

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: P162457

Luminaire Tested: **ECM-E04-LED-E1-SL3-HSS**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P162457  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ECM-E04-LED-E1-SL3-HSS  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (84) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6593.8 lumens  
Efficiency: N/A  
Efficacy: 67.8 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G2

Input Watts (W): 97.2  
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

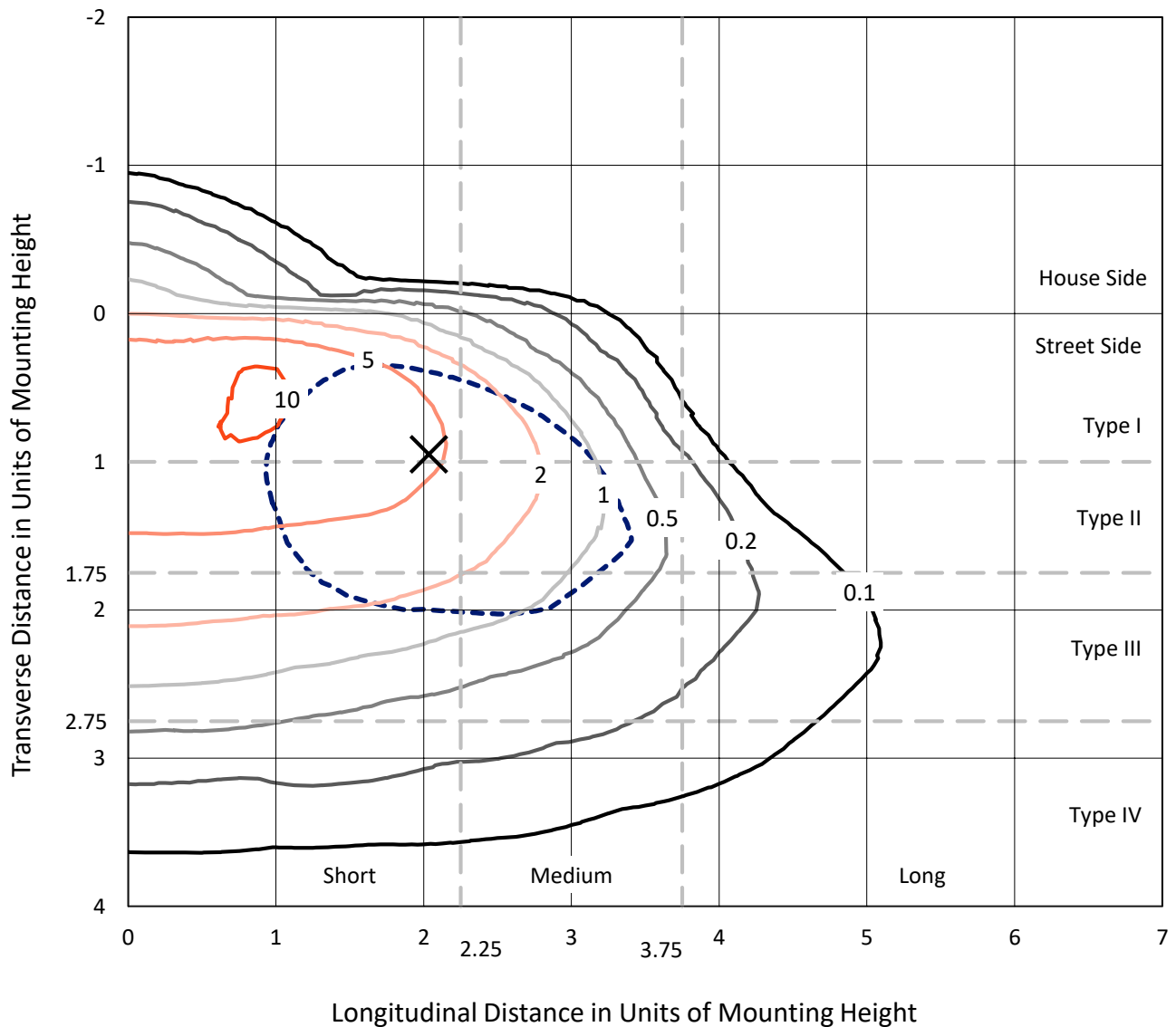


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### Iso-Footcandle Lines of Horizontal Illumination

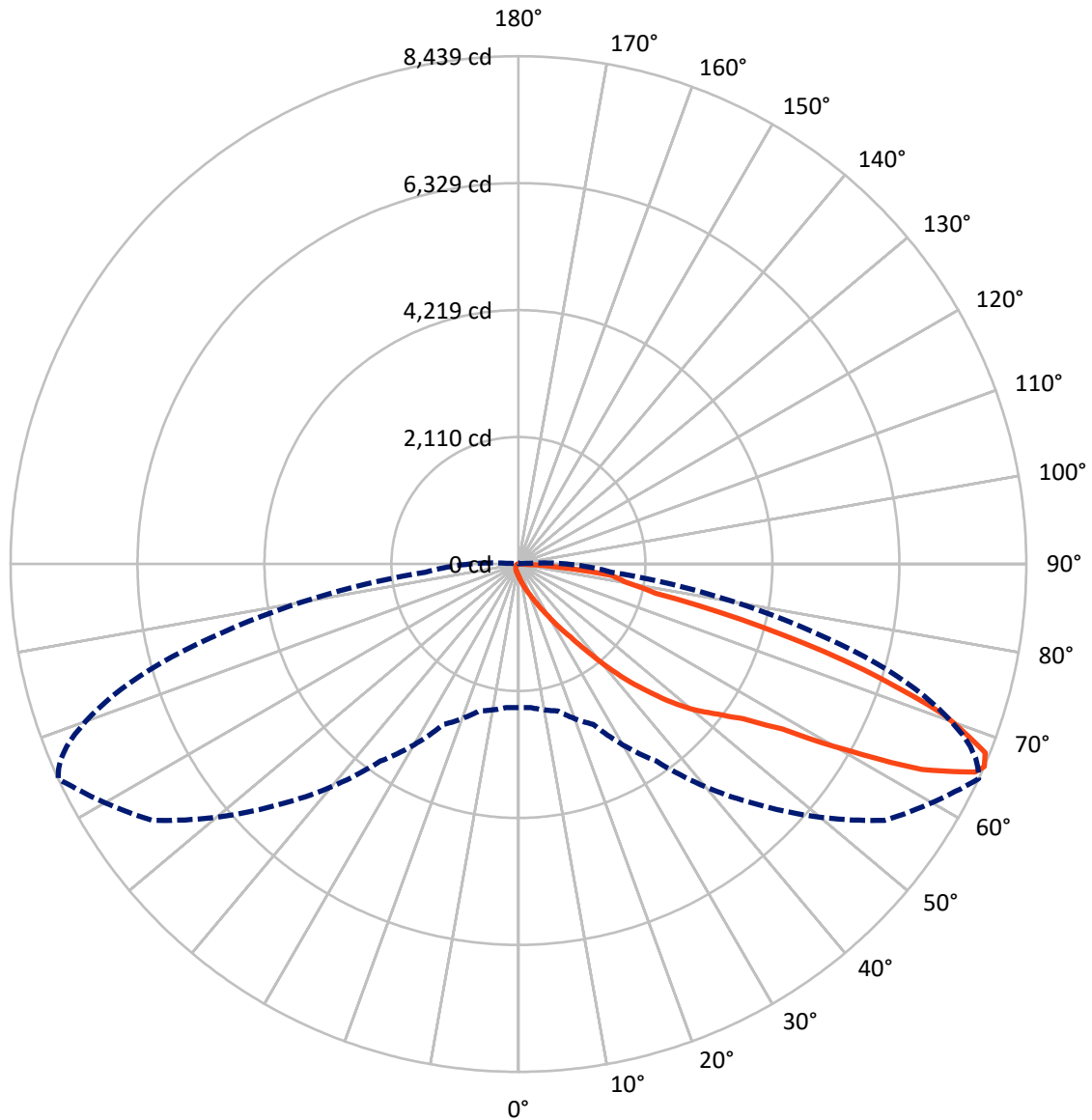
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.9 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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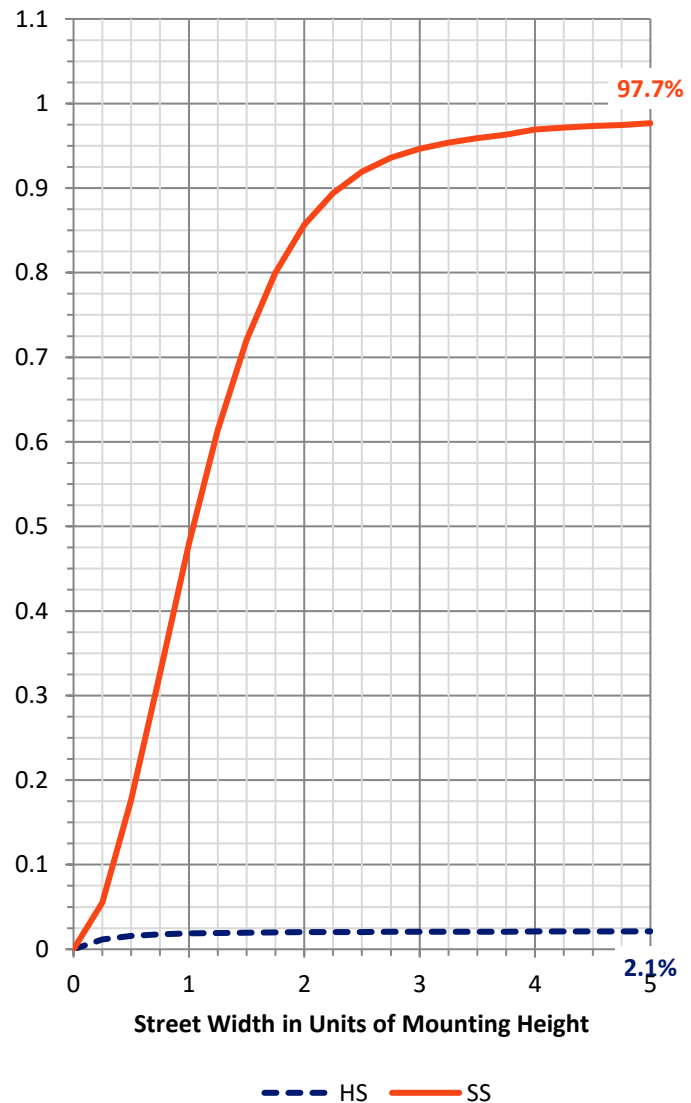
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	142.9	0.0	142.9
	% Fixture	2.2	0.0	2.2
<b>Street Side</b>	Lumens	6450.9	0.0	6450.9
	% Fixture	97.8	0.0	97.8
<b>Total</b>	Lumens	6593.8	0.0	6593.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.3	0.3
10°-20°	94.5	1.4
20°-30°	203.8	3.1
30°-40°	435.1	6.6
40°-50°	962.3	14.6
50°-60°	1630.8	24.7
60°-70°	2176.1	33.0
70°-80°	958.6	14.5
80°-90°	110.4	1.7
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°	6593.8	100.0
0°-180°	6593.8	100.0



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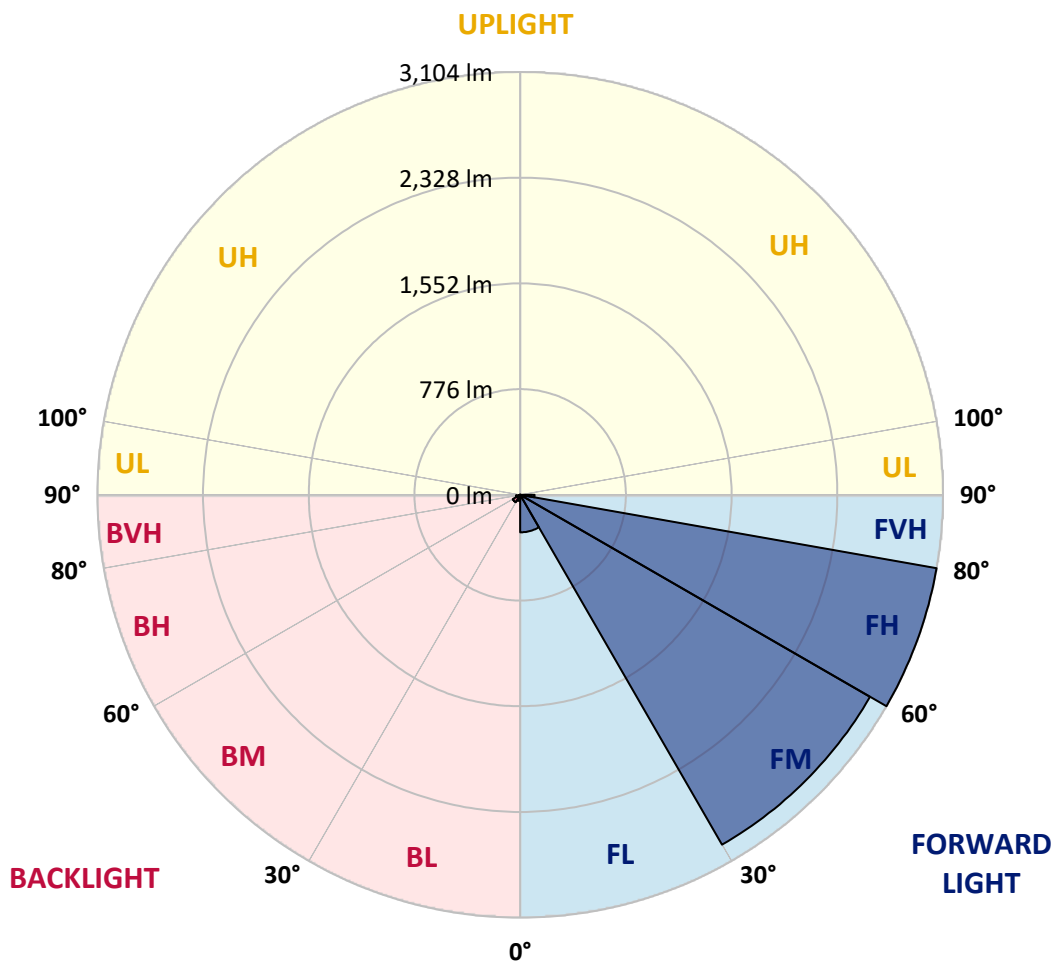
CATALOG NUMBER: ECM-E04-LED-E1-SL3-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	275.4	4.2			
FM	(30°-60°)	2965.4	45.0			
FH	(60°-80°)	3104.0	47.1			G2/5000
FVH	(80°-90°)	106.0	1.6			G2/225
BL	(0°-30°)	45.1	0.7	B0/110		
BM	(30°-60°)	62.8	1.0	B0/220		
BH	(60°-80°)	30.7	0.5	B0/110		G0/110
BVH	(80°-90°)	4.4	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1
2.5°	251.1	249.7	244.7	244.7	237.1	232.0	225.6	219.3	219.3	218.0	216.8
5°	332.1	324.5	323.2	309.3	297.9	281.5	266.3	245.9	243.3	240.8	239.6
7.5°	422.1	420.9	409.5	392.9	370.1	339.7	309.3	276.4	271.3	268.8	263.7
10°	538.8	532.4	517.2	489.3	455.1	414.5	365.1	313.1	306.8	301.7	299.2
12.5°	650.3	638.9	630.0	594.5	551.5	491.9	432.3	357.5	352.4	346.1	336.0
15°	754.3	744.1	728.9	698.5	650.3	575.5	505.9	414.5	401.9	392.9	385.3
17.5°	835.5	829.1	811.3	777.1	725.1	659.2	575.5	472.8	462.7	451.3	437.3
20°	912.7	903.9	876.0	829.1	773.3	722.5	657.9	548.9	534.9	521.1	505.9
22.5°	986.3	977.3	931.7	854.4	794.8	773.3	750.4	635.1	613.6	602.1	586.9
25°	1088.9	1069.9	998.9	876.0	796.1	812.5	851.9	746.7	726.4	709.9	685.9
27.5°	1227.1	1201.7	1090.3	907.6	801.2	855.7	968.5	882.3	860.8	841.7	815.1
30°	1383.1	1366.5	1233.5	983.7	838.0	919.1	1099.1	1054.7	1029.3	1006.5	974.8
32.5°	1540.3	1517.5	1385.6	1128.3	936.8	1042.0	1262.7	1255.1	1222.0	1200.5	1166.3
35°	1678.4	1666.9	1569.3	1365.3	1162.4	1257.6	1480.7	1489.5	1460.4	1437.6	1399.5
37.5°	1772.3	1772.3	1753.2	1620.1	1521.2	1592.3	1801.3	1802.7	1773.5	1721.5	1702.5
40°	1820.4	1834.3	1902.8	1928.1	1923.1	2014.4	2222.3	2199.5	2175.3	2148.7	2085.3
42.5°	1919.3	1932.0	2077.7	2252.7	2366.8	2487.2	2630.4	2622.8	2593.7	2545.5	2487.2
45°	2086.7	2103.1	2276.8	2554.4	2788.9	2960.0	3051.3	3015.9	2986.7	2941.1	2910.5
47.5°	2299.6	2331.2	2527.7	2871.3	3154.0	3436.7	3531.7	3438.0	3412.5	3377.1	3327.6
50°	2526.5	2556.9	2766.1	3159.1	3478.5	3815.7	3974.1	3815.7	3778.9	3767.6	3711.7
52.5°	2722.9	2748.3	2949.9	3380.9	3726.9	4122.5	4353.2	4144.0	4117.5	4079.3	4038.8
55°	2839.6	2859.9	3048.8	3487.3	3895.6	4398.8	4719.6	4535.7	4496.4	4481.2	4422.9
57.5°	2878.9	2899.2	3069.1	3501.3	3986.8	4651.1	5164.5	5170.9	5124.0	5069.5	5051.7
60°	2878.9	2901.7	3044.9	3467.1	4075.6	4919.9	5757.9	6286.4	6185.1	6174.9	6110.3
62.5°	2759.7	2781.3	2925.9	3361.9	4194.8	5282.4	6584.3	7517.3	7488.1	7422.3	7315.7
65°	2501.1	2513.9	2655.7	3093.2	4149.1	5615.9	7300.5	8336.3	8289.3	8160.0	8023.2
66°	2384.5	2394.7	2527.7	2939.7	3999.5	5661.5	7427.3	8438.9	8361.6	8252.5	8098.0
67.5°	2215.9	2233.6	2327.5	2654.5	3640.8	5502.9	7347.5	8366.7	8299.5	8167.6	8013.1
70°	1479.3	1466.7	1797.6	2037.2	2773.7	4483.7	6592.0	7512.3	7513.6	7451.5	7389.3
72.5°	702.3	709.9	806.3	1253.7	1815.3	2995.5	5246.9	5996.1	6082.3	5970.8	5893.5
75°	504.5	516.0	574.3	766.9	1082.5	1797.6	3401.2	4193.5	4196.0	3998.3	3822.0
77.5°	147.1	153.3	215.5	472.8	811.3	1213.2	1953.5	2331.2	2276.8	2134.8	2001.7
80°	60.8	60.8	63.3	150.8	325.7	824.0	1366.5	1795.1	1788.7	1734.1	1655.6
82.5°	22.8	24.1	30.4	62.1	77.3	202.8	911.5	1558.0	1554.1	1476.8	1421.1
85°	2.5	2.5	7.6	26.7	29.2	38.0	182.5	687.1	683.3	687.1	602.1
87.5°	0.0	0.0	1.3	2.5	3.9	5.1	7.6	26.7	29.2	27.9	25.3
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):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1
2.5°	216.8	214.3	214.3	212.9	212.9	212.9	211.7	210.4	210.4	209.2	207.9
5°	237.1	234.5	233.2	230.7	229.5	228.1	225.6	224.4	221.9	220.5	219.3
7.5°	261.2	256.1	254.8	251.1	247.2	244.7	242.1	238.3	235.7	230.7	229.5
10°	291.6	285.2	280.1	275.1	271.3	264.9	261.2	256.1	251.1	247.2	243.3
12.5°	330.8	322.0	314.4	309.3	300.4	292.8	285.2	281.5	271.3	266.3	259.9
15°	374.0	363.9	354.9	344.8	338.5	325.7	315.6	304.3	299.2	290.3	280.1
17.5°	429.7	413.2	399.3	389.2	376.5	363.9	352.4	341.1	325.7	315.6	302.9
20°	489.3	475.3	456.4	438.7	423.5	408.1	391.7	376.5	362.5	346.1	330.8
22.5°	565.3	545.1	522.3	504.5	484.3	467.7	444.9	424.7	401.9	380.3	362.5
25°	661.7	635.1	613.6	588.3	564.1	538.8	510.9	485.5	456.4	436.1	405.6
27.5°	780.9	755.6	726.4	693.5	669.3	631.3	594.5	562.8	528.7	496.9	462.7
30°	933.1	896.3	865.9	834.1	786.0	749.2	706.1	662.9	616.1	584.4	532.4
32.5°	1115.6	1076.3	1030.7	984.9	940.7	888.7	835.5	782.1	730.1	671.9	618.7
35°	1338.7	1291.7	1239.7	1190.4	1121.9	1066.1	998.9	925.5	867.1	799.9	732.7
37.5°	1634.0	1556.7	1511.1	1459.1	1366.5	1290.5	1215.7	1142.1	1039.5	968.5	873.5
40°	2004.3	1958.5	1883.7	1800.1	1716.4	1616.3	1514.9	1417.2	1298.1	1199.2	1088.9
42.5°	2439.1	2371.9	2295.7	2175.3	2090.4	1972.5	1857.2	1727.9	1582.0	1455.3	1326.0
45°	2847.2	2767.3	2709.1	2588.7	2499.9	2360.4	2220.9	2084.0	1915.5	1752.0	1602.4
47.5°	3288.4	3222.4	3126.1	3028.5	2938.5	2781.3	2630.4	2464.4	2286.9	2092.9	1898.9
50°	3676.3	3624.3	3558.4	3440.5	3340.4	3208.5	3031.1	2849.7	2625.3	2432.7	2212.1
52.5°	4005.9	3965.3	3872.8	3789.1	3699.1	3574.8	3416.4	3242.7	3000.5	2788.9	2537.9
55°	4395.1	4365.9	4284.8	4232.8	4152.9	4033.7	3885.5	3724.4	3468.4	3237.6	2953.7
57.5°	5032.7	5009.9	4938.9	4917.3	4838.8	4734.8	4552.3	4379.9	4080.7	3794.1	3469.6
60°	6088.7	6043.1	5939.1	5885.9	5719.7	5580.3	5343.3	5106.3	4744.9	4379.9	3989.3
62.5°	7219.5	7091.5	6893.6	6723.7	6488.0	6245.9	5928.9	5566.4	5142.9	4709.5	4260.7
65°	7829.2	7611.2	7361.5	7091.5	6785.9	6429.7	6030.4	5595.6	5140.4	4682.8	4208.7
66°	7898.9	7652.9	7388.0	7087.6	6747.9	6368.8	5963.2	5506.8	5034.0	4587.7	4113.6
67.5°	7811.5	7554.1	7274.0	6940.5	6572.9	6180.0	5754.0	5279.9	4824.8	4372.3	3910.8
70°	7199.2	6943.1	6693.3	6342.3	5950.5	5554.9	5151.9	4622.0	4190.9	3775.2	3364.4
72.5°	5748.9	5575.2	5328.0	5027.6	4646.0	4182.1	3846.1	3372.0	2998.0	2594.9	2276.8
75°	3592.7	3348.0	3042.4	2659.6	2368.0	1991.5	1795.1	1435.1	1222.0	1035.7	855.7
77.5°	1836.9	1653.1	1438.8	1223.3	1016.7	811.3	627.5	443.7	299.2	207.9	154.7
80°	1517.5	1355.2	1177.7	981.2	798.7	619.9	446.3	304.3	194.0	126.8	98.9
82.5°	1253.7	1116.8	958.4	775.9	617.3	486.8	338.5	220.5	136.9	88.8	69.7
85°	533.7	484.3	374.0	296.7	223.1	164.8	115.3	77.3	54.5	44.4	40.5
87.5°	22.8	25.3	24.1	19.1	14.0	14.0	12.7	10.1	10.1	10.1	10.1
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):**

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1	199.1
2.5°	207.9	206.7	205.3	205.3	204.1	202.8	195.2	188.9	181.3	176.3	171.2
5°	216.8	215.5	212.9	211.7	209.2	207.9	191.5	177.5	166.0	157.2	150.8
7.5°	225.6	224.4	220.5	216.8	215.5	212.9	186.4	168.7	153.3	143.2	136.9
10°	237.1	233.2	229.5	224.4	220.5	216.8	181.3	158.4	142.0	133.1	126.8
12.5°	253.6	247.2	240.8	234.5	229.5	223.1	178.8	149.6	133.1	122.9	116.7
15°	272.5	263.7	256.1	248.4	239.6	233.2	173.7	142.0	125.5	115.3	107.7
17.5°	290.3	280.1	268.8	257.3	248.4	239.6	168.7	134.4	117.9	107.7	100.1
20°	315.6	300.4	286.5	272.5	259.9	248.4	160.9	126.8	111.6	100.1	92.5
22.5°	343.6	325.7	308.0	289.1	272.5	257.3	154.7	120.4	105.2	93.9	84.9
25°	379.1	357.5	333.3	309.3	290.3	270.0	148.3	114.1	98.9	87.5	78.5
27.5°	428.5	398.0	371.5	341.1	311.9	289.1	143.2	109.1	92.5	81.1	72.3
30°	495.6	451.3	409.5	376.5	342.3	309.3	138.1	102.7	87.5	74.8	64.7
32.5°	570.4	518.5	470.3	420.9	377.7	339.7	133.1	97.6	81.1	68.4	59.6
35°	662.9	597.1	532.4	475.3	423.5	372.7	128.0	92.5	76.0	62.1	53.2
37.5°	796.1	713.7	628.8	555.2	488.0	420.9	124.3	87.5	69.7	55.7	46.9
40°	978.7	872.1	768.3	668.1	580.5	496.9	119.2	82.4	64.7	50.7	41.9
42.5°	1176.4	1047.1	910.1	797.3	676.9	571.7	114.1	77.3	59.6	45.6	36.8
45°	1422.4	1261.3	1095.3	941.9	794.8	659.2	109.1	72.3	53.2	40.5	31.7
47.5°	1691.1	1485.7	1298.1	1105.5	930.5	768.3	102.7	68.4	48.1	35.5	27.9
50°	1967.5	1750.7	1513.6	1294.3	1086.4	877.2	96.4	62.1	43.1	31.7	22.8
52.5°	2265.3	2009.3	1767.2	1494.5	1252.5	1020.5	90.0	57.1	39.3	27.9	19.1
55°	2644.4	2357.9	2073.9	1768.4	1476.8	1186.5	83.7	50.7	34.3	24.1	15.2
57.5°	3121.1	2781.3	2432.7	2087.9	1734.1	1404.5	78.5	44.4	29.2	20.3	12.7
60°	3571.1	3174.3	2752.1	2355.3	1956.0	1571.9	70.9	39.3	25.3	16.5	12.7
62.5°	3804.3	3351.7	2896.7	2459.3	2033.3	1631.5	63.3	32.9	21.6	14.0	11.5
65°	3747.2	3285.9	2844.7	2403.5	1986.4	1593.5	55.7	29.2	19.1	12.7	11.5
66°	3664.8	3208.5	2764.8	2345.2	1947.2	1552.9	52.0	27.9	17.7	12.7	10.1
67.5°	3484.8	3043.7	2620.3	2229.9	1839.5	1475.6	46.9	25.3	16.5	11.5	10.1
70°	2976.5	2575.9	2237.5	1890.1	1571.9	1243.6	38.0	21.6	14.0	10.1	10.1
72.5°	1970.0	1697.5	1471.7	1266.4	1058.5	821.5	31.7	17.7	11.5	10.1	8.9
75°	742.8	671.9	576.8	518.5	452.5	396.8	25.3	11.5	8.9	8.9	8.9
77.5°	131.9	121.7	107.7	98.9	91.3	83.7	20.3	7.6	7.6	8.9	8.9
80°	88.8	82.4	74.8	68.4	63.3	57.1	14.0	6.4	7.6	7.6	8.9
82.5°	63.3	59.6	55.7	50.7	46.9	41.9	8.9	6.4	7.6	7.6	7.6
85°	38.0	35.5	32.9	30.4	26.7	25.3	6.4	6.4	6.4	7.6	7.6
87.5°	10.1	8.9	10.1	10.1	7.6	8.9	5.1	5.1	5.1	6.4	6.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P162457

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**CANDELA DISTRIBUTION (continued):**

	145°	155°	165°	175°	180°
0°	199.1	199.1	199.1	199.1	199.1
2.5°	168.7	168.7	166.0	169.9	169.9
5°	145.7	145.7	144.5	145.7	145.7
7.5°	133.1	131.9	131.9	131.9	133.1
10°	121.7	120.4	120.4	120.4	120.4
12.5°	111.6	110.3	109.1	110.3	110.3
15°	102.7	100.1	100.1	100.1	100.1
17.5°	95.1	92.5	91.3	91.3	91.3
20°	87.5	83.7	83.7	83.7	83.7
22.5°	79.9	76.0	76.0	76.0	76.0
25°	72.3	68.4	68.4	68.4	68.4
27.5°	65.9	62.1	62.1	62.1	62.1
30°	58.3	55.7	55.7	57.1	55.7
32.5°	53.2	49.5	49.5	50.7	50.7
35°	46.9	44.4	44.4	44.4	44.4
37.5°	40.5	38.0	38.0	38.0	38.0
40°	35.5	32.9	31.7	32.9	32.9
42.5°	30.4	27.9	26.7	26.7	26.7
45°	26.7	22.8	21.6	22.8	22.8
47.5°	21.6	19.1	19.1	20.3	20.3
50°	16.5	16.5	17.7	20.3	20.3
52.5°	15.2	15.2	17.7	20.3	20.3
55°	14.0	15.2	17.7	19.1	20.3
57.5°	12.7	15.2	17.7	19.1	19.1
60°	12.7	14.0	16.5	19.1	19.1
62.5°	11.5	12.7	15.2	17.7	17.7
65°	11.5	12.7	15.2	17.7	17.7
66°	11.5	12.7	15.2	17.7	17.7
67.5°	11.5	12.7	15.2	17.7	17.7
70°	11.5	12.7	15.2	16.5	16.5
72.5°	10.1	11.5	14.0	16.5	16.5
75°	10.1	11.5	14.0	16.5	16.5
77.5°	10.1	11.5	14.0	16.5	16.5
80°	10.1	11.5	14.0	15.2	16.5
82.5°	8.9	11.5	12.7	15.2	15.2
85°	8.9	10.1	12.7	14.0	15.2
87.5°	7.6	8.9	10.1	12.7	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)