.6	21.6
85°	140.4	188.6	199.6	198.1	198.6	185.6	54.7	30.1	23.1	18.1	15.0
87.5°	68.2	66.7	70.7	79.7	77.7	100.8	46.1	15.0	10.0	7.5	7.5
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):

	135°	145°	155°	165°	175°	180°
0°	427.3	427.3	427.3	427.3	427.3	427.3
2.5°	424.8	424.3	431.3	424.3	428.3	425.3
5°	429.8	431.8	433.3	436.3	429.3	436.3
7.5°	444.9	446.9	447.4	449.9	446.9	446.4
10°	456.4	461.4	464.4	454.4	460.4	459.9
12.5°	479.0	474.0	473.5	471.5	465.9	463.9
15°	495.0	487.5	483.0	475.0	468.4	465.9
17.5°	517.6	503.1	484.5	467.9	456.4	447.4
20°	531.6	505.6	468.4	448.9	431.3	435.3
22.5°	540.7	503.1	453.9	428.8	411.3	416.3
25°	543.7	490.5	443.9	412.8	395.7	392.2
27.5°	535.2	476.0	424.3	389.2	374.2	377.2
30°	531.1	454.9	406.3	371.6	351.6	354.6
32.5°	520.6	433.3	382.2	347.1	332.5	327.5
35°	505.6	415.3	359.1	326.0	308.5	304.4
37.5°	487.0	392.7	339.0	298.9	283.4	280.4
40°	459.4	365.6	310.0	275.3	257.3	256.8
42.5°	435.3	339.5	282.9	247.3	229.2	230.2
45°	404.7	304.4	251.8	221.2	203.1	204.1
47.5°	365.6	271.8	222.2	188.1	173.0	172.0
50°	319.5	234.7	186.1	157.0	144.4	141.9
52.5°	275.3	197.1	152.5	126.4	115.9	114.9
55°	219.7	153.5	118.9	99.3	91.3	91.8
56°	199.6	141.4	108.3	90.8	84.8	84.8
57°	180.6	125.4	98.3	83.8	78.2	78.2
58°	159.5	110.3	89.3	75.7	73.2	71.2
59°	144.9	100.3	80.7	71.7	67.7	67.2
60°	127.9	90.3	75.2	67.2	64.2	63.7
61°	113.3	81.3	69.2	62.7	61.7	61.7
62°	101.3	75.2	64.2	60.7	60.2	58.7
63°	90.8	69.2	61.7	57.7	56.2	57.7
64°	81.3	63.7	59.7	56.7	54.7	55.7
65°	73.7	61.2	57.2	55.2	53.2	53.7
66°	68.7	57.2	55.2	52.7	51.7	52.2
67°	62.2	55.2	53.2	50.7	50.2	50.7
67.5°	60.2	53.7	52.2	49.7	49.2	49.7
68°	58.7	52.7	51.7	49.2	48.7	48.1
69°	54.7	50.7	49.2	48.1	47.1	46.6
70°	51.2	48.7	47.6	46.1	45.1	44.6
71°	49.2	46.1	45.6	44.1	43.1	42.6
72°	46.6	44.6	43.6	41.6	41.1	41.6
72.5°	46.1	43.6	43.1	41.1	40.6	40.6
73°	44.6	41.6	42.1	40.1	39.1	40.1
74°	41.6	40.6	39.6	38.1	37.6	37.6
75°	39.1	38.1	37.1	36.1	36.1	36.1



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CANDELA DISTRIBUTION (continued):

	135°	145°	155°	165°	175°	180°
77.5°	33.1	32.6	33.1	31.1	30.6	30.1
80°	26.6	26.6	27.1	25.6	24.6	24.1
82.5°	20.1	20.6	21.6	20.1	19.1	18.1
85°	13.0	13.5	13.5	12.0	14.0	13.0
87.5°	6.5	7.0	6.5	6.0	7.0	7.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)