

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:

Luminaire Tested: **ENT-SA1D-740-U-T4W-HSS-ULG**

Issue Date: 3/30/2022

**Test Information**

Test Method: LM-79-08  
Report Number:  
REPORT IS A COMBINATION OF REPORTS P401518 AND P226775  
Test Lab: INNOVATION CENTER  
Issue Date: 3/30/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-740-U-T4W-HSS-ULG  
Description: ENTRI LED LUMINAIRE WITH UPLIGHT  
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

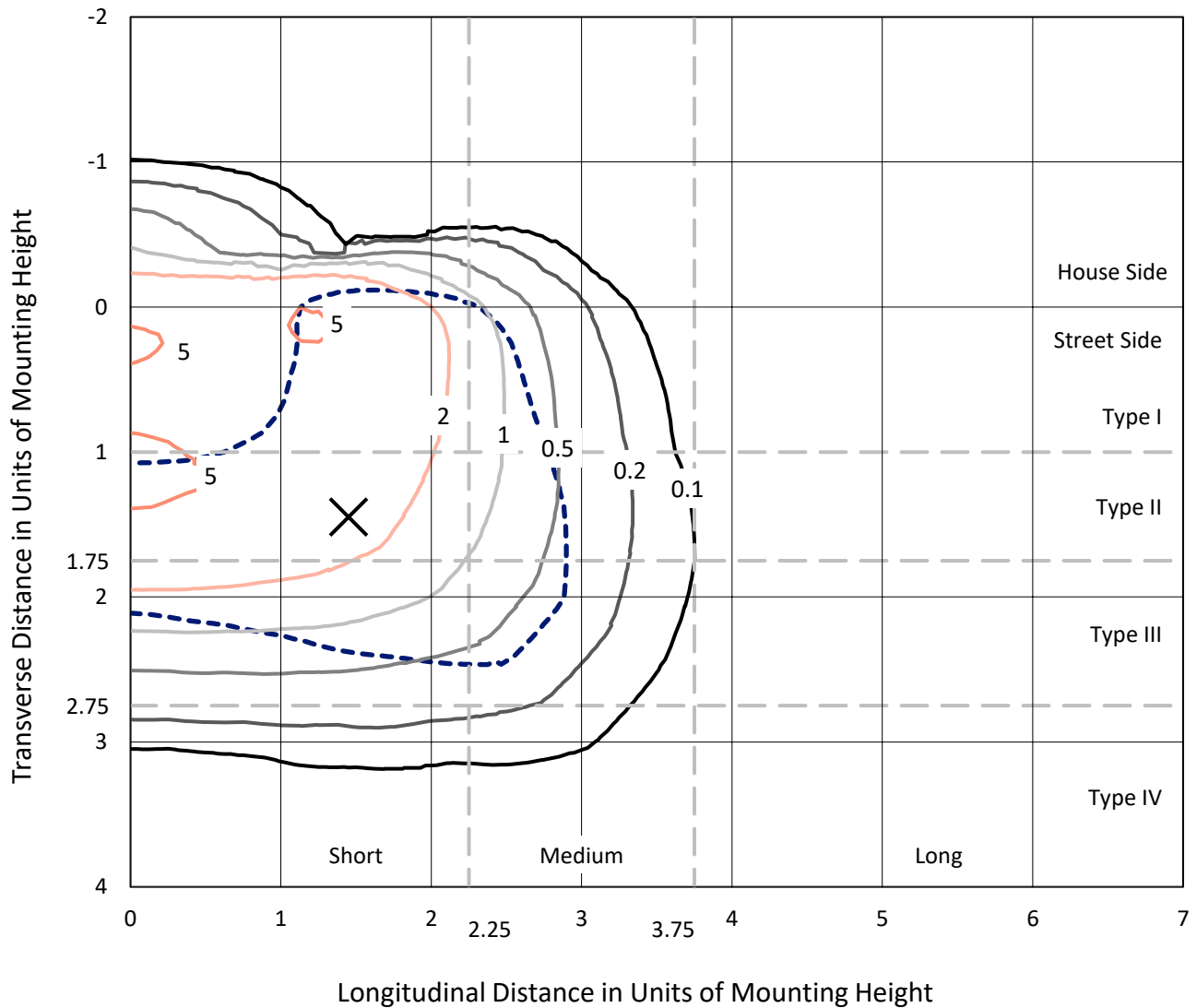
Lumens per Lamp: N/A  
Luminaire Lumens: 5983.9 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')  
IES Classification: Type III - Short  
BUG Rating: B1 - U5 - G1  
  
Input Watts (W): 59.8  
Input Voltage (V): NR  
Input Current (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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

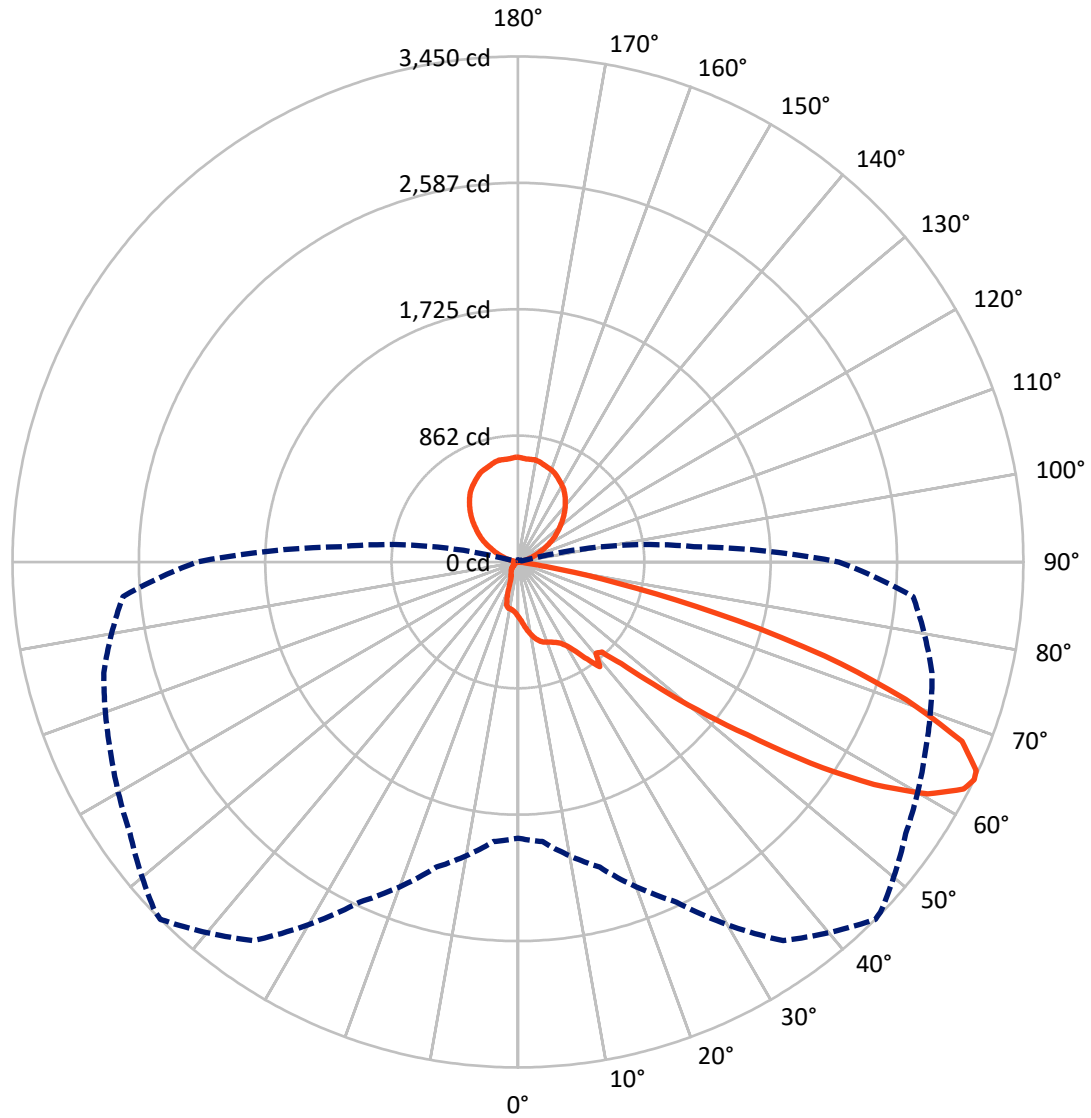
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.6 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 64-Deg Vertical

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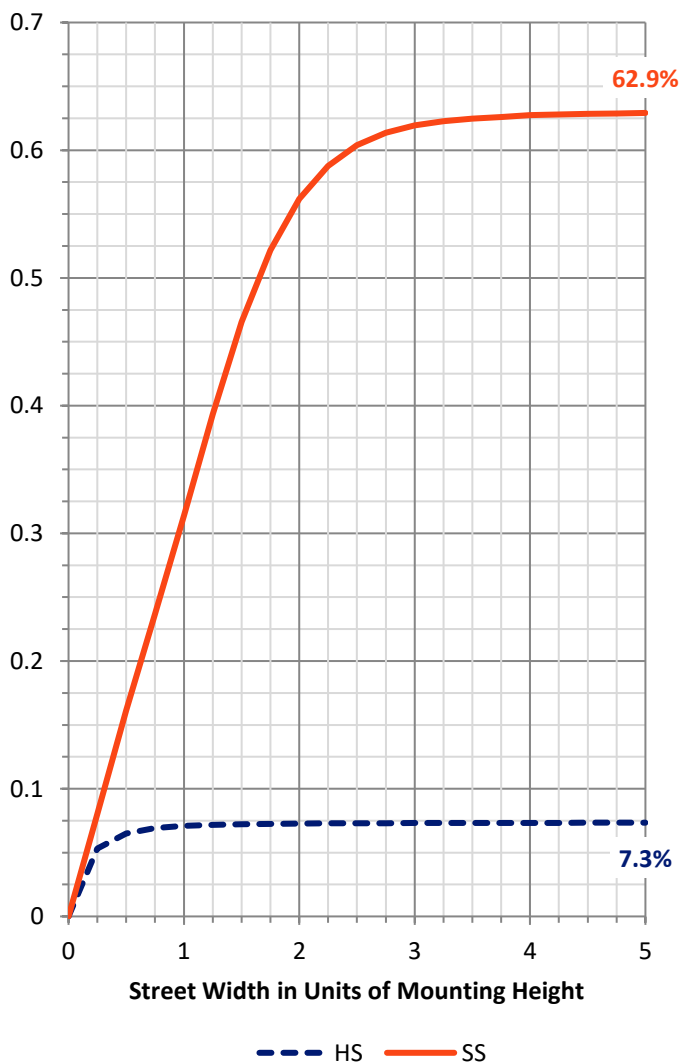
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	444.2	887.0	1331.2
	% Fixture	7.4	14.8	22.2
<b>Street Side</b>	Lumens	3765.8	887.0	4652.7
	% Fixture	62.9	14.8	77.8
<b>Total</b>	Lumens	4210.0	1773.9	5983.9
	% Fixture	70.4	29.6	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.8	0.6
10°-20°	118.0	2.0
20°-30°	192.1	3.2
30°-40°	305.2	5.1
40°-50°	581.3	9.7
50°-60°	1197.9	20.0
60°-70°	1337.9	22.4
70°-80°	422.6	7.1
80°-90°	17.2	0.3
90°-100°	8.4	0.1
100°-110°	58.7	1.0
110°-120°	169.9	2.8
120°-130°	279.4	4.7
130°-140°	344.6	5.8
140°-150°	352.5	5.9
150°-160°	297.0	5.0
160°-170°	195.5	3.3
170°-180°	67.8	1.1
0°-90°	4210.0	70.4
0°-180°	5983.9	100.0

**Coefficient of Utilization**

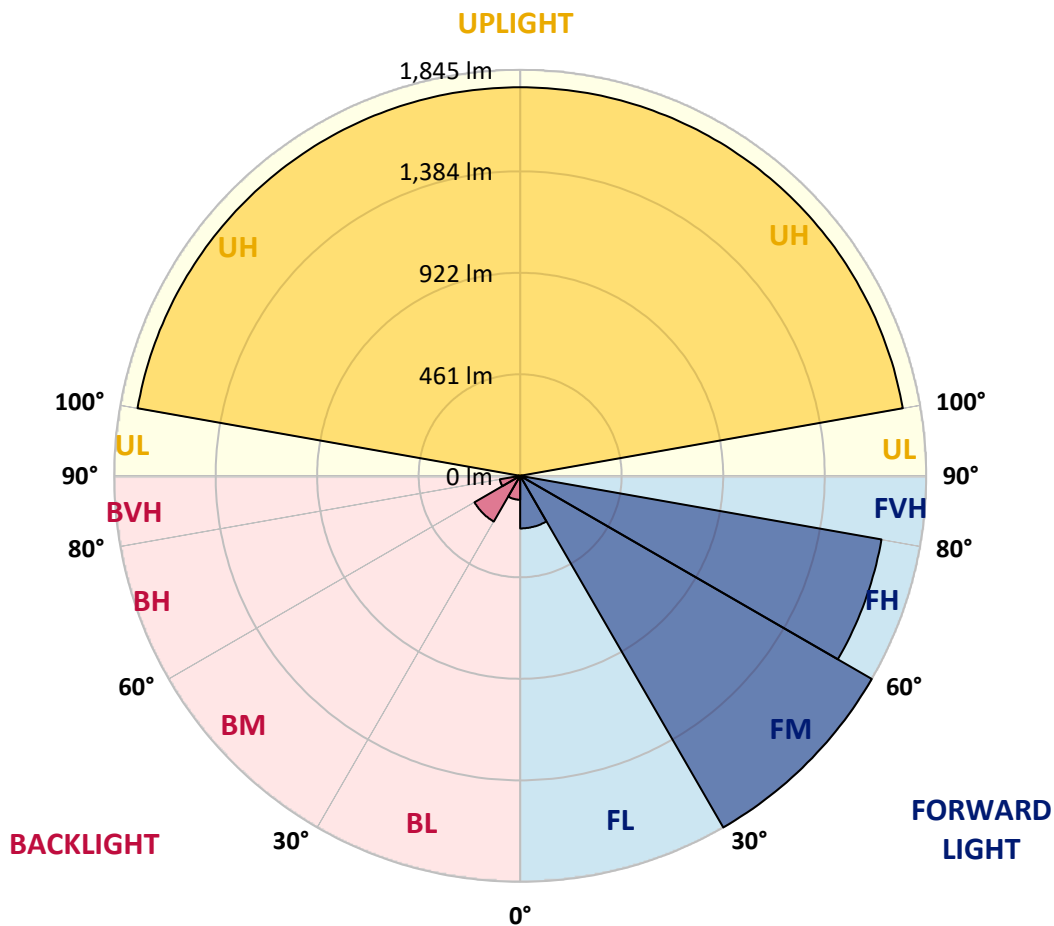


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	239.1	4.0			
FM (30°-60°)	1844.7	30.8			
FH (60°-80°)	1666.8	27.9			G1/1800
FVH (80°-90°)	15.1	0.3			G1/100
BL (0°-30°)	108.8	1.8	B0/110		
BM (30°-60°)	239.7	4.0	B1/1000		
BH (60°-80°)	93.6	1.6	B0/110		G0/110
BVH (80°-90°)	2.0	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	29.5		U5	

**BUG Rating: B1-U5-G1**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	373.2	373.2	373.2	373.2	373.2	373.2	373.2	373.2	373.2	373.2	373.2
2.5°	411.7	413.3	410.9	407.7	404.5	398.8	399.6	392.4	386.8	382.8	376.4
5°	463.8	463.0	458.2	451.0	443.8	433.4	431.7	420.5	408.5	395.6	383.6
7.5°	516.8	514.4	509.6	500.0	486.3	472.7	468.7	452.6	435.0	415.7	394.8
10°	560.1	558.5	552.9	542.5	526.4	505.6	505.6	483.1	459.8	436.6	411.7
12.5°	595.5	593.9	587.4	574.6	555.3	536.9	534.5	514.4	488.7	461.4	430.9
15°	617.1	615.5	608.3	593.9	577.0	560.1	557.7	538.5	515.2	483.9	448.6
17.5°	622.7	621.1	615.5	602.7	589.8	575.4	572.2	555.3	535.3	503.2	467.1
20°	620.3	617.1	613.9	603.5	593.0	583.4	581.8	569.8	552.1	524.8	486.3
22.5°	613.9	610.7	608.3	601.1	595.5	594.7	593.0	585.8	574.6	551.3	515.2
25°	611.5	609.1	606.7	601.9	601.1	609.1	608.3	607.5	602.7	582.6	544.9
27.5°	625.1	624.3	618.7	610.7	614.7	628.4	629.2	633.2	630.0	617.1	588.2
30°	673.3	669.3	656.4	638.8	649.2	666.9	670.1	682.9	683.7	685.3	646.0
32.5°	738.3	731.9	710.2	687.7	694.2	727.1	727.9	747.9	790.5	764.0	677.3
35°	783.2	775.2	742.3	730.3	762.4	814.5	821.8	862.7	865.9	769.6	674.9
37.5°	909.2	897.2	837.0	764.0	795.3	907.6	915.7	908.4	841.0	761.6	709.4
40°	1077.8	1066.5	1012.8	890.0	801.7	818.6	822.6	844.2	857.1	817.7	820.2
42.5°	1296.8	1282.4	1227.0	1077.0	902.0	840.2	848.2	892.4	976.6	995.1	1089.8
45°	1520.7	1512.7	1456.5	1294.4	1085.0	987.9	991.9	1045.7	1196.5	1312.9	1393.1
47.5°	1739.8	1741.4	1693.3	1556.0	1351.4	1243.9	1239.1	1308.9	1499.9	1582.5	1664.4
50°	2048.8	2047.2	1961.3	1876.2	1716.5	1589.0	1580.9	1620.2	1804.0	1834.5	1961.3
52.5°	2400.3	2398.7	2269.5	2229.3	2161.9	1956.5	1978.2	1944.5	2076.9	2131.4	2311.2
55°	2567.2	2552.8	2498.2	2548.7	2629.0	2422.7	2419.5	2291.1	2394.7	2441.2	2608.9
57.5°	2550.3	2556.0	2608.1	2775.8	3039.1	2866.5	2871.3	2633.0	2693.2	2722.1	2844.9
60°	2454.8	2458.9	2580.0	2859.3	3243.7	3214.0	3197.2	2952.4	2913.1	2901.0	2959.6
62.5°	2182.0	2183.6	2380.2	2738.9	3242.1	3414.6	3398.6	3177.1	3054.3	2977.3	2870.5
64°	1885.1	1915.6	2156.3	2561.6	3154.6	3449.9	3441.1	3231.7	3067.2	2925.9	2706.8
65°	1641.1	1686.9	1978.2	2404.3	3055.9	3437.9	3427.5	3222.0	3049.5	2829.6	2537.5
67.5°	1119.5	1143.6	1405.2	1892.3	2679.5	3268.6	3265.4	3098.5	2857.7	2444.4	1991.0
70°	660.5	678.1	871.5	1320.9	2059.2	2807.9	2850.5	2790.3	2372.2	1755.9	1268.0
72.5°	205.4	215.9	384.4	733.5	1349.8	2187.6	2243.0	2199.7	1727.0	1097.0	703.0
75°	77.0	80.3	126.8	318.6	671.7	1398.8	1415.6	1466.2	1052.1	579.4	307.4
77.5°	42.5	43.3	62.6	119.6	295.3	686.9	703.0	696.6	559.3	273.7	97.9
80°	20.9	21.7	30.5	53.0	114.8	194.2	230.3	304.1	197.4	134.8	31.3
82.5°	7.2	6.4	13.6	24.1	38.5	52.2	58.6	84.3	82.7	73.8	11.2
85°	0.0	0.0	0.8	0.8	0.8	1.6	1.6	10.4	20.9	24.1	3.2
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	6.2	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	9.5	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	22.3	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	41.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	65.3	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	90.7	97.2	96.2	92.1	89.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	117.2	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	146.8	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	178.5	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	210.3	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	248.9	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	283.6	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	317.4	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	348.3	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	381.0	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	414.9	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	447.6	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	479.2	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	508.7	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	537.2	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	564.1	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	588.7	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	607.0	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.1	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	642.2	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	659.7	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.3	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	678.6	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.3	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	700.0	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	706.4	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.7	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	710.9	709.9	715.0	717.1	714.0
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1





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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	373.2	373.2	373.2	373.2	373.2	373.2	373.2	373.2	373.2	373.2	373.2
2.5°	373.2	371.6	365.9	360.3	356.3	351.5	350.7	347.5	346.7	346.7	346.7
5°	377.2	372.4	361.9	353.1	345.1	337.9	334.6	331.4	329.0	328.2	328.2
7.5°	386.0	378.8	361.9	349.1	337.1	328.2	323.4	320.2	317.8	317.8	317.8
10°	398.8	387.6	366.7	349.1	334.6	323.4	316.2	311.4	308.2	307.4	308.2
12.5°	414.9	400.4	374.8	353.1	336.2	321.8	306.6	278.5	260.0	249.6	248.0
15°	430.1	413.3	383.6	358.7	338.7	306.6	251.2	207.8	179.0	170.1	168.5
17.5°	447.0	429.3	395.6	366.7	329.8	247.2	179.0	142.8	137.2	138.8	138.8
20°	467.9	447.0	408.5	374.8	284.1	175.7	130.8	126.0	127.6	130.8	130.8
22.5°	491.9	469.5	426.1	370.0	216.7	128.4	119.6	120.4	122.0	125.2	125.2
25°	523.2	500.0	445.4	333.8	150.9	112.4	113.2	114.0	116.4	119.6	120.4
27.5°	569.8	541.7	468.7	280.1	114.0	104.3	105.1	107.5	109.9	114.0	114.0
30°	619.5	585.0	489.5	215.9	99.5	95.5	96.3	98.7	102.7	105.9	107.5
32.5°	641.2	610.7	493.5	147.7	92.3	88.3	86.7	89.1	92.3	95.5	96.3
35°	653.2	640.4	474.3	106.7	86.7	81.9	78.6	77.8	78.6	81.1	81.1
37.5°	712.6	703.8	435.8	91.5	81.1	76.2	71.4	67.4	65.8	65.0	65.8
40°	826.6	807.3	385.2	84.3	76.2	70.6	64.2	57.8	52.2	49.8	49.8
42.5°	1077.8	980.7	313.0	79.4	71.4	65.0	55.4	46.5	40.1	38.5	38.5
45°	1348.2	1195.7	235.1	75.4	66.6	58.6	46.5	36.9	31.3	29.7	29.7
47.5°	1608.2	1354.6	164.5	70.6	61.0	51.4	38.5	29.7	25.7	24.9	24.9
50°	1881.1	1492.7	114.8	65.0	55.4	44.1	31.3	24.1	21.7	21.7	21.7
52.5°	2146.7	1594.6	84.3	59.4	48.2	36.9	26.5	21.7	20.1	20.1	20.1
55°	2347.3	1633.9	64.2	52.2	40.9	31.3	24.1	20.9	19.3	18.5	18.5
57.5°	2481.3	1601.0	52.2	43.3	34.5	27.3	21.7	19.3	17.7	16.9	16.9
60°	2478.1	1491.8	41.7	35.3	28.1	23.3	20.1	17.7	16.1	15.2	15.2
62.5°	2332.9	1314.5	32.9	28.1	23.3	20.1	17.7	16.1	14.4	13.6	12.8
64°	2190.8	1204.6	28.1	24.1	20.9	18.5	16.1	14.4	12.8	11.2	11.2
65°	2036.7	1100.2	25.7	21.7	18.5	16.9	15.2	13.6	11.2	9.6	9.6
67.5°	1548.8	814.5	20.9	16.9	14.4	13.6	12.0	10.4	8.0	6.4	6.4
70°	1005.5	527.2	17.7	13.6	12.0	12.0	11.2	8.8	6.4	5.6	4.8
72.5°	515.2	262.4	14.4	11.2	10.4	10.4	9.6	7.2	5.6	4.8	4.0
75°	218.3	106.7	12.0	9.6	8.8	8.0	7.2	6.4	4.8	4.0	4.0
77.5°	76.2	40.1	11.2	9.6	7.2	6.4	6.4	6.4	6.4	5.6	4.8
80°	25.7	15.2	7.2	7.2	8.0	8.8	8.8	8.0	8.8	7.2	5.6
82.5°	10.4	5.6	2.4	3.2	5.6	6.4	7.2	7.2	7.2	5.6	4.8
85°	2.4	1.6	1.6	2.4	2.4	3.2	3.2	4.0	4.0	3.2	3.2
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	2.4	1.6	2.4	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1	5.1	4.1	4.1
95°	7.2	7.2	7.2	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	38.9	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	88.0	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5
112.5°	150.4	150.4	152.4	153.4	151.4	146.3	137.1	123.8	108.4	101.3	101.3
115°	182.1	181.1	183.1	186.2	183.1	178.0	171.9	162.6	150.4	142.2	143.2
117.5°	213.8	212.8	214.8	219.9	215.8	209.7	206.6	201.5	193.3	188.2	188.2
120°	248.6	248.6	250.6	255.7	251.6	248.6	242.4	238.3	231.2	228.1	230.2
122.5°	283.4	282.3	284.4	289.5	285.4	283.4	277.2	273.1	267.0	266.0	269.0
125°	317.1	317.1	317.1	322.2	320.2	317.1	312.0	305.9	302.8	300.7	304.8
127.5°	355.0	352.9	353.9	353.9	352.9	347.8	346.8	340.6	336.6	336.6	337.6
130°	388.7	387.7	389.7	389.7	385.7	380.5	378.5	374.4	370.3	369.3	371.3
132.5°	424.5	423.5	423.5	425.5	420.4	414.3	413.3	410.2	402.0	403.0	405.1
135°	461.4	460.3	457.3	458.3	453.2	447.0	445.0	441.9	435.8	435.8	438.8
137.5°	493.1	492.0	486.9	485.9	483.9	478.7	474.6	470.6	469.5	467.5	470.6
140°	522.7	520.7	515.6	513.5	511.5	508.4	502.3	500.2	498.2	496.1	499.2
142.5°	548.3	546.3	545.2	545.2	539.1	537.0	533.0	529.9	528.9	526.8	529.9
145°	572.9	570.8	573.9	574.9	568.8	563.6	562.6	559.6	556.5	558.5	562.6
147.5°	598.4	596.4	599.4	598.4	593.3	588.2	587.2	587.2	584.1	585.1	588.2
150°	624.0	619.9	616.8	613.8	610.7	606.6	606.6	606.6	606.6	605.6	608.7
152.5°	642.4	637.3	632.2	628.1	625.0	624.0	624.0	623.0	622.0	622.0	625.0
155°	655.7	652.6	650.6	645.5	640.4	642.4	644.5	641.4	639.3	639.3	643.4
157.5°	670.0	664.9	664.9	662.9	658.8	659.8	660.8	658.8	657.8	657.8	660.8
160°	681.3	675.1	676.2	679.2	673.1	670.0	670.0	671.1	674.1	675.1	678.2
162.5°	689.5	683.3	685.4	686.4	682.3	678.2	676.2	680.3	684.4	684.4	688.4
165°	697.7	693.6	695.6	692.5	687.4	688.4	688.4	691.5	691.5	693.6	696.6
167.5°	709.9	703.8	703.8	699.7	693.6	700.7	703.8	701.7	699.7	702.8	705.8
170°	717.1	712.0	709.9	704.8	701.7	706.9	708.9	707.9	707.9	711.0	714.0
172.5°	717.1	712.0	709.9	707.9	704.8	705.8	705.8	708.9	711.0	713.0	715.0
175°	715.0	709.9	712.0	711.0	705.8	705.8	706.9	711.0	713.0	714.0	716.1
177.5°	718.1	714.0	717.1	715.0	709.9	711.0	713.0	715.0	716.1	721.2	723.2
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

(END OF REPORT)