

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: P400933

Luminaire Tested: **ENV-SA1A-735-U-SLL-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400933  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENV-SA1A-735-U-SLL-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 3500K, 350mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1931 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 20.1  
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

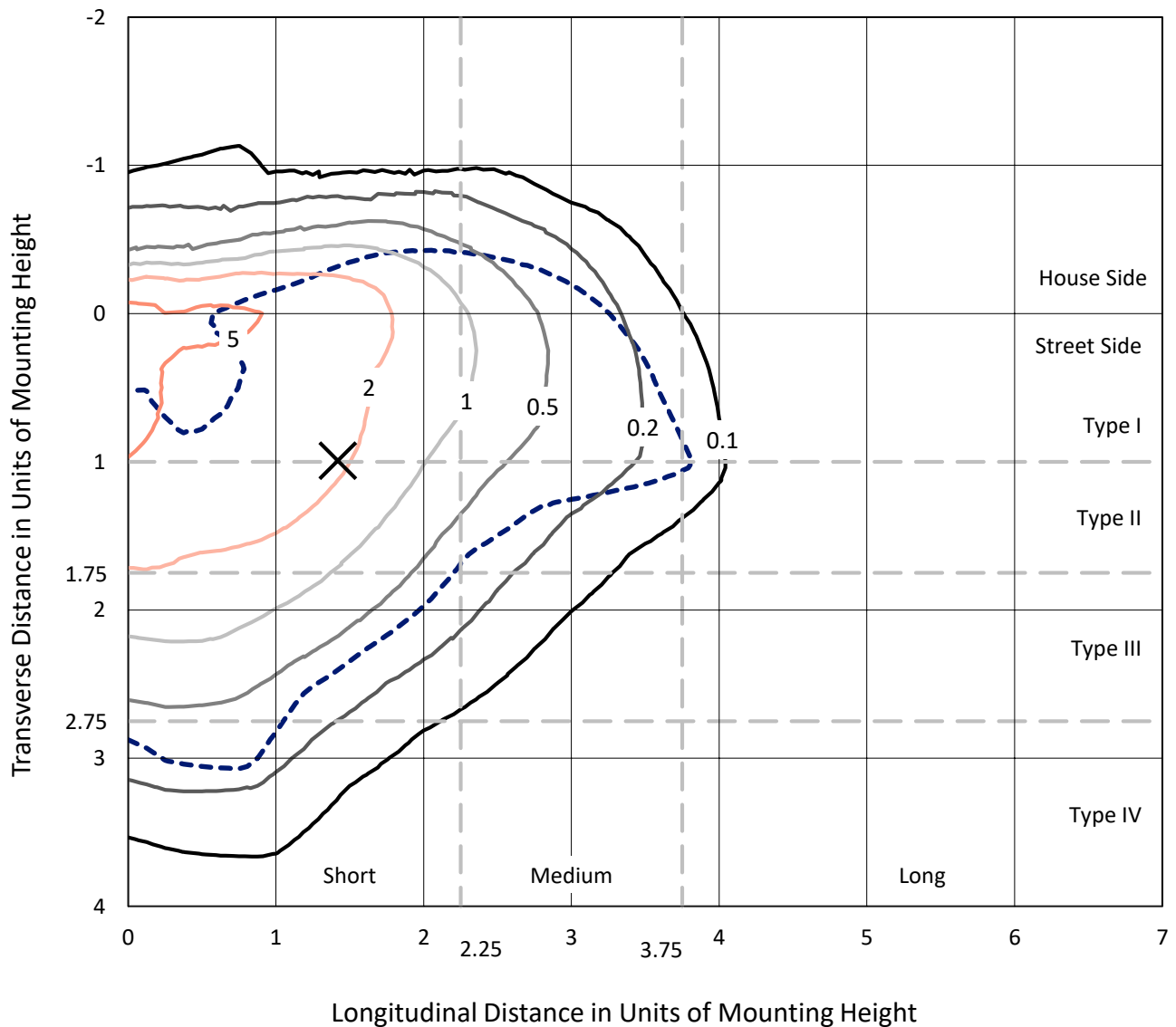


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### Iso-Footcandle Lines of Horizontal Illumination

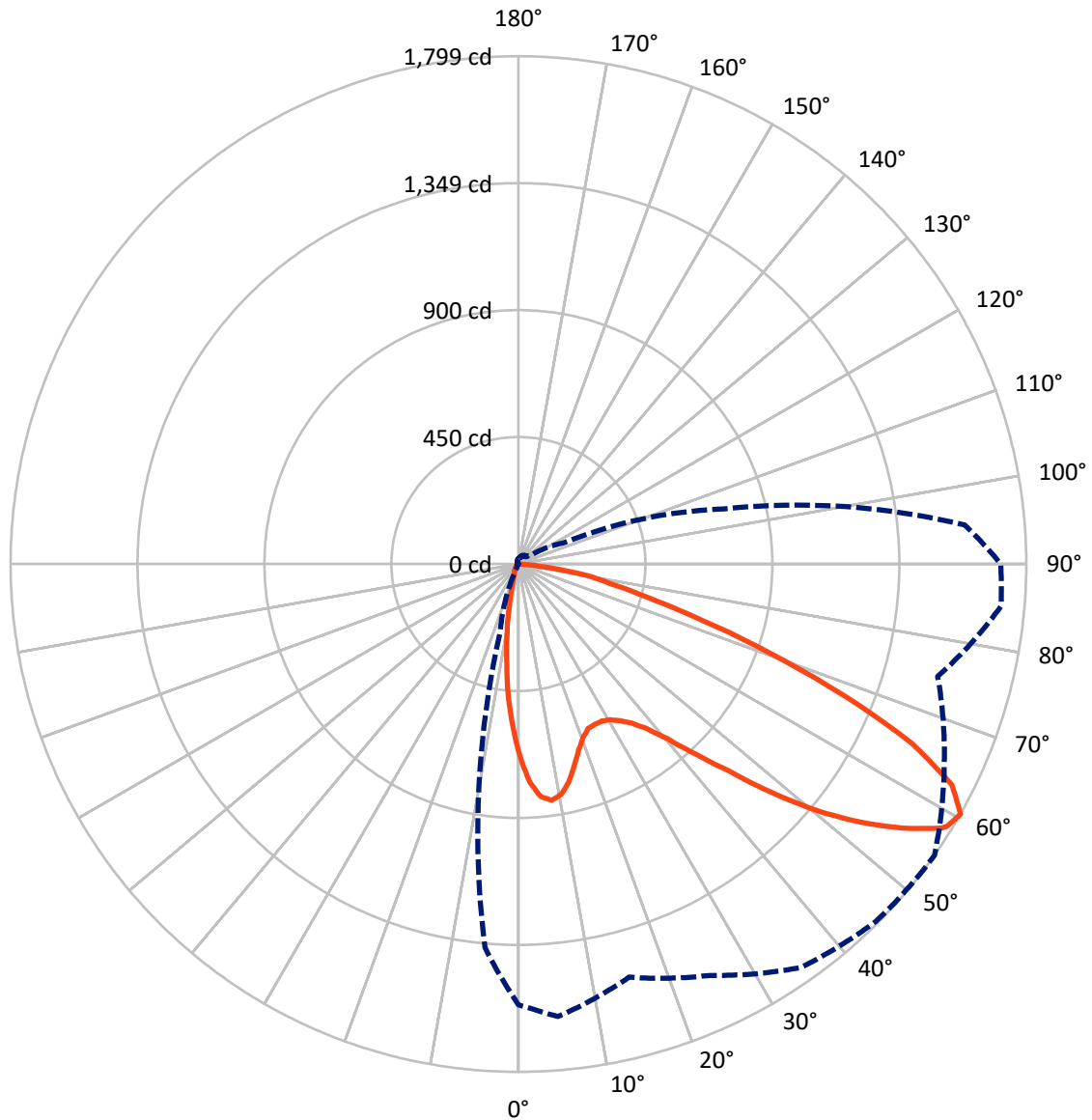
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.1 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral      - - - Horizontal Cone Through 60-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	342.0	0.0	342.0
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	1589.0	0.0	1589.0
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	1931.0	0.0	1931.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.3	2.7
10°-20°	97.6	5.1
20°-30°	139.2	7.2
30°-40°	204.2	10.6
40°-50°	301.1	15.6
50°-60°	446.1	23.1
60°-70°	475.4	24.6
70°-80°	197.2	10.2
80°-90°	18.9	1.0
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°	1931.0	100.0
0°-180°	1931.0	100.0



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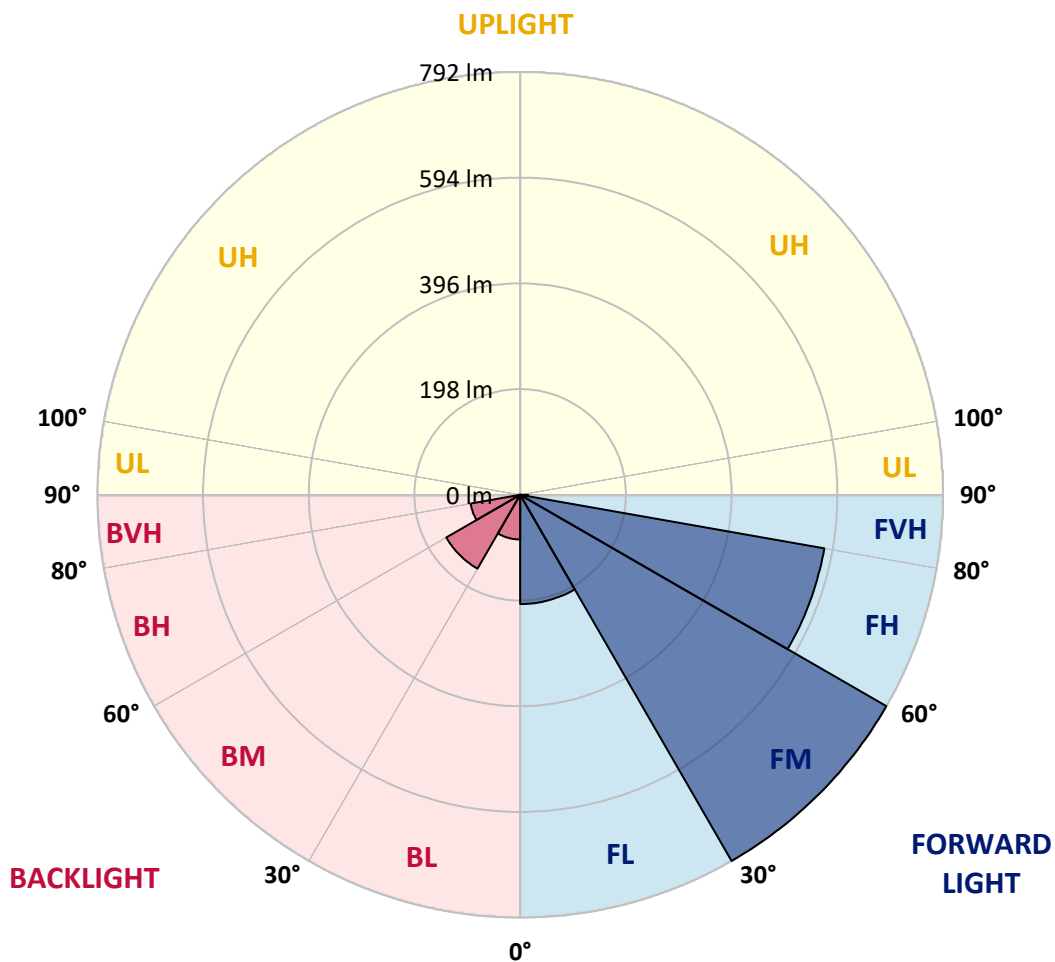
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	204.5	10.6			
FM	(30°-60°)	791.7	41.0			
FH	(60°-80°)	578.3	29.9			G0/660
FVH	(80°-90°)	14.5	0.8			G1/100
BL	(0°-30°)	83.6	4.3	B0/110		
BM	(30°-60°)	159.7	8.3	B0/220		
BH	(60°-80°)	94.3	4.9	B0/110		G0/110
BVH	(80°-90°)	4.4	0.2			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9
2.5°	712.2	711.1	721.4	742.5	755.7	763.7	765.2	773.6	765.2	760.8	745.1
5°	691.4	691.1	710.8	757.1	795.1	823.6	837.5	828.0	813.4	784.5	749.5
7.5°	633.8	633.8	671.0	733.1	796.6	845.9	862.6	845.1	810.4	752.4	689.6
10°	586.7	591.0	626.8	700.9	771.4	825.4	844.0	830.5	785.3	710.1	636.3
12.5°	558.5	561.1	600.9	675.4	741.1	784.9	796.2	792.2	759.3	677.6	599.4
15°	561.1	564.8	610.4	671.4	714.1	731.6	735.6	740.7	727.2	664.4	587.4
17.5°	601.3	603.8	649.8	689.2	687.4	681.9	683.4	691.8	707.9	675.4	611.8
20°	665.5	672.1	718.4	719.2	673.5	648.0	641.4	655.3	698.7	704.2	664.1
22.5°	748.0	750.6	797.7	769.6	675.0	624.6	617.0	632.7	701.7	750.9	736.3
25°	843.7	852.8	878.3	834.9	696.2	621.3	616.2	629.4	712.2	800.6	810.8
27.5°	908.3	915.6	940.0	879.4	715.2	623.2	613.7	629.7	725.0	847.3	890.4
30°	966.0	971.1	980.2	902.8	736.7	632.3	617.0	640.0	732.0	857.2	941.9
32.5°	1020.4	1026.6	1021.1	930.9	760.4	649.5	623.2	661.5	746.9	876.9	986.8
35°	1090.4	1090.8	1072.2	959.0	787.4	669.9	641.4	692.2	776.1	907.6	1035.0
37.5°	1173.7	1174.4	1127.3	987.9	818.1	704.2	684.5	739.6	818.5	943.0	1104.0
40°	1246.3	1249.3	1186.8	1021.1	855.7	771.0	769.2	814.8	872.9	990.1	1178.1
42.5°	1309.5	1317.9	1241.6	1048.8	909.0	873.6	878.0	919.6	938.9	1029.5	1224.1
45°	1373.4	1373.0	1286.5	1076.6	998.1	1005.8	1047.4	1045.5	1013.8	1050.7	1260.2
47.5°	1413.2	1411.3	1313.9	1121.8	1118.2	1191.6	1235.7	1211.7	1096.7	1073.3	1305.5
50°	1428.5	1427.8	1335.4	1179.5	1240.5	1359.9	1423.0	1374.8	1198.1	1111.3	1359.5
52.5°	1471.9	1468.3	1385.1	1245.2	1351.1	1522.0	1574.2	1520.5	1299.3	1179.5	1422.3
55°	1539.8	1540.9	1470.5	1322.3	1439.8	1636.2	1700.1	1652.3	1402.6	1273.3	1508.4
57.5°	1585.5	1588.8	1565.0	1408.1	1534.7	1716.2	1778.2	1764.7	1540.2	1385.4	1609.6
58°	1589.9	1592.4	1580.0	1424.5	1549.0	1725.3	1788.8	1779.3	1570.5	1421.2	1633.7
60°	1561.7	1569.4	1609.2	1515.0	1607.7	1744.6	1790.6	1799.0	1664.3	1537.3	1716.2
62.5°	1485.5	1488.0	1560.3	1616.5	1647.9	1696.8	1701.2	1723.1	1703.0	1673.5	1789.9
65°	1392.0	1392.0	1470.1	1621.3	1543.9	1535.8	1510.3	1532.2	1590.2	1758.9	1784.8
67.5°	1229.5	1230.6	1330.3	1444.2	1279.9	1252.2	1235.7	1243.8	1367.5	1687.7	1685.5
70°	993.7	993.0	1095.6	1169.3	949.9	926.2	945.9	943.3	1110.9	1499.7	1471.6
72.5°	702.8	709.0	814.5	903.2	645.1	556.0	642.9	676.5	835.6	1264.2	1138.6
75°	395.7	404.1	490.3	627.5	407.0	376.0	420.6	468.4	604.2	1006.5	764.8
77.5°	198.6	201.9	251.2	301.9	246.8	286.6	284.0	329.7	414.3	679.0	437.3
80°	114.6	121.2	138.0	155.9	138.0	181.8	211.0	248.2	255.2	351.2	243.9
82.5°	46.0	51.5	64.6	73.4	57.3	54.0	36.9	116.1	153.7	169.8	93.5
85°	0.0	0.0	0.4	0.7	1.1	1.1	1.8	20.4	37.6	8.4	15.3
87.5°	0.0	0.0	0.4	0.4	0.7	1.1	1.5	2.6	3.3	4.0	13.9
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°	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9
2.5°	739.3	735.2	721.7	701.3	688.5	668.8	660.8	642.1	632.7	617.0	617.0
5°	732.0	715.5	681.6	637.4	606.0	573.2	562.6	540.7	525.0	506.3	498.7
7.5°	665.5	642.5	589.6	538.1	488.1	454.9	422.0	399.7	378.6	363.2	365.4
10°	604.5	571.7	513.6	448.3	396.5	361.8	332.2	306.3	284.4	262.8	259.6
12.5°	564.8	527.2	457.8	387.7	349.0	323.4	296.1	267.6	240.6	216.8	207.4
15°	548.0	507.1	429.7	363.6	328.2	295.3	263.6	228.5	197.5	169.0	161.4
17.5°	566.2	517.3	427.1	347.5	298.3	257.0	212.8	174.5	138.0	117.6	111.3
20°	615.9	552.3	435.5	331.5	265.0	211.7	157.7	114.3	93.8	81.4	77.4
22.5°	687.8	610.4	449.8	315.8	231.5	157.7	108.8	82.5	70.5	63.9	62.1
25°	765.9	685.2	476.0	302.6	197.9	117.2	80.7	67.5	60.2	55.5	53.7
27.5°	853.9	759.3	508.2	292.8	166.8	93.8	69.4	59.5	53.7	50.4	48.9
30°	909.0	812.6	532.6	275.3	145.7	85.4	66.1	56.2	50.0	47.5	46.4
32.5°	959.8	854.6	556.0	255.2	129.6	75.6	64.3	59.1	51.8	46.7	44.5
35°	1015.6	897.7	567.3	243.1	119.0	65.7	52.9	46.0	42.0	41.3	40.2
37.5°	1098.8	948.8	574.6	236.6	112.4	59.9	49.3	41.6	36.9	32.5	30.7
40°	1177.7	1001.7	578.3	230.4	109.2	56.2	47.1	39.4	34.3	30.3	28.5
42.5°	1239.4	1049.9	580.5	226.0	103.3	54.0	45.3	38.0	32.5	28.5	26.6
45°	1289.8	1105.8	578.6	224.5	98.6	55.5	44.5	36.9	31.0	27.0	25.2
47.5°	1339.1	1166.4	585.6	222.7	93.8	53.3	44.9	36.5	29.9	25.9	24.1
50°	1403.7	1239.8	610.8	217.6	90.5	50.0	48.6	36.9	29.6	25.2	23.7
52.5°	1487.3	1341.2	656.4	212.1	86.5	47.1	50.7	36.9	28.8	24.5	22.6
55°	1588.8	1455.1	706.8	204.1	79.6	43.4	48.6	36.9	28.1	24.1	21.9
57.5°	1671.6	1556.6	746.6	194.6	66.8	39.1	44.5	35.4	26.3	22.6	20.8
58°	1678.9	1568.3	752.0	192.0	65.3	38.3	43.4	35.0	25.6	22.3	20.4
60°	1708.5	1587.3	754.2	178.2	54.4	36.5	37.6	34.0	24.1	20.8	19.3
62.5°	1698.3	1524.5	707.9	153.7	48.6	33.2	31.4	34.7	22.3	19.0	17.5
65°	1647.5	1401.1	620.2	137.6	48.9	29.6	27.0	30.3	20.4	17.2	15.7
67.5°	1526.7	1213.8	503.8	128.9	51.1	26.3	23.4	22.6	18.3	15.3	14.2
70°	1302.2	994.8	381.9	121.2	54.0	23.4	21.5	20.1	16.8	14.2	12.8
72.5°	959.0	736.7	277.8	113.5	52.6	20.8	20.1	18.3	15.3	12.8	12.0
75°	598.3	427.9	190.2	92.7	47.1	18.3	18.6	17.2	13.9	12.0	11.0
77.5°	349.4	300.4	93.8	69.0	32.5	16.1	16.4	15.7	14.2	11.3	10.6
80°	209.2	186.9	40.2	29.6	17.9	14.2	13.9	14.6	13.5	10.6	9.9
82.5°	90.5	81.0	19.3	16.4	14.6	12.4	12.0	12.4	11.7	8.8	8.4
85°	5.1	13.5	9.1	12.0	11.0	9.1	9.1	9.5	8.4	6.9	6.9
87.5°	4.7	10.2	5.8	7.3	8.0	6.9	7.3	7.3	6.9	6.2	5.8
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°	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9
2.5°	608.6	604.5	592.5	588.1	569.1	573.9	575.3	573.5	574.2	575.7	581.2
5°	504.2	497.6	481.9	471.7	466.2	462.5	445.4	445.7	448.3	438.4	451.2
7.5°	358.1	365.4	366.9	357.4	351.6	339.1	323.4	314.7	299.7	308.1	309.9
10°	256.3	252.6	259.6	256.3	247.1	242.4	225.6	224.2	222.7	221.6	232.2
12.5°	195.3	184.4	176.3	178.2	171.2	159.5	156.6	157.0	158.4	158.4	161.4
15°	154.8	138.0	125.2	117.6	118.6	107.0	103.7	92.7	91.3	88.0	88.7
17.5°	108.4	101.5	93.8	85.1	81.4	70.8	58.0	52.2	47.8	48.6	50.7
20°	74.8	71.9	69.7	65.3	61.7	49.3	41.3	38.7	38.3	39.1	39.8
22.5°	60.2	57.3	55.1	53.7	48.9	39.8	35.4	33.6	33.6	33.6	34.0
25°	51.8	48.9	46.0	46.0	41.6	34.7	31.4	29.9	29.6	29.2	29.9
27.5°	48.2	44.2	41.3	39.4	36.1	30.7	27.7	26.3	25.9	25.9	26.3
30°	44.5	40.5	37.6	35.0	31.4	27.4	24.5	23.4	22.6	22.6	23.0
32.5°	42.3	38.3	34.7	31.4	27.4	24.1	21.5	20.1	19.3	19.7	20.1
35°	37.6	34.3	31.0	27.7	24.1	21.2	18.6	17.2	16.8	16.8	17.2
37.5°	29.6	27.0	26.3	24.5	21.2	18.3	15.7	14.2	13.9	13.9	14.2
40°	26.6	23.4	21.9	21.2	19.3	15.7	12.8	11.3	11.3	11.0	11.7
42.5°	24.5	21.2	18.6	17.9	16.8	13.5	10.2	9.1	8.8	8.8	9.1
45°	23.0	19.3	16.1	14.2	14.2	11.0	8.4	6.9	6.6	6.6	6.9
47.5°	22.3	18.3	14.2	11.7	11.3	9.1	6.6	5.1	4.7	4.7	4.7
50°	21.5	16.8	12.8	9.9	8.8	7.7	5.1	4.0	3.7	3.7	3.7
52.5°	20.4	16.1	11.7	8.8	6.9	5.8	4.0	2.9	2.6	2.2	2.6
55°	19.7	15.0	11.3	8.0	5.8	4.4	2.9	2.2	1.8	1.8	1.8
57.5°	18.6	13.9	10.2	7.7	5.5	3.3	2.2	1.5	1.1	1.1	1.5
58°	18.3	13.9	9.9	7.3	5.1	3.3	2.2	1.5	1.1	1.1	1.5
60°	17.2	12.8	9.5	6.6	4.7	2.9	1.8	1.1	0.7	0.7	1.1
62.5°	16.1	11.7	8.4	5.8	4.0	2.6	1.5	0.7	0.4	0.4	0.4
65°	14.2	10.6	7.3	5.5	3.3	1.8	1.1	0.4	0.0	0.0	0.0
67.5°	12.8	9.9	6.6	4.7	2.9	1.5	0.7	0.0	0.0	0.0	0.0
70°	11.7	9.1	5.8	4.0	2.6	1.1	0.4	0.0	0.0	0.0	0.0
72.5°	11.0	8.4	5.5	3.7	1.8	1.1	0.4	0.0	0.0	0.0	0.0
75°	10.6	8.0	5.5	3.3	1.8	1.1	0.7	0.4	0.0	0.0	0.4
77.5°	10.2	8.0	5.5	3.3	2.2	1.1	1.1	0.7	0.7	0.4	1.1
80°	9.5	7.3	4.7	2.9	1.8	1.5	1.1	0.7	0.0	0.0	0.0
82.5°	8.0	5.8	4.0	2.9	1.8	1.1	0.4	0.0	0.0	0.0	0.0
85°	6.6	4.7	3.3	1.8	1.1	0.4	0.0	0.0	0.0	0.0	0.0
87.5°	5.8	3.7	2.6	1.5	0.7	0.4	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°	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9	681.9
2.5°	585.9	602.7	609.7	633.0	643.2	664.4	682.7	698.4	706.0	712.2
5°	454.5	470.6	487.7	522.4	552.3	584.5	624.6	666.2	678.3	691.4
7.5°	317.2	341.0	369.8	400.8	443.6	492.1	549.8	601.3	627.2	633.8
10°	246.4	274.5	305.2	335.9	371.3	423.1	481.2	547.6	575.3	586.7
12.5°	185.1	222.7	259.2	295.3	326.0	370.9	434.1	513.3	543.9	558.5
15°	111.3	153.7	198.6	247.1	289.9	342.4	413.6	506.0	544.7	561.1
17.5°	55.5	75.9	117.2	190.2	253.4	318.7	413.3	532.3	580.1	601.3
20°	41.3	46.7	62.4	118.6	210.6	299.0	417.6	577.2	647.6	665.5
22.5°	35.4	39.4	44.9	69.4	157.7	280.7	433.0	636.7	724.3	748.0
25°	31.0	34.3	38.7	47.8	108.1	259.2	461.8	720.6	811.2	843.7
27.5°	27.4	30.3	34.0	40.2	72.3	218.7	478.2	791.1	881.3	908.3
30°	24.1	26.3	29.9	34.3	53.3	169.0	493.6	853.2	944.8	966.0
32.5°	21.2	23.0	25.9	29.2	40.5	128.1	494.3	906.5	1000.3	1020.4
35°	17.9	20.1	22.3	25.2	32.1	100.0	479.3	959.4	1066.0	1090.4
37.5°	15.0	16.8	19.3	21.9	29.2	77.4	448.3	1021.5	1145.9	1173.7
40°	12.8	14.6	16.8	19.7	25.9	56.2	398.7	1077.7	1220.8	1246.3
42.5°	10.2	12.0	14.6	19.3	21.5	40.5	348.6	1131.7	1285.8	1309.5
45°	8.0	10.2	13.5	18.6	17.9	28.5	305.6	1179.5	1341.6	1373.4
47.5°	5.8	8.4	13.5	16.8	14.6	20.4	283.7	1225.5	1391.6	1413.2
50°	4.4	6.9	14.6	14.2	12.4	17.5	286.9	1276.6	1414.6	1428.5
52.5°	3.3	5.8	11.3	10.2	10.6	15.3	299.7	1344.2	1462.1	1471.9
55°	2.9	4.4	6.9	7.7	9.5	14.6	296.4	1408.1	1522.7	1539.8
57.5°	2.6	3.7	5.5	6.2	8.4	13.9	277.8	1436.2	1561.7	1585.5
58°	2.2	3.7	5.1	6.2	8.4	13.5	273.1	1428.5	1559.9	1589.9
60°	1.8	3.3	4.7	5.5	7.3	12.0	250.1	1363.5	1519.8	1561.7
62.5°	1.5	2.2	3.7	4.0	5.8	9.9	205.9	1258.4	1433.6	1485.5
65°	0.7	1.5	2.2	2.9	4.0	7.3	146.4	1133.9	1341.2	1392.0
67.5°	0.0	0.7	1.5	1.8	2.6	5.5	84.3	962.3	1189.4	1229.5
70°	0.0	0.4	0.7	1.1	1.5	3.7	44.5	706.4	921.4	993.7
72.5°	0.4	0.4	0.4	0.0	0.7	2.9	19.7	419.1	628.3	702.8
75°	0.4	0.4	0.0	0.0	0.0	1.5	8.4	220.9	360.3	395.7
77.5°	1.5	0.7	0.0	0.0	0.0	0.4	4.0	119.0	186.9	198.6
80°	0.4	0.0	0.0	0.0	0.0	0.0	1.5	39.8	112.1	114.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	48.2	46.0
85°	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
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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