

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: P401456

Luminaire Tested: **ENT-SA1D-730-U-SLL**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401456  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-730-U-SLL  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4547 lumens  
Efficiency: N/A  
Efficacy: 105.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G1

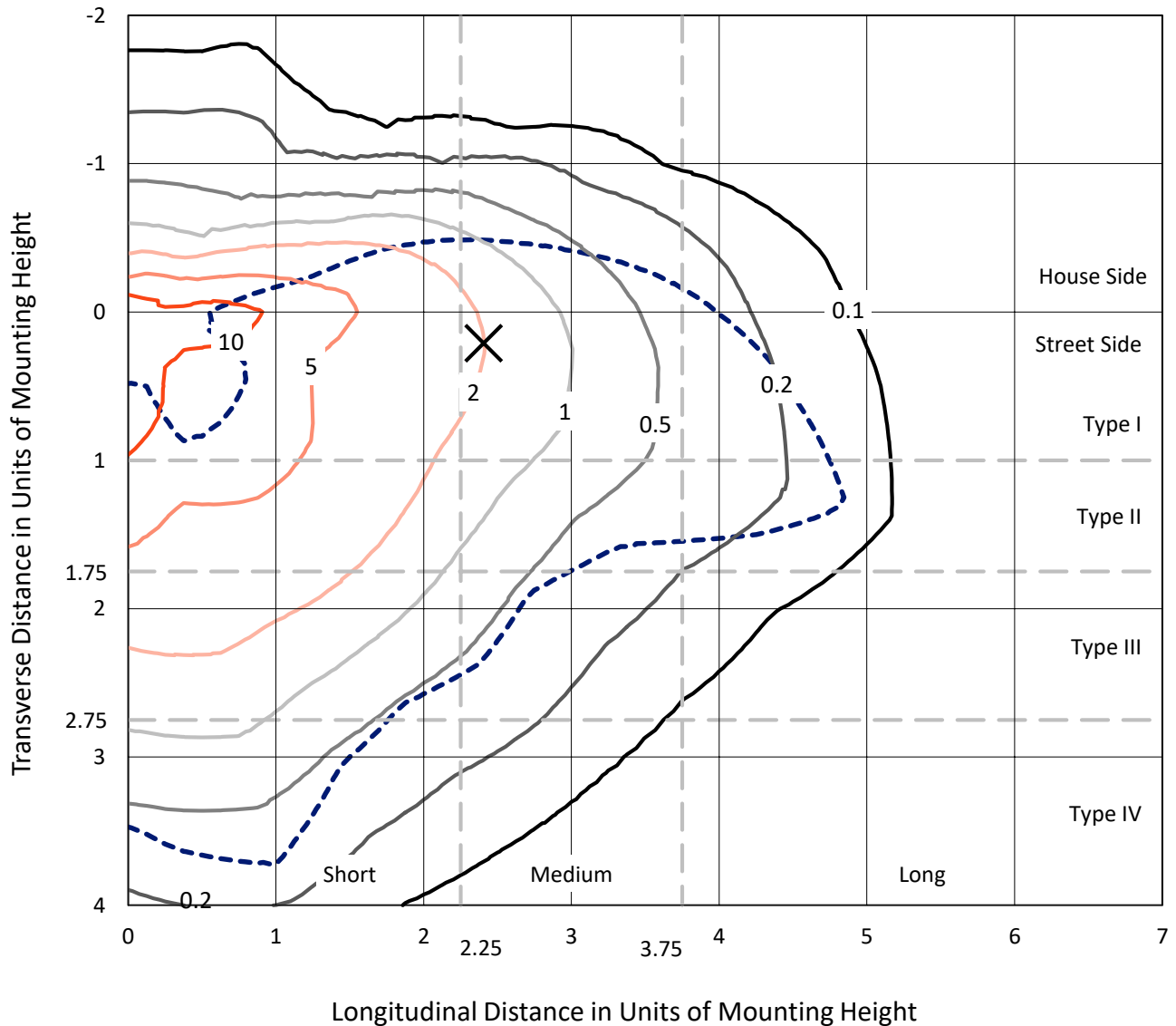
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

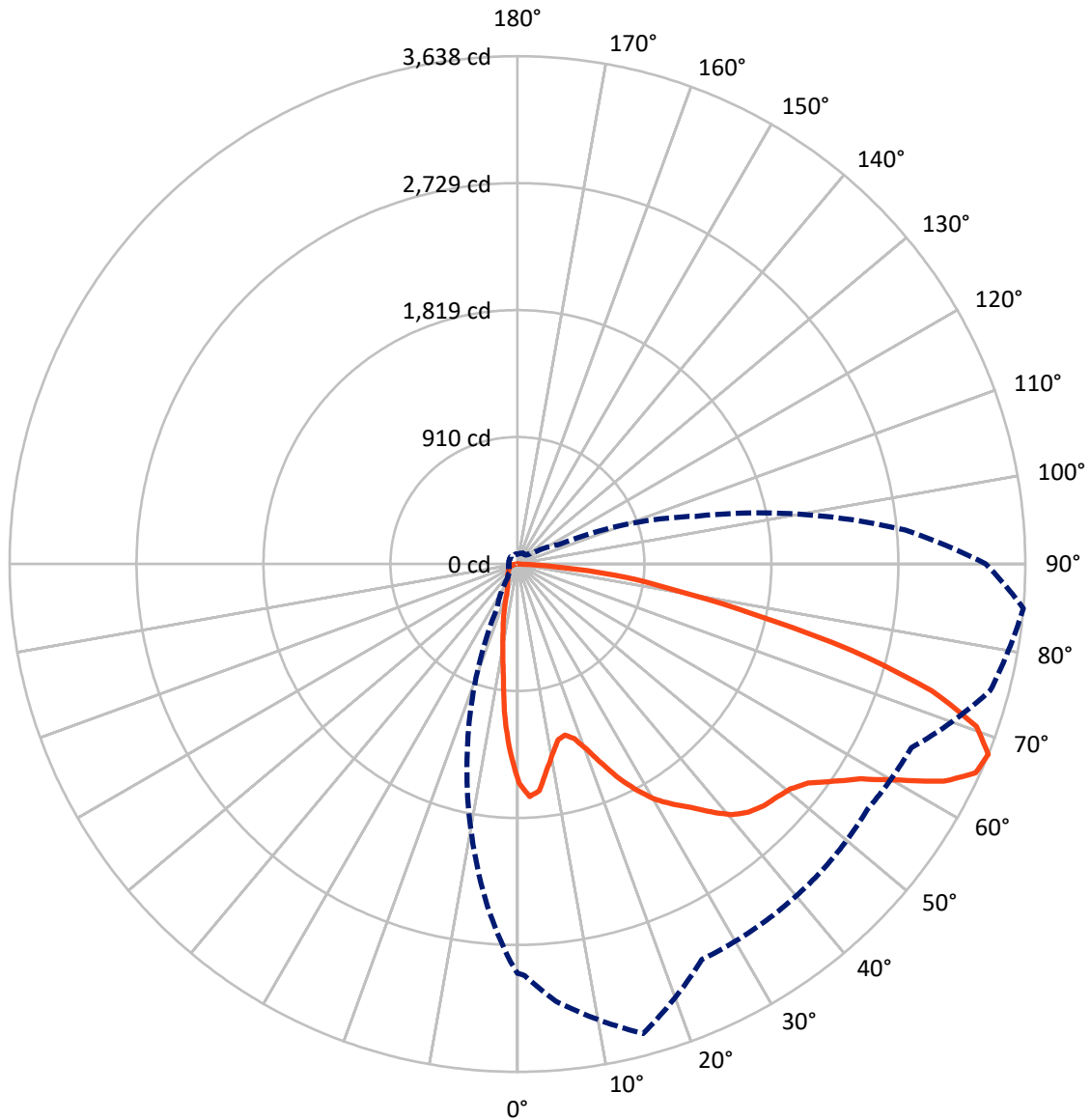
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.8 fc  
 Type III - Medium - Non-Cutoff

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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
<b>House Side</b>	Lumens	916.1	0.0	916.1
	% Fixture	20.1	0.0	20.1
<b>Street Side</b>	Lumens	3630.9	0.0	3630.9
	% Fixture	79.9	0.0	79.9
<b>Total</b>	Lumens	4547.0	0.0	4547.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.4	2.6
10°-20°	235.6	5.2
20°-30°	329.1	7.2
30°-40°	463.9	10.2
40°-50°	642.9	14.1
50°-60°	903.3	19.9
60°-70°	1104.3	24.3
70°-80°	649.0	14.3
80°-90°	99.4	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°	4547.0	100.0
0°-180°	4547.0	100.0



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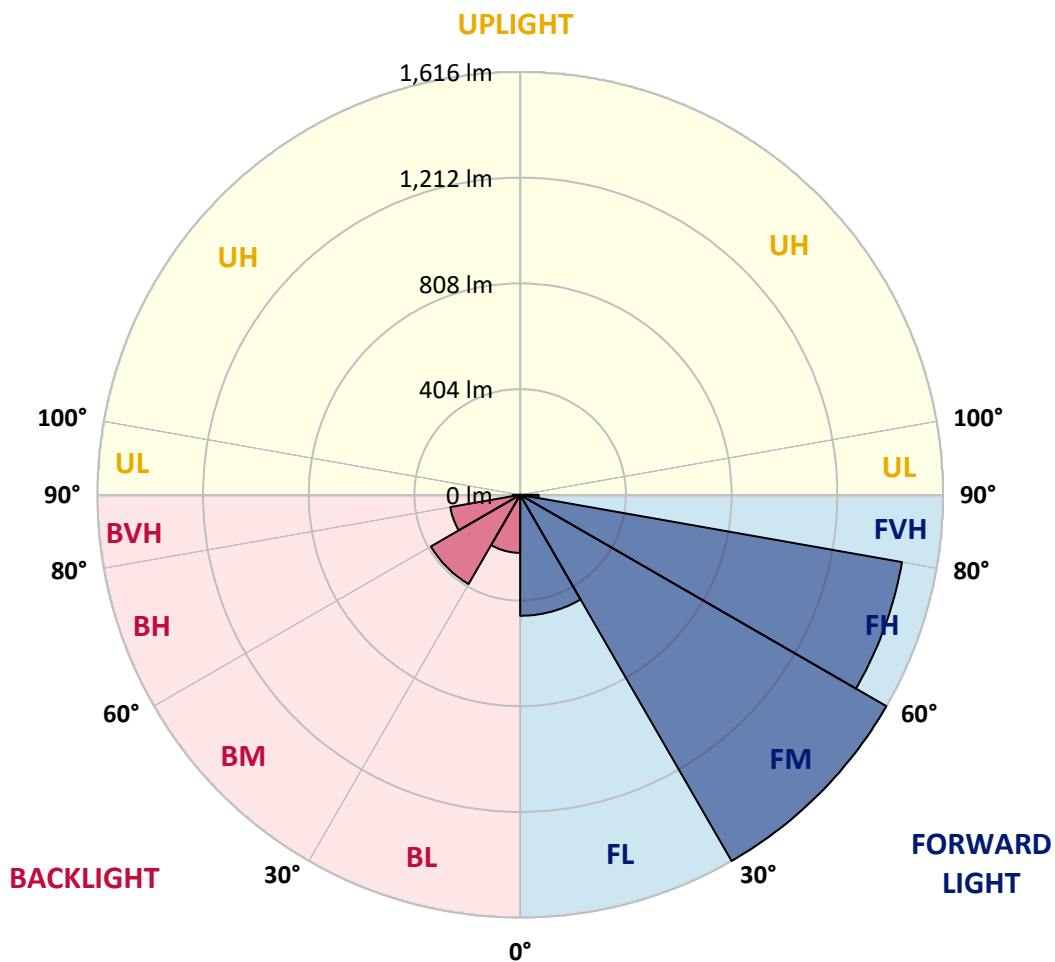
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	462.2	10.2			
FM	(30°-60°)	1616.3	35.5			
FH	(60°-80°)	1482.0	32.6			G1/1800
FVH	(80°-90°)	70.3	1.5			G1/100
BL	(0°-30°)	221.9	4.9	B1/500		
BM	(30°-60°)	393.8	8.7	B1/1000		
BH	(60°-80°)	271.4	6.0	B1/500		G1/500
BVH	(80°-90°)	29.0	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9
2.5°	1614.0	1606.7	1631.6	1668.1	1693.0	1710.5	1716.4	1715.6	1710.5	1696.6	1667.4
5°	1542.4	1535.8	1586.3	1667.4	1738.3	1789.5	1804.1	1783.6	1758.0	1703.9	1632.3
7.5°	1406.4	1416.7	1481.0	1595.0	1709.1	1790.2	1809.9	1777.8	1725.1	1614.8	1494.1
10°	1303.4	1308.5	1380.8	1518.3	1639.6	1722.9	1757.3	1728.8	1660.1	1520.5	1380.8
12.5°	1239.8	1244.9	1315.1	1442.2	1571.6	1636.7	1646.9	1646.2	1589.2	1453.9	1292.4
15°	1248.5	1255.1	1325.3	1430.6	1503.7	1532.2	1532.9	1540.9	1524.1	1421.0	1271.2
17.5°	1333.3	1333.3	1400.6	1464.2	1447.4	1426.9	1442.2	1456.9	1486.1	1440.8	1314.3
20°	1467.1	1472.9	1535.1	1524.1	1421.8	1370.6	1352.3	1377.9	1468.6	1500.0	1415.9
22.5°	1611.8	1627.2	1692.2	1611.8	1417.4	1318.0	1297.5	1325.3	1470.8	1593.6	1555.6
25°	1771.9	1790.9	1834.8	1714.2	1430.6	1288.7	1274.9	1301.2	1476.6	1679.8	1706.1
27.5°	1918.1	1919.6	1962.7	1800.4	1464.9	1291.7	1268.3	1302.6	1492.7	1747.8	1839.2
30°	2021.9	2021.9	2040.9	1844.3	1507.3	1309.9	1274.1	1324.6	1515.3	1785.1	1959.8
32.5°	2117.0	2122.1	2112.6	1890.3	1547.5	1336.3	1288.0	1368.4	1551.2	1815.8	2052.6
35°	2237.6	2236.8	2194.4	1926.9	1584.8	1364.8	1322.4	1424.0	1603.1	1861.1	2141.1
37.5°	2386.7	2379.4	2289.5	1959.8	1630.1	1413.7	1387.4	1500.0	1672.5	1914.5	2252.9
40°	2521.9	2510.2	2376.5	1990.5	1665.9	1508.8	1493.4	1594.3	1760.2	1981.0	2361.8
42.5°	2627.2	2609.6	2450.3	2012.4	1720.0	1657.9	1671.0	1763.9	1848.7	2040.2	2429.8
45°	2715.6	2697.4	2505.8	2023.4	1850.9	1870.6	1896.2	1973.7	1943.0	2056.3	2471.5
47.5°	2779.2	2749.3	2530.0	2055.6	2027.8	2119.1	2198.1	2203.2	2076.0	2055.6	2497.1
50°	2816.5	2783.6	2552.6	2135.2	2233.2	2401.3	2485.4	2445.9	2214.2	2068.7	2533.6
52.5°	2891.8	2857.4	2646.9	2264.6	2443.7	2687.1	2732.4	2668.9	2357.5	2136.7	2606.7
55°	3081.1	3065.8	2829.7	2438.6	2650.6	2918.1	2938.6	2875.0	2507.3	2254.4	2746.3
57.5°	3295.3	3261.7	3076.7	2657.2	2848.7	3098.7	3131.6	3043.9	2664.5	2419.6	2902.0
60°	3355.3	3348.7	3285.8	2912.3	3053.4	3291.7	3293.9	3182.0	2847.9	2616.2	3139.6
62.5°	3267.5	3288.7	3372.8	3148.4	3225.1	3421.0	3402.8	3286.5	3040.2	2929.1	3428.4
65°	3114.8	3144.7	3313.6	3371.3	3264.6	3395.5	3356.7	3282.9	3161.5	3266.1	3607.4
67.5°	2931.3	2947.4	3144.0	3482.4	3126.5	3114.0	3095.8	3062.1	3113.3	3505.8	3638.1
70°	2740.5	2754.4	2935.7	3329.7	2712.0	2569.4	2554.1	2524.8	2724.4	3502.9	3487.6
72.5°	2309.9	2301.2	2468.6	2779.2	2070.9	1877.2	2007.3	1943.7	2203.9	3146.9	3106.7
75°	1434.9	1483.2	1693.0	1948.8	1418.9	1285.8	1465.6	1449.6	1789.5	2709.8	2473.7
77.5°	874.3	883.8	1002.2	1214.9	854.5	891.1	942.2	1041.7	1326.8	2196.6	1724.4
80°	457.6	425.4	512.4	666.7	507.3	598.0	690.8	800.4	842.1	1432.0	1152.8
82.5°	132.3	131.6	173.2	279.2	240.5	293.9	348.7	502.9	551.9	851.6	789.5
85°	0.7	0.7	0.7	1.5	2.2	3.7	15.4	129.4	171.1	394.7	324.6
87.5°	0.0	0.0	0.7	1.5	1.5	2.9	4.4	5.8	7.3	8.8	32.2
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°	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9
2.5°	1657.9	1646.9	1623.5	1592.1	1570.2	1532.2	1524.1	1500.0	1475.9	1456.1	1456.9
5°	1597.9	1560.7	1503.7	1437.9	1375.0	1318.7	1307.7	1274.9	1265.3	1255.8	1229.5
7.5°	1440.8	1396.9	1317.2	1220.0	1141.1	1087.7	1030.7	996.3	965.6	930.6	939.3
10°	1320.2	1257.3	1147.7	1033.6	934.9	863.3	800.4	768.3	723.7	691.5	687.1
12.5°	1227.3	1159.4	1027.8	894.0	801.2	759.5	719.3	668.9	619.2	576.8	554.8
15°	1196.6	1119.9	967.1	834.1	761.0	710.5	654.2	596.5	535.8	490.5	473.0
17.5°	1232.5	1141.8	966.4	808.5	717.1	643.3	573.1	508.0	436.4	391.1	377.2
20°	1331.1	1217.8	986.8	784.4	663.7	563.6	464.9	394.7	321.6	289.5	274.9
22.5°	1468.6	1320.9	1018.3	755.1	604.5	466.4	355.3	266.8	231.0	214.9	211.3
25°	1609.6	1451.8	1062.9	730.3	539.5	371.3	255.1	213.4	196.6	189.3	189.3
27.5°	1764.6	1582.6	1111.1	700.3	472.2	276.3	207.6	187.9	179.1	174.7	174.0
30°	1890.3	1689.3	1165.9	665.2	411.5	226.6	184.2	171.1	163.0	160.8	160.8
32.5°	1981.0	1769.0	1223.7	630.1	356.0	204.7	171.1	159.4	150.6	149.1	149.1
35°	2087.0	1845.0	1250.0	610.4	322.4	190.8	161.5	149.9	141.8	138.2	138.2
37.5°	2214.2	1935.7	1264.6	591.4	307.7	177.6	155.0	141.8	133.8	129.4	129.4
40°	2375.7	2038.7	1280.0	572.4	299.0	166.7	147.7	134.5	127.9	122.8	122.8
42.5°	2491.2	2133.8	1291.7	556.3	283.6	161.5	141.8	129.4	121.3	117.0	116.2
45°	2551.9	2222.2	1296.8	546.8	266.1	165.9	137.4	125.0	115.5	111.1	110.4
47.5°	2592.8	2295.3	1303.4	539.5	252.2	157.9	136.7	120.6	111.1	105.3	105.3
50°	2657.9	2391.8	1320.2	525.6	244.2	147.7	147.7	118.4	106.0	100.9	100.1
52.5°	2774.1	2530.0	1365.5	510.2	235.4	137.4	152.0	119.2	102.3	96.5	95.0
55°	2949.6	2750.0	1440.8	488.3	223.0	125.0	141.8	119.9	98.7	93.6	91.4
57.5°	3177.6	3016.1	1528.5	470.8	201.8	114.8	129.4	116.2	94.3	89.9	88.5
60°	3331.1	3193.7	1584.1	448.1	171.8	108.2	111.1	112.6	89.9	84.8	84.1
62.5°	3413.7	3196.6	1584.8	416.7	144.0	102.3	99.4	114.8	86.3	79.7	78.9
65°	3419.6	3040.9	1505.1	376.5	134.5	95.8	91.4	101.6	82.6	76.0	75.3
67.5°	3356.0	2787.3	1323.1	330.4	138.2	90.6	84.8	85.5	78.2	72.4	71.6
70°	3127.9	2459.1	1061.4	293.9	138.9	84.1	79.7	77.5	73.8	68.7	67.3
72.5°	2698.8	2054.8	804.1	282.2	141.1	78.9	73.8	71.6	68.7	64.3	62.9
75°	2036.5	1603.1	603.8	263.2	142.5	73.1	67.3	65.8	62.9	58.5	57.7
77.5°	1407.2	1188.6	419.6	222.2	127.2	66.5	60.7	59.2	57.0	52.6	51.9
80°	950.3	815.1	257.3	166.7	96.5	58.5	52.6	52.6	50.4	46.1	46.1
82.5°	661.5	608.9	148.4	108.9	70.2	48.2	46.1	46.1	43.9	39.5	38.7
85°	276.3	368.4	66.5	59.2	49.0	38.0	38.0	38.7	36.5	32.9	32.2
87.5°	9.5	39.5	26.3	27.8	29.2	26.3	29.2	29.2	28.5	25.6	24.9
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):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9
2.5°	1435.7	1426.2	1396.9	1393.3	1371.3	1369.9	1379.4	1363.3	1364.8	1384.5	1381.6
5°	1235.4	1213.4	1212.7	1188.6	1161.5	1155.0	1131.6	1122.8	1119.1	1111.1	1140.3
7.5°	966.4	956.1	964.9	962.0	937.1	923.2	873.5	835.5	816.5	824.6	826.8
10°	687.1	702.5	725.9	748.5	731.0	684.9	663.7	633.0	629.4	627.2	641.8
12.5°	544.6	527.0	538.0	546.1	529.2	509.5	500.7	487.6	494.9	511.7	521.2
15°	452.5	421.8	407.9	398.4	402.8	391.1	395.5	391.1	396.2	401.3	418.9
17.5°	357.5	346.5	320.2	307.7	308.5	303.4	304.8	304.1	301.2	312.9	326.8
20°	269.0	266.1	260.2	251.5	252.9	249.3	247.1	234.6	229.5	233.2	244.9
22.5°	209.8	213.4	217.1	216.4	220.0	210.5	201.8	190.8	189.3	190.1	193.0
25°	187.9	189.3	192.3	195.9	198.1	189.3	176.9	170.3	169.6	171.1	171.1
27.5°	174.7	173.2	176.9	181.3	184.2	173.2	163.0	157.2	155.7	154.2	153.5
30°	160.8	160.8	163.7	168.1	170.3	160.8	152.0	146.2	142.5	140.4	139.6
32.5°	150.6	151.3	152.8	155.7	159.4	149.9	142.5	137.4	130.8	128.7	127.2
35°	138.9	141.8	144.0	144.7	147.7	141.1	133.8	125.7	119.9	117.7	117.7
37.5°	129.4	131.6	135.2	134.5	136.7	132.3	124.3	115.5	112.6	111.8	111.1
40°	122.1	122.1	125.0	127.9	130.8	122.8	113.3	108.9	106.7	105.3	106.0
42.5°	115.5	114.8	114.8	119.9	125.0	113.3	105.3	102.3	101.6	100.1	100.9
45°	109.6	108.9	106.7	108.9	116.2	103.8	98.7	96.5	95.8	95.8	95.8
47.5°	104.5	103.1	100.1	100.9	106.0	96.5	92.1	91.4	90.6	90.6	91.4
50°	98.7	97.2	95.0	94.3	95.8	91.4	87.7	86.3	86.3	86.3	87.7
52.5°	93.6	92.8	89.9	89.2	89.9	87.0	83.3	82.6	82.6	82.6	84.8
55°	89.9	88.5	87.0	85.5	87.0	83.3	80.4	78.9	78.9	80.4	81.9
57.5°	86.3	84.8	84.1	82.6	84.1	80.4	77.5	76.0	76.8	77.5	77.5
60°	82.6	81.1	80.4	78.9	81.1	77.5	74.6	73.8	73.8	73.1	73.1
62.5°	78.9	78.2	76.8	75.3	78.2	73.8	71.6	70.2	69.4	69.4	69.4
65°	74.6	73.8	73.1	72.4	73.8	70.2	68.0	67.3	65.8	65.1	65.8
67.5°	70.9	70.9	69.4	68.0	70.2	65.8	64.3	63.6	61.4	60.7	61.4
70°	66.5	66.5	65.1	64.3	67.3	61.4	59.9	59.2	57.7	57.0	57.0
72.5°	62.1	62.1	60.7	59.9	63.6	57.0	55.6	54.8	52.6	51.9	51.9
75°	57.7	57.0	56.3	55.6	59.9	52.6	50.4	49.0	46.8	46.1	45.3
77.5°	52.6	51.9	50.4	51.2	54.1	46.8	43.9	43.1	40.9	40.2	39.5
80°	46.1	45.3	44.6	46.1	46.1	40.9	37.3	35.8	33.6	32.2	31.4
82.5°	39.5	38.7	38.7	40.2	38.0	35.8	31.4	28.5	24.9	22.7	21.9
85°	32.2	33.6	32.2	33.6	28.5	28.5	21.9	16.8	11.7	9.5	8.8
87.5°	24.9	25.6	24.9	25.6	19.7	19.0	10.2	5.8	0.7	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°	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9
2.5°	1403.5	1405.0	1436.4	1467.8	1486.8	1534.4	1557.7	1584.1	1597.9	1614.0
5°	1126.5	1154.2	1179.8	1242.7	1274.9	1350.1	1405.0	1492.7	1520.5	1542.4
7.5°	850.9	892.5	924.0	1002.2	1062.9	1156.4	1252.2	1356.7	1386.7	1406.4
10°	676.2	714.2	773.4	834.8	902.8	1016.1	1119.9	1228.1	1280.7	1303.4
12.5°	568.0	628.7	698.1	755.1	809.2	892.5	1024.1	1160.8	1215.6	1239.8
15°	468.6	536.5	607.5	677.6	744.9	839.2	977.3	1155.0	1224.4	1248.5
17.5°	372.1	427.6	499.3	584.1	682.0	801.9	986.1	1217.1	1301.9	1333.3
20°	264.6	318.7	391.8	496.3	612.6	763.2	1006.6	1310.7	1431.3	1467.1
22.5°	199.6	229.5	296.8	399.9	550.4	732.5	1038.7	1438.6	1579.7	1611.8
25°	175.4	185.7	220.0	319.4	488.3	704.7	1081.1	1565.8	1736.8	1771.9
27.5°	155.7	161.5	179.1	256.6	442.3	676.2	1131.6	1703.2	1872.1	1918.1
30°	140.4	147.7	162.3	214.9	397.7	635.2	1177.6	1826.8	1986.8	2021.9
32.5°	128.7	136.7	149.9	194.4	359.6	604.5	1203.9	1918.9	2084.8	2117.0
35°	120.6	127.9	141.1	176.2	326.0	583.3	1212.0	2010.2	2204.7	2237.6
37.5°	113.3	120.6	132.3	157.9	302.6	555.6	1224.4	2119.1	2343.6	2386.7
40°	108.2	114.0	125.0	145.5	270.5	525.6	1239.0	2246.3	2478.8	2521.9
42.5°	103.1	109.6	119.2	146.2	238.3	500.0	1248.5	2344.3	2586.3	2627.2
45°	98.7	106.0	117.0	143.3	214.2	476.6	1244.1	2426.2	2684.2	2715.6
47.5°	94.3	103.1	122.8	137.4	206.9	455.4	1247.8	2505.1	2754.4	2779.2
50°	91.4	102.3	131.6	128.7	208.3	445.9	1282.9	2599.4	2807.0	2816.5
52.5°	89.2	104.5	124.3	116.2	208.3	441.5	1350.1	2751.5	2898.4	2891.8
55°	85.5	103.8	116.2	105.3	199.6	443.7	1413.7	2952.5	3117.7	3081.1
57.5°	82.6	99.4	104.5	97.2	179.1	444.4	1508.0	3122.1	3290.2	3295.3
60°	78.9	106.7	90.6	90.6	153.5	440.8	1591.4	3119.1	3321.6	3355.3
62.5°	75.3	104.5	81.1	84.1	136.0	426.9	1641.8	2937.1	3205.4	3267.5
65°	70.9	82.6	74.6	78.2	128.7	392.5	1570.2	2711.3	3048.2	3114.8
67.5°	65.8	68.0	68.0	72.4	125.7	340.6	1389.6	2462.0	2850.9	2931.3
70°	59.9	60.7	62.1	68.7	117.0	293.1	1131.6	2196.6	2638.9	2740.5
72.5°	54.1	54.8	54.8	62.1	109.6	252.9	801.2	1740.5	2203.2	2309.9
75°	47.5	48.2	47.5	54.1	95.8	189.3	475.9	1100.9	1314.3	1434.9
77.5°	40.2	40.2	38.7	42.4	65.8	119.9	260.2	668.9	799.7	874.3
80°	32.9	30.0	24.9	25.6	35.8	68.7	116.2	383.8	438.6	457.6
82.5°	21.9	16.8	10.2	9.5	11.7	19.0	27.0	152.0	139.6	132.3
85°	4.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
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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