

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: P162661

Luminaire Tested: **EMM-F04-LED-E1-SL4-HSS-7030**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P162661  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM-F04-LED-E1-SL4-HSS-7030  
Description: EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (28) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

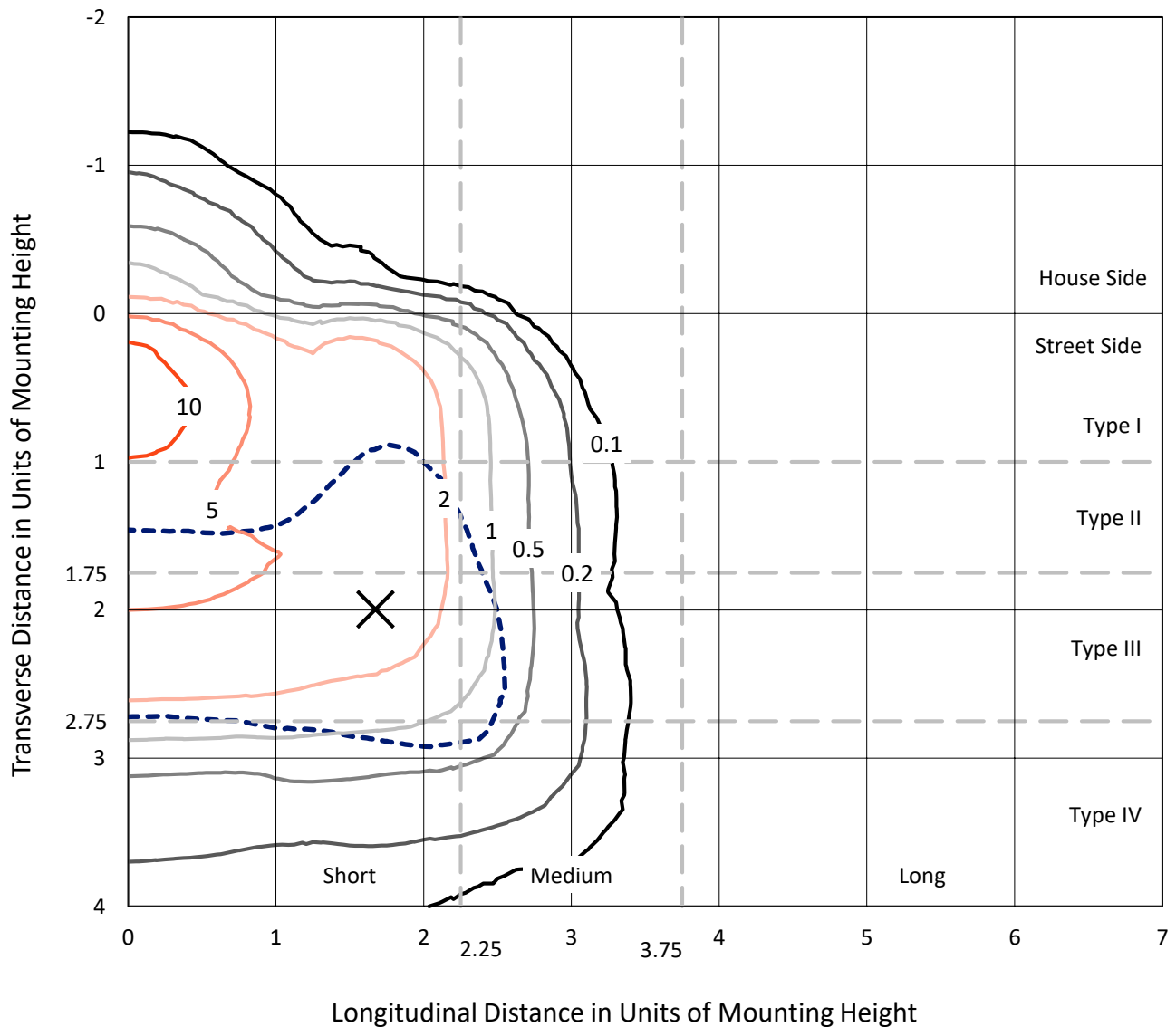
Lumens per Lamp: N/A  
Luminaire Lumens: 5834.8 lumens  
Efficiency: N/A  
Efficacy: 57.1 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G2  
  
Input Watts (W): 102.2  
Input Voltage (V): NR  
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

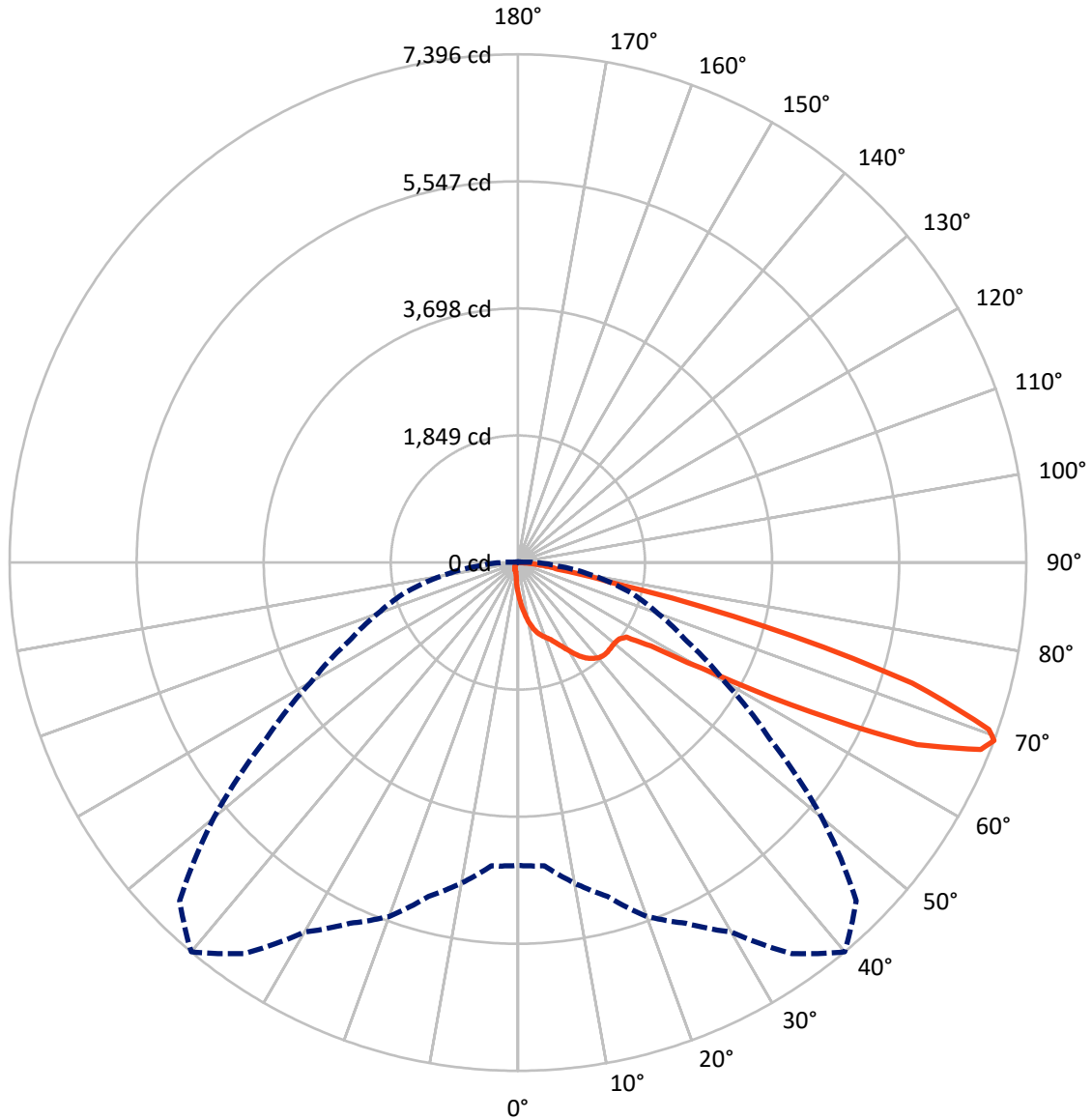
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	173.8	0.0	173.8
	% Fixture	3.0	0.0	3.0
<b>Street Side</b>	Lumens	5661.0	0.0	5661.0
	% Fixture	97.0	0.0	97.0
<b>Total</b>	Lumens	5834.8	0.0	5834.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.3	0.8
10°-20°	156.2	2.7
20°-30°	298.9	5.1
30°-40°	497.0	8.5
40°-50°	672.5	11.5
50°-60°	1051.8	18.0
60°-70°	2162.5	37.1
70°-80°	870.1	14.9
80°-90°	80.5	1.4
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°	5834.8	100.0
0°-180°	5834.8	100.0



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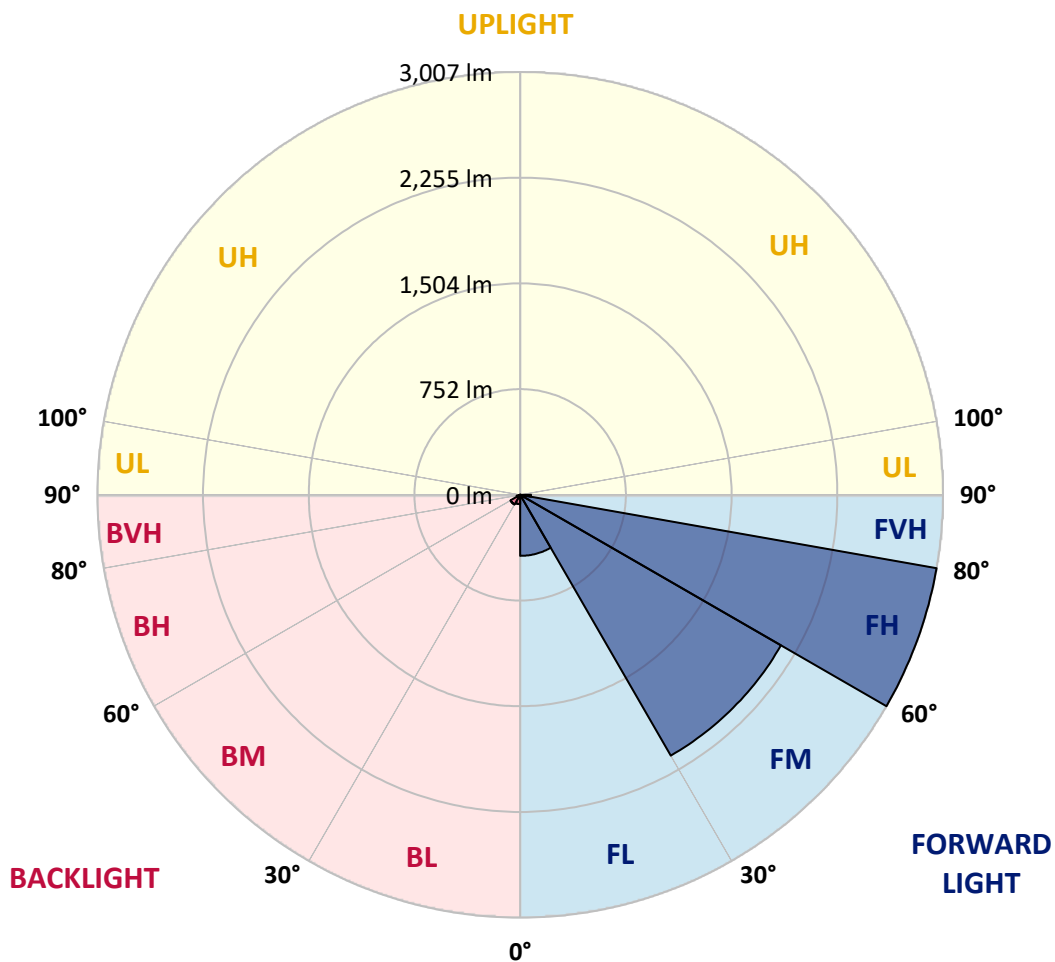
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	434.2	7.4			
FM	(30°-60°)	2142.0	36.7			
FH	(60°-80°)	3007.3	51.5			G2/5000
FVH	(80°-90°)	77.5	1.3			G1/100
BL	(0°-30°)	66.1	1.1	B0/110		
BM	(30°-60°)	79.3	1.4	B0/220		
BH	(60°-80°)	25.4	0.4	B0/110		G0/110
BVH	(80°-90°)	3.0	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6
2.5°	587.8	581.2	573.5	573.5	563.9	563.9	558.2	542.9	541.0	532.4	523.8
5°	750.3	744.5	735.0	726.4	718.8	705.4	695.9	677.7	657.6	638.5	621.3
7.5°	909.0	906.1	888.9	886.1	873.6	851.6	832.5	805.8	771.4	744.5	713.1
10°	1056.2	1049.5	1045.6	1029.5	1011.3	987.3	957.8	925.2	885.1	843.1	798.1
12.5°	1172.8	1169.0	1151.8	1145.1	1126.0	1102.0	1064.7	1022.7	982.6	928.1	875.5
15°	1259.8	1253.0	1241.6	1231.1	1208.2	1187.1	1152.7	1106.9	1058.1	998.8	935.8
17.5°	1332.5	1320.0	1317.1	1300.9	1277.0	1252.1	1213.9	1171.8	1114.5	1055.2	986.4
20°	1429.9	1412.7	1407.0	1383.0	1355.4	1321.0	1277.0	1224.4	1164.2	1099.2	1028.4
22.5°	1544.6	1532.2	1519.7	1498.7	1463.4	1414.6	1350.6	1293.2	1216.7	1145.1	1068.6
25°	1707.1	1696.6	1676.5	1647.8	1603.9	1545.6	1468.2	1384.0	1294.2	1202.5	1112.6
27.5°	1864.8	1855.2	1841.0	1818.9	1769.3	1705.2	1609.6	1502.6	1388.9	1278.0	1178.5
30°	2013.0	2004.3	1990.0	1968.0	1924.1	1861.0	1753.0	1638.3	1496.8	1367.7	1248.3
32.5°	2172.6	2169.7	2153.5	2121.9	2083.7	1998.6	1881.1	1757.7	1614.4	1465.3	1325.7
35°	2353.3	2331.2	2316.0	2284.4	2219.5	2128.6	1990.9	1856.2	1705.2	1552.2	1396.5
37.5°	2506.2	2485.2	2466.1	2425.8	2346.5	2230.9	2075.1	1926.9	1771.2	1615.4	1456.7
40°	2618.0	2607.5	2584.6	2532.0	2443.0	2305.4	2137.2	1975.7	1818.9	1662.2	1505.4
42.5°	2701.1	2684.9	2659.1	2604.6	2499.4	2342.7	2162.1	1995.8	1841.0	1690.9	1536.9
45°	2731.8	2718.4	2694.5	2635.2	2521.5	2353.3	2161.1	1990.0	1841.9	1699.5	1558.0
47.5°	2713.6	2700.2	2679.2	2623.7	2511.9	2340.8	2144.0	1973.8	1832.3	1702.3	1577.2
50°	2653.4	2645.7	2629.4	2582.7	2482.2	2316.9	2128.6	1965.2	1830.4	1716.7	1603.9
52.5°	2647.6	2642.9	2622.8	2575.9	2473.7	2309.2	2126.7	1969.9	1846.7	1734.8	1623.0
55°	3235.4	3167.6	3015.6	2886.6	2674.4	2422.0	2223.3	2047.3	1915.4	1806.5	1728.2
57.5°	4598.5	4497.1	4297.4	4051.8	3564.3	3085.4	2702.1	2424.9	2288.2	2238.6	2268.2
60°	5236.9	5218.7	5187.3	5070.7	4821.1	4409.3	3950.4	3454.3	3255.5	3238.4	3298.6
62.5°	5539.9	5528.5	5538.0	5523.7	5446.2	5325.8	5193.9	4979.9	4782.9	4655.9	4386.2
65°	5679.5	5687.1	5741.6	5784.6	5794.2	5825.8	5922.3	6189.0	6383.9	6056.1	5307.7
67.5°	5324.9	5369.8	5495.0	5651.7	5835.3	6013.0	6299.9	6861.8	7262.4	6877.1	5814.3
69°	4408.2	4430.3	4736.1	5031.4	5479.7	5793.3	6209.0	6946.0	7396.2	6961.3	5774.1
70°	3470.6	3490.7	3818.5	4220.0	4978.0	5381.3	5925.2	6803.5	7270.9	6849.4	5567.7
72.5°	1565.6	1536.9	1652.7	1867.7	2691.6	3331.9	4283.1	5512.2	5998.8	5487.4	4165.5
75°	1093.5	1081.0	1093.5	1094.4	1222.5	1577.2	1990.0	2987.9	3695.2	3188.6	1990.0
77.5°	846.9	838.2	829.7	820.1	835.4	935.8	975.9	1060.0	1376.4	1301.8	758.9
80°	670.0	662.4	683.4	676.7	676.7	688.1	680.5	649.0	589.7	546.7	489.4
82.5°	311.6	313.5	313.5	340.3	410.1	478.8	500.9	469.3	416.7	354.6	285.8
85°	29.7	33.5	56.4	87.0	173.0	195.0	195.9	162.5	162.5	128.1	103.2
87.5°	0.0	1.0	1.0	1.0	8.6	23.9	20.1	5.7	2.9	2.9	4.8
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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6
2.5°	508.5	505.7	494.1	482.7	472.2	460.7	450.2	439.6	428.2	419.6	409.1
5°	594.5	573.5	549.6	526.7	503.8	479.8	455.0	433.0	410.1	389.1	369.0
7.5°	681.5	640.4	607.9	566.8	529.5	492.2	457.8	422.4	390.0	359.4	330.8
10°	755.1	705.4	654.8	602.2	548.6	498.9	451.2	409.1	366.0	328.8	293.5
12.5°	815.3	752.2	690.1	624.1	563.9	500.9	441.6	391.0	340.3	298.2	261.9
15°	869.8	797.1	722.6	646.1	569.7	497.9	432.0	369.0	317.4	269.5	228.4
17.5°	913.7	830.6	746.5	660.5	578.3	494.1	419.6	353.7	293.5	243.7	203.6
20°	952.0	865.0	774.2	677.7	584.0	493.2	409.1	334.6	272.4	219.9	180.7
22.5°	987.3	900.4	802.9	699.7	592.6	492.2	399.5	320.2	254.2	201.7	162.5
25°	1027.5	935.8	833.5	722.6	607.9	496.0	393.8	308.7	238.0	184.5	148.2
27.5°	1072.5	975.9	869.8	751.3	627.9	503.8	391.9	296.3	223.7	168.2	136.7
30°	1135.5	1023.7	906.1	779.9	646.1	512.3	390.0	288.6	209.3	155.8	125.2
32.5°	1190.9	1070.6	946.3	809.6	666.2	521.0	389.1	278.2	195.9	143.4	116.6
35°	1249.2	1113.5	980.7	838.2	683.4	530.5	388.1	270.5	183.5	131.0	108.0
37.5°	1299.9	1149.9	1007.4	863.1	702.5	539.1	389.1	263.8	172.0	120.4	100.3
40°	1342.9	1187.1	1037.1	886.1	722.6	552.4	390.0	257.2	160.6	110.9	93.7
42.5°	1381.1	1222.5	1068.6	911.8	745.5	567.8	395.7	251.3	151.0	102.2	87.0
45°	1410.8	1254.9	1103.0	948.2	782.8	592.6	406.3	247.5	141.4	94.6	81.2
47.5°	1441.3	1302.8	1161.4	1005.5	837.3	631.8	424.3	246.6	133.8	88.9	76.5
50°	1483.5	1350.6	1212.9	1063.8	887.0	672.0	446.4	247.5	124.3	83.1	71.7
52.5°	1514.0	1399.3	1279.9	1165.2	1005.5	794.3	531.4	264.8	119.4	78.4	65.9
55°	1694.7	1674.6	1677.5	1696.6	1573.3	1351.6	888.9	382.3	140.5	88.9	65.0
57.5°	2389.6	2460.3	2501.3	2500.4	2296.9	1905.0	1193.8	491.3	156.7	103.2	77.4
60°	3303.3	3249.8	3174.3	2987.9	2717.4	2174.5	1335.3	528.6	135.7	82.2	70.8
62.5°	4111.0	3797.5	3519.3	3217.3	2862.7	2268.2	1363.9	525.7	118.5	62.1	49.7
65°	4614.7	4050.8	3601.6	3223.1	2805.4	2189.8	1290.3	482.7	100.3	50.7	41.1
67.5°	4735.2	3914.1	3278.5	2795.8	2343.7	1704.2	947.2	363.2	78.4	42.0	36.3
69°	4472.3	3479.2	2716.5	2168.8	1705.2	1130.7	585.9	229.4	60.2	38.2	33.5
70°	4113.9	3026.1	2212.7	1740.5	1262.7	794.3	410.1	161.6	48.8	35.4	30.6
72.5°	2646.7	1589.5	1087.8	757.0	521.0	316.4	160.6	72.7	37.3	29.7	24.8
75°	1026.5	587.8	426.3	324.0	253.3	175.8	97.5	46.8	31.6	24.8	19.1
77.5°	505.7	387.2	316.4	216.9	126.2	78.4	52.6	36.3	25.8	18.2	12.5
80°	399.5	265.7	158.6	98.4	74.6	56.4	40.1	29.7	19.1	11.5	8.6
82.5°	204.6	111.8	82.2	67.0	55.4	43.9	32.5	21.0	12.5	7.6	6.7
85°	64.0	46.8	42.0	41.1	38.2	31.6	22.9	13.4	7.6	4.8	4.8
87.5°	4.8	6.7	8.6	6.7	7.6	6.7	8.6	5.7	3.8	3.8	2.9
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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6	440.6
2.5°	401.4	390.0	379.5	372.8	360.3	355.6	350.8	348.8	340.3	342.2	334.6
5°	350.8	330.8	315.5	300.1	285.8	275.3	266.7	256.2	247.5	243.7	236.1
7.5°	304.9	279.1	259.1	242.8	225.6	212.2	200.8	193.1	185.4	177.7	173.9
10°	264.8	237.1	214.1	197.8	181.6	170.1	161.6	155.8	151.0	148.2	147.2
12.5°	227.5	200.8	179.7	165.4	152.9	147.2	143.4	140.5	139.5	138.6	138.6
15°	198.9	172.0	155.8	145.3	139.5	136.7	135.7	133.8	131.9	131.0	131.0
17.5°	172.0	152.0	140.5	134.8	131.9	130.0	128.1	126.2	124.3	123.3	123.3
20°	153.9	137.6	131.9	128.1	125.2	123.3	120.4	118.5	117.5	116.6	115.6
22.5°	139.5	129.1	125.2	122.3	118.5	115.6	113.7	111.8	109.9	109.0	108.0
25°	129.1	122.3	119.4	115.6	111.8	109.0	106.1	103.2	101.3	100.3	98.4
27.5°	121.3	116.6	112.8	108.0	104.2	101.3	98.4	95.6	93.7	91.8	90.8
30°	114.7	109.9	105.2	101.3	96.5	93.7	89.9	87.0	86.1	84.1	82.2
32.5°	108.0	103.2	98.4	93.7	88.9	85.1	83.1	79.3	77.4	76.5	74.6
35°	100.3	95.6	89.9	86.1	81.2	77.4	74.6	71.7	69.8	67.9	67.0
37.5°	93.7	88.0	82.2	77.4	73.6	69.8	67.0	64.0	62.1	60.2	59.2
40°	86.1	80.3	74.6	69.8	65.9	63.1	60.2	57.3	55.4	54.5	54.5
42.5°	79.3	72.7	67.0	63.1	60.2	56.4	53.5	50.7	49.7	48.8	49.7
45°	72.7	65.9	61.1	57.3	54.5	50.7	47.8	45.8	44.9	45.8	46.8
47.5°	67.0	60.2	55.4	52.6	49.7	46.8	43.9	42.0	42.0	43.9	45.8
50°	61.1	54.5	50.7	48.8	45.8	43.0	39.2	38.2	39.2	41.1	43.0
52.5°	55.4	47.8	44.9	43.9	41.1	38.2	35.4	34.4	35.4	37.3	36.3
55°	49.7	42.0	41.1	40.1	37.3	33.5	30.6	30.6	30.6	29.7	27.7
57.5°	47.8	37.3	36.3	35.4	32.5	28.7	26.7	24.8	23.9	21.0	20.1
60°	49.7	33.5	33.5	31.6	28.7	24.8	22.0	19.1	17.2	15.3	15.3
62.5°	40.1	30.6	29.7	27.7	23.9	20.1	17.2	14.4	13.4	12.5	12.5
65°	32.5	27.7	25.8	22.9	20.1	16.3	13.4	11.5	10.6	10.6	11.5
67.5°	29.7	24.8	22.0	19.1	16.3	12.5	10.6	9.6	9.6	10.6	10.6
69°	27.7	22.9	20.1	17.2	14.4	11.5	9.6	9.6	9.6	9.6	10.6
70°	25.8	22.0	19.1	16.3	12.5	9.6	8.6	8.6	9.6	9.6	10.6
72.5°	20.1	17.2	16.3	13.4	9.6	8.6	7.6	8.6	8.6	9.6	9.6
75°	15.3	12.5	12.5	10.6	7.6	6.7	6.7	7.6	7.6	8.6	8.6
77.5°	10.6	8.6	8.6	7.6	6.7	5.7	5.7	6.7	7.6	7.6	8.6
80°	7.6	6.7	5.7	6.7	5.7	4.8	5.7	6.7	6.7	7.6	7.6
82.5°	5.7	5.7	5.7	5.7	4.8	4.8	5.7	5.7	6.7	7.6	7.6
85°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	5.7	5.7	6.7	6.7
87.5°	2.9	2.9	2.9	3.8	3.8	4.8	4.8	4.8	4.8	5.7	5.7
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):**

	165°	170°	175°	180°
0°	440.6	440.6	440.6	440.6
2.5°	332.7	331.7	327.8	328.8
5°	233.2	227.5	231.3	230.3
7.5°	171.1	170.1	169.2	171.1
10°	146.3	146.3	145.3	146.3
12.5°	137.6	137.6	137.6	137.6
15°	131.0	131.0	130.0	130.0
17.5°	123.3	123.3	123.3	122.3
20°	115.6	114.7	114.7	114.7
22.5°	107.1	106.1	106.1	106.1
25°	98.4	97.5	97.5	97.5
27.5°	89.9	88.9	88.0	88.0
30°	81.2	80.3	79.3	79.3
32.5°	72.7	71.7	70.8	70.8
35°	65.0	65.0	64.0	63.1
37.5°	58.3	58.3	58.3	58.3
40°	53.5	54.5	54.5	54.5
42.5°	50.7	51.6	52.6	53.5
45°	48.8	50.7	51.6	51.6
47.5°	47.8	48.8	49.7	49.7
50°	43.9	43.0	43.0	43.0
52.5°	35.4	33.5	32.5	31.6
55°	25.8	24.8	22.9	22.9
57.5°	18.2	18.2	17.2	17.2
60°	14.4	14.4	13.4	14.4
62.5°	12.5	12.5	12.5	12.5
65°	11.5	11.5	11.5	11.5
67.5°	11.5	11.5	11.5	11.5
69°	10.6	10.6	10.6	10.6
70°	10.6	10.6	10.6	10.6
72.5°	9.6	9.6	9.6	9.6
75°	8.6	9.6	9.6	9.6
77.5°	8.6	8.6	8.6	8.6
80°	7.6	7.6	8.6	8.6
82.5°	7.6	7.6	7.6	7.6
85°	6.7	6.7	7.6	7.6
87.5°	5.7	5.7	6.7	6.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)