

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: P140898

Luminaire Tested: **ECM-E01-LED-E1-SL2-8030**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P140898  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33690)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ECM-E01-LED-E1-SL2-8030  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL  
Light Source: (21) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2428.9 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1

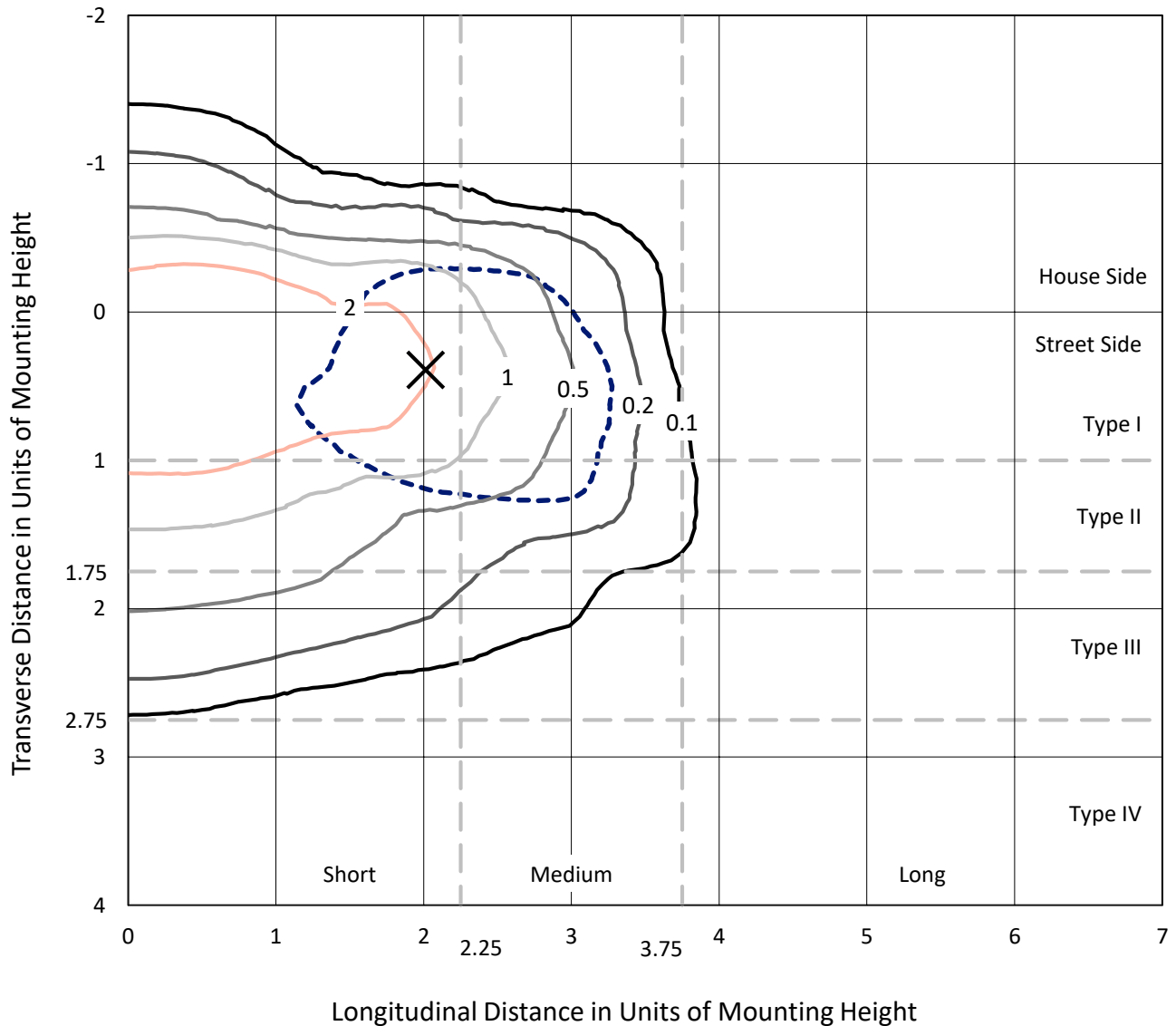
Input Watts (W): 24.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

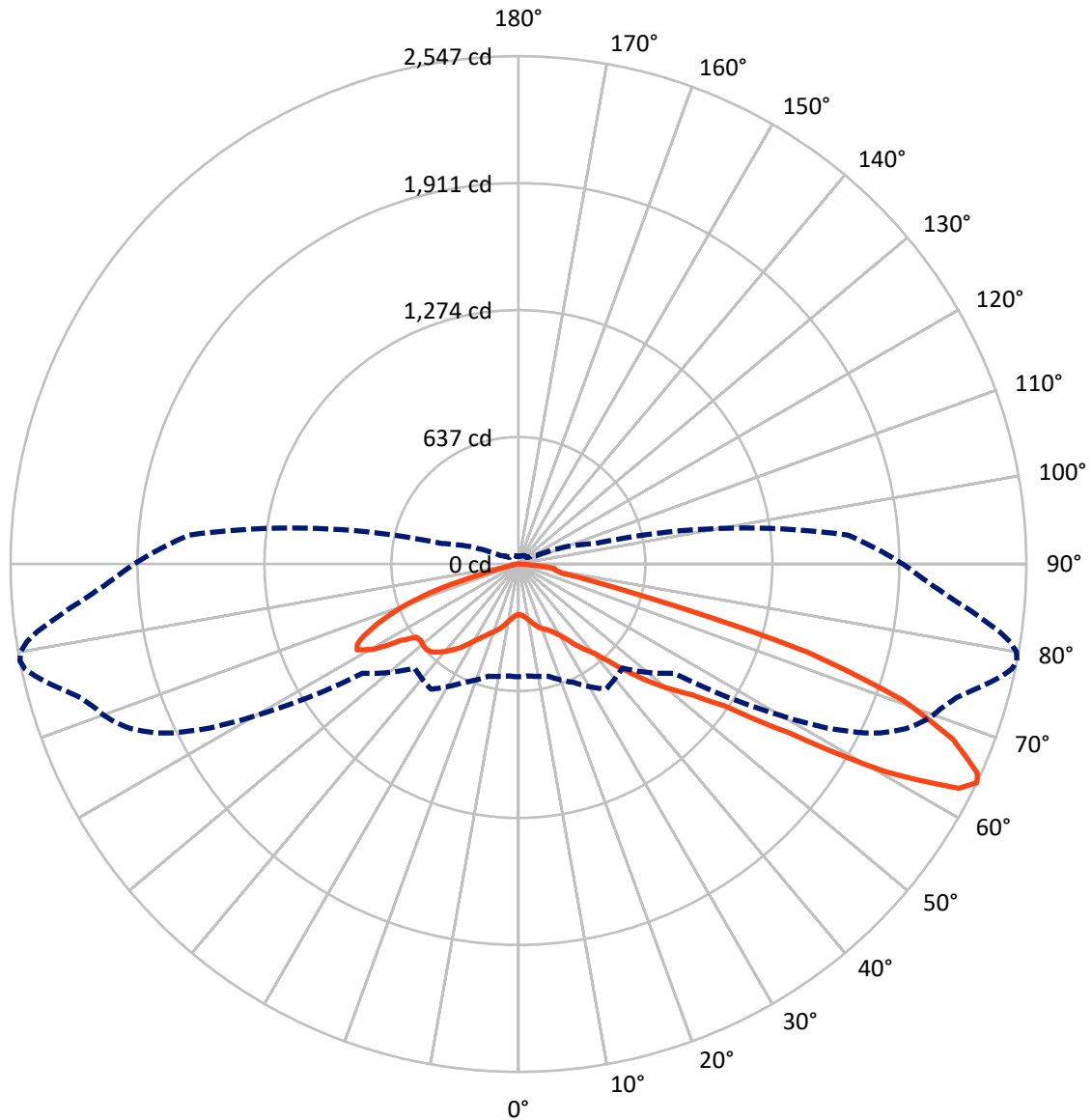
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 64-Deg Vertical

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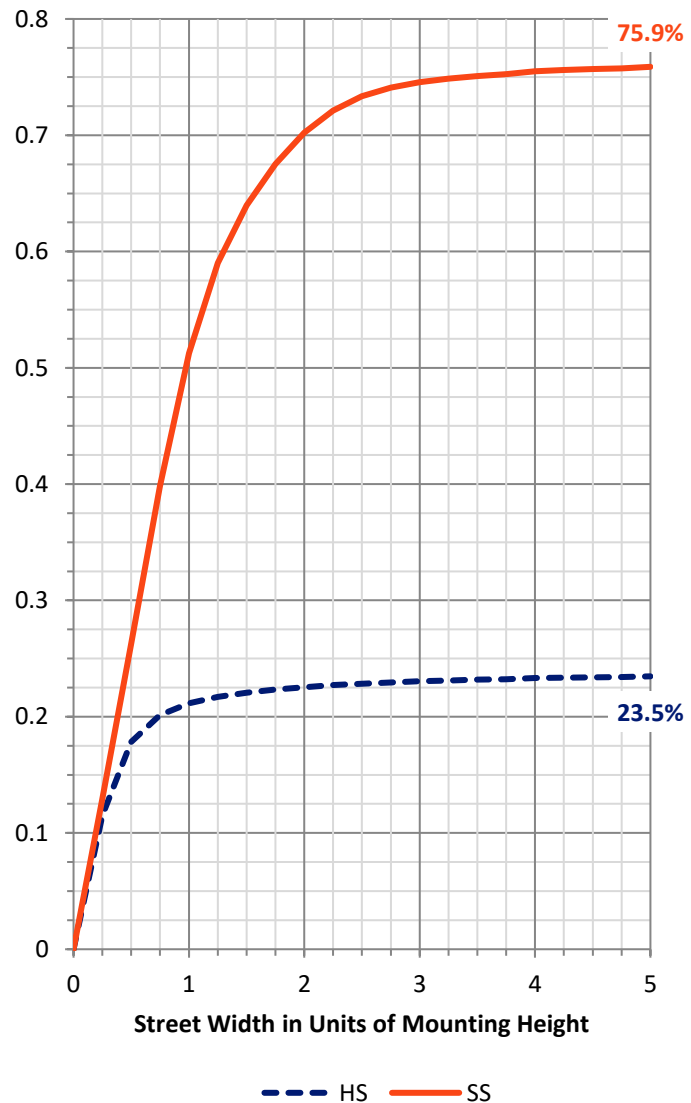
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	579.0	0.0	579.0
	% Fixture	23.8	0.0	23.8
<b>Street Side</b>	Lumens	1850.0	0.0	1850.0
	% Fixture	76.2	0.0	76.2
<b>Total</b>	Lumens	2428.9	0.0	2428.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.2	1.0
10°-20°	81.6	3.4
20°-30°	140.1	5.8
30°-40°	234.1	9.6
40°-50°	401.1	16.5
50°-60°	541.0	22.3
60°-70°	684.4	28.2
70°-80°	273.1	11.2
80°-90°	48.4	2.0
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°	2428.9	100.0
0°-180°	2428.9	100.0



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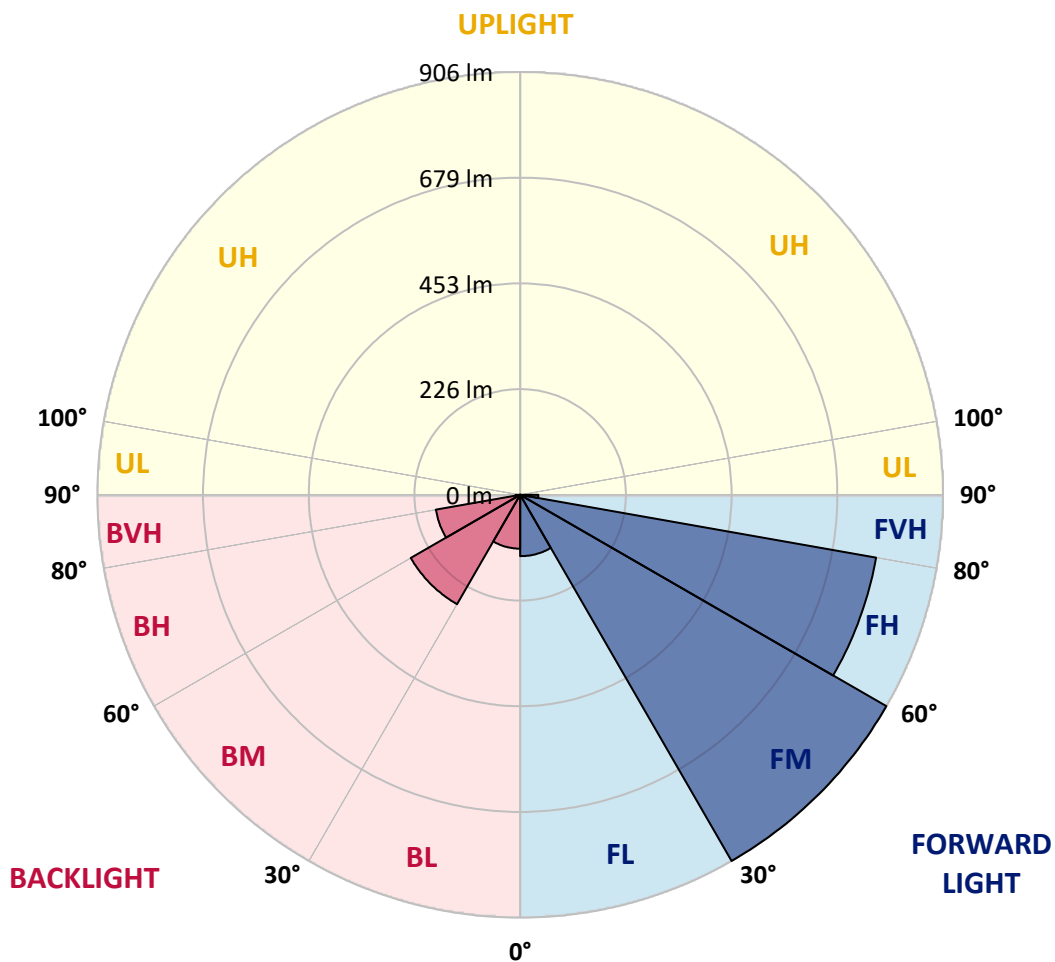
CATALOG NUMBER: ECM-E01-LED-E1-SL2-8030

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	131.4	5.4			
FM (30°-60°)	905.7	37.3			
FH (60°-80°)	774.0	31.9			G1/1800
FVH (80°-90°)	38.8	1.6			G1/100
BL (0°-30°)	115.4	4.8	B1/500		
BM (30°-60°)	270.5	11.1	B1/1000		
BH (60°-80°)	183.4	7.6	B1/500		G1/500
BVH (80°-90°)	9.6	0.4			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

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

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0
2.5°	252.9	253.2	252.9	253.8	254.3	255.2	255.2	255.2	255.2	255.2	255.2
5°	252.6	252.9	252.6	254.0	255.4	257.1	258.8	259.4	259.4	259.7	259.9
7.5°	255.2	255.4	255.2	256.9	258.8	261.6	264.7	266.4	266.7	267.0	267.5
10°	263.0	262.5	261.4	263.0	265.0	269.2	272.9	275.7	276.5	276.8	278.0
12.5°	273.5	273.2	271.2	270.4	271.5	276.3	283.0	287.0	287.8	288.1	289.2
15°	281.3	280.5	278.8	277.7	279.6	284.7	293.7	298.8	300.5	300.7	302.7
17.5°	286.4	285.8	283.0	282.2	285.3	293.1	304.4	310.6	311.7	312.6	314.8
20°	294.8	293.1	288.9	285.3	287.8	299.9	313.1	319.6	321.3	322.1	324.1
22.5°	306.1	304.7	299.6	290.3	290.3	303.8	321.0	328.3	329.7	331.4	333.7
25°	325.5	324.4	314.5	298.8	294.8	307.8	328.3	338.2	339.6	341.5	344.9
27.5°	345.5	344.1	333.1	312.0	302.7	315.1	339.0	350.8	352.8	355.0	359.0
30°	371.1	368.5	357.6	333.1	318.2	326.9	355.9	370.8	373.0	375.9	381.2
32.5°	428.5	429.6	409.6	383.7	357.6	353.9	382.0	400.3	403.7	407.4	414.7
35°	521.9	517.4	510.1	483.6	454.6	425.9	433.0	452.7	456.3	457.4	460.5
37.5°	581.5	584.0	589.9	589.9	568.3	556.2	536.2	526.7	527.5	528.6	526.1
40°	614.7	620.1	640.3	667.6	687.3	698.3	694.9	650.2	644.8	637.8	615.3
42.5°	638.6	644.0	678.6	730.9	779.8	818.7	840.1	804.9	800.9	784.1	757.1
45°	653.2	657.5	699.1	773.4	847.4	913.5	972.0	959.6	958.5	944.1	908.7
47.5°	650.4	654.1	697.4	786.9	883.9	973.7	1064.3	1086.8	1087.9	1084.2	1062.6
50°	608.8	617.5	660.6	757.1	863.7	997.0	1123.9	1182.7	1184.4	1187.8	1179.3
52.5°	571.7	578.4	617.0	703.3	805.7	974.0	1159.6	1253.0	1267.4	1275.6	1291.3
55°	556.5	560.4	589.9	663.4	757.9	912.4	1171.7	1304.0	1329.6	1345.0	1381.1
57.5°	553.7	556.8	579.5	635.5	726.1	848.8	1167.8	1372.3	1412.8	1442.1	1511.9
60°	572.5	575.3	591.4	638.3	704.2	802.4	1131.8	1462.4	1519.2	1598.0	1710.5
62.5°	586.6	588.0	607.7	673.5	728.4	757.1	1040.1	1525.4	1626.4	1726.5	1893.9
64°	566.0	563.2	582.6	655.2	765.8	737.6	955.1	1522.3	1640.7	1751.8	1933.0
65°	535.9	537.9	555.3	619.5	759.3	736.8	899.4	1488.5	1611.5	1729.3	1914.7
67.5°	416.4	424.0	428.7	487.5	622.0	760.7	753.1	1273.6	1397.1	1509.6	1728.8
70°	223.9	223.1	233.8	280.2	432.7	645.7	646.2	897.7	1034.5	1174.3	1392.3
72.5°	82.4	86.6	95.1	128.0	224.8	465.9	592.2	622.6	683.6	794.8	1028.5
75°	47.3	47.8	49.5	60.2	108.3	257.1	550.3	550.8	555.3	573.6	700.8
77.5°	36.9	35.7	36.6	39.1	59.1	135.3	441.4	523.3	522.7	519.9	538.5
80°	27.6	28.7	30.4	30.4	36.6	72.6	250.9	465.6	481.4	493.2	499.9
82.5°	22.2	23.1	27.3	27.3	26.7	41.1	118.4	344.9	394.4	426.5	476.3
85°	14.3	15.2	23.1	22.8	21.7	24.2	61.9	115.6	124.6	151.9	216.1
87.5°	3.9	4.8	10.7	9.3	11.3	9.0	23.1	35.2	43.3	49.0	61.6
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):**

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0
2.5°	255.2	255.2	255.2	255.4	255.4	255.4	255.4	255.4	255.7	255.2	255.2
5°	260.2	259.9	260.2	260.2	261.1	260.8	261.1	261.1	260.8	261.4	261.4
7.5°	268.4	267.8	268.4	268.7	269.0	270.1	270.1	270.6	270.9	271.2	270.6
10°	278.2	279.1	279.4	279.4	280.8	281.3	281.3	282.2	283.0	283.6	283.3
12.5°	290.3	290.9	291.2	292.9	293.1	294.0	295.4	296.2	296.2	297.6	298.5
15°	303.8	304.4	306.1	306.7	307.8	309.2	310.0	310.9	310.9	313.4	314.2
17.5°	315.4	316.5	317.6	318.5	320.4	321.8	323.2	324.1	325.5	326.6	328.6
20°	325.2	326.6	328.0	329.7	331.1	332.5	334.2	335.3	337.0	338.7	340.7
22.5°	334.8	336.5	338.2	339.6	341.5	342.9	344.3	346.3	347.4	349.1	351.4
25°	345.2	348.0	349.7	351.7	353.6	355.6	357.3	359.0	360.7	362.9	365.2
27.5°	361.8	363.2	365.4	366.6	369.9	372.2	374.5	374.7	377.0	381.2	381.8
30°	383.5	386.0	387.4	391.3	391.9	392.7	396.4	398.9	401.7	405.1	406.5
32.5°	416.1	418.3	420.3	421.4	424.5	429.6	430.2	432.4	437.2	438.0	443.1
35°	463.9	464.5	467.6	469.3	473.2	476.0	477.4	479.4	481.9	487.8	489.2
37.5°	521.3	526.1	522.1	518.2	525.2	524.4	526.1	523.8	530.6	530.9	533.4
40°	610.5	608.5	600.1	591.1	586.9	584.3	579.3	578.1	581.8	580.1	580.9
42.5°	741.9	723.3	709.0	698.3	685.0	670.7	662.5	650.2	650.2	646.5	649.9
45°	896.3	875.5	848.8	823.5	807.1	788.3	768.9	755.9	742.7	732.9	741.6
47.5°	1048.5	1034.5	1004.6	981.3	948.6	920.5	889.8	863.1	847.4	835.8	837.5
50°	1180.7	1167.8	1152.3	1120.8	1096.1	1067.4	1035.0	999.8	965.8	952.0	940.2
52.5°	1292.2	1287.6	1274.4	1259.8	1239.5	1208.9	1188.3	1154.9	1114.6	1085.7	1073.3
55°	1390.6	1398.5	1405.5	1402.4	1395.1	1391.2	1365.9	1343.1	1315.8	1307.3	1281.7
57.5°	1545.6	1568.4	1595.4	1610.3	1625.0	1658.4	1666.6	1657.9	1661.3	1659.0	1645.5
60°	1765.1	1820.2	1867.5	1905.2	1945.4	1984.5	2030.6	2061.0	2073.7	2122.6	2121.8
62.5°	1953.3	2026.7	2087.2	2132.5	2179.5	2214.9	2244.7	2275.1	2312.3	2347.7	2392.4
64°	2004.5	2062.2	2111.4	2151.9	2185.7	2214.6	2237.4	2265.3	2295.9	2341.8	2391.3
65°	1978.0	2043.0	2078.7	2115.3	2145.7	2168.2	2191.6	2216.9	2255.7	2292.0	2344.9
67.5°	1798.3	1847.5	1899.3	1933.3	1962.6	1975.8	1997.7	2018.8	2040.5	2077.1	2143.2
70°	1516.4	1571.5	1646.1	1678.1	1708.5	1713.3	1733.8	1749.6	1763.9	1812.6	1845.2
72.5°	1137.7	1244.6	1317.8	1374.0	1380.2	1404.1	1412.6	1419.0	1435.3	1444.3	1454.2
75°	784.1	880.3	942.5	963.8	990.0	977.3	962.7	911.2	911.5	867.9	818.4
77.5°	551.7	566.6	567.2	567.4	532.8	512.6	489.5	460.0	448.4	425.4	393.9
80°	500.2	498.5	488.1	475.4	456.6	429.6	401.7	382.3	367.1	350.0	327.5
82.5°	482.8	486.7	479.1	468.4	457.4	430.7	398.6	368.3	343.2	315.9	288.4
85°	235.2	241.9	263.9	278.2	281.6	265.0	242.2	214.7	188.2	158.4	144.6
87.5°	70.6	75.7	77.4	82.1	88.1	80.2	70.6	63.3	50.9	44.2	34.6
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):**

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0
2.5°	255.2	255.4	255.4	255.2	255.4	255.4	255.7	255.4	255.4	255.4	255.2
5°	260.8	261.9	261.6	261.6	262.2	262.2	261.9	262.5	262.2	262.2	261.9
7.5°	271.5	271.5	272.3	272.6	272.0	272.0	272.6	272.9	273.5	273.7	273.7
10°	283.9	285.3	285.3	285.6	285.8	286.7	287.0	287.0	287.5	287.5	288.1
12.5°	299.1	299.6	300.2	301.6	301.9	301.9	303.3	303.0	303.0	304.4	304.7
15°	315.4	316.2	317.6	318.2	318.7	320.2	321.0	321.8	321.6	323.5	324.1
17.5°	329.7	330.6	332.3	333.7	334.5	335.3	335.9	337.0	338.7	340.1	340.4
20°	341.3	342.4	344.3	346.0	347.4	348.3	350.5	351.7	352.2	353.4	354.8
22.5°	352.5	354.5	356.4	357.0	360.1	360.9	362.6	364.3	365.4	368.0	368.8
25°	366.6	368.3	370.8	372.5	374.5	376.1	377.8	379.2	381.8	384.0	385.1
27.5°	385.1	386.5	388.5	391.6	393.3	394.4	397.5	400.3	401.5	403.7	405.7
30°	409.6	411.0	413.8	416.9	418.3	422.0	424.2	426.2	428.5	431.6	434.4
32.5°	445.3	447.0	449.6	453.5	453.5	456.0	460.8	465.0	466.7	470.4	472.4
35°	492.3	492.6	495.4	501.3	503.0	502.5	507.0	510.9	512.0	517.6	521.3
37.5°	537.9	538.7	542.1	544.4	547.5	549.7	552.8	558.7	558.7	566.9	570.3
40°	585.2	589.4	589.9	590.5	595.6	604.6	607.7	613.6	618.9	626.8	630.5
42.5°	653.8	658.3	663.7	669.8	677.4	682.5	688.4	696.9	699.1	709.0	711.5
45°	747.8	753.1	767.5	768.9	782.4	789.1	799.0	810.2	813.0	819.5	816.1
47.5°	841.5	847.6	863.4	879.7	892.1	903.9	906.7	911.5	915.7	911.8	912.9
50°	945.3	954.3	969.2	983.5	992.8	1006.3	1006.3	1007.4	1003.5	997.0	986.6
52.5°	1066.8	1068.2	1077.8	1089.0	1097.5	1100.3	1100.3	1093.8	1084.2	1073.8	1053.6
55°	1269.6	1254.2	1257.0	1257.0	1250.8	1245.7	1241.8	1226.0	1207.2	1188.3	1169.8
57.5°	1635.1	1649.7	1606.1	1594.3	1594.9	1556.3	1540.6	1513.6	1493.3	1459.5	1431.1
60°	2156.4	2146.3	2131.9	2118.4	2119.5	2068.6	2032.9	1992.7	1957.5	1883.2	1851.7
62.5°	2432.4	2468.4	2488.9	2478.5	2454.6	2422.8	2364.3	2303.3	2241.4	2178.3	2121.8
64°	2442.5	2490.1	2530.6	2547.4	2536.2	2496.0	2436.3	2360.4	2286.7	2212.4	2144.0
65°	2393.6	2453.8	2506.1	2529.7	2530.3	2494.8	2435.2	2358.7	2279.9	2193.8	2122.6
67.5°	2190.4	2259.6	2311.1	2350.8	2384.8	2366.8	2325.5	2244.2	2169.6	2072.0	1994.1
70°	1885.8	1928.5	1986.5	2044.4	2071.7	2075.9	2060.5	2019.4	1932.2	1852.8	1752.4
72.5°	1453.4	1519.7	1485.7	1521.4	1544.2	1522.0	1524.8	1454.8	1426.6	1356.9	1286.2
75°	769.7	772.0	757.3	651.0	637.8	589.1	643.1	546.6	513.7	483.3	444.2
77.5°	357.0	310.9	267.8	223.7	182.9	160.1	124.9	110.0	99.0	87.2	89.7
80°	298.5	263.0	225.3	186.8	157.0	126.9	101.8	79.1	63.3	53.2	48.4
82.5°	264.2	232.9	206.8	183.1	161.8	132.2	108.6	83.8	64.4	48.7	37.7
85°	119.3	93.4	85.0	67.0	56.8	48.4	38.5	31.8	26.2	22.2	17.4
87.5°	27.9	19.1	16.3	15.5	13.5	12.7	10.7	11.3	9.3	7.3	7.6
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):**

	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°
0°	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0	254.0
2.5°	255.2	255.2	255.4	255.4	255.7	256.3	257.1	256.3	256.3	256.3	256.6
5°	262.5	262.8	262.5	262.5	263.0	263.9	264.2	262.5	261.6	260.8	259.7
7.5°	273.2	274.3	274.0	274.0	274.6	274.6	274.0	271.5	269.0	265.0	261.6
10°	288.1	288.6	288.6	288.6	289.5	290.1	287.5	281.9	275.1	268.1	261.9
12.5°	305.8	305.5	306.4	307.2	306.7	306.7	301.9	293.1	282.2	270.6	259.9
15°	324.4	324.7	324.7	326.1	326.3	325.2	317.6	304.1	287.2	269.8	252.6
17.5°	341.8	342.4	342.7	343.8	345.2	342.1	331.1	312.8	288.1	261.9	238.8
20°	356.4	357.3	358.1	359.0	360.4	358.1	343.5	317.1	283.6	249.3	222.8
22.5°	369.7	371.1	371.6	373.0	375.3	372.5	354.8	317.1	273.5	235.5	204.8
25°	385.7	387.4	390.2	390.8	394.7	391.6	363.8	314.8	261.9	218.0	185.4
27.5°	406.8	408.5	411.0	412.4	417.2	413.0	370.5	308.9	247.6	199.2	166.5
30°	434.7	436.3	439.4	440.8	449.6	435.5	375.0	299.9	231.0	177.2	144.9
32.5°	473.5	478.0	477.7	481.4	489.2	460.5	377.0	287.2	210.2	155.0	124.6
35°	524.4	527.5	530.3	535.4	539.0	487.3	375.6	270.6	184.3	131.9	106.9
37.5°	573.4	578.7	580.7	584.0	583.2	505.3	369.9	244.8	156.1	111.4	94.8
40°	634.4	637.5	643.7	646.8	631.9	522.4	356.7	210.2	128.0	97.9	86.9
42.5°	715.7	719.6	716.5	715.7	687.0	532.0	331.4	175.6	107.2	88.1	80.5
45°	814.5	816.1	806.9	800.7	750.6	531.2	294.6	142.9	92.8	80.7	74.8
47.5°	903.6	900.3	888.2	878.9	805.7	511.5	248.4	117.9	85.2	74.8	70.3
50°	977.3	962.4	949.5	937.7	849.9	481.4	204.2	99.3	77.9	70.1	65.8
52.5°	1044.0	1023.8	1008.6	988.6	890.1	441.7	169.1	86.6	70.6	65.3	61.0
55°	1142.8	1119.1	1099.7	1080.0	961.3	410.7	146.3	77.1	63.3	60.2	56.3
57.5°	1426.1	1362.8	1345.6	1327.9	1152.0	404.0	133.1	69.5	57.7	55.4	52.9
60°	1813.5	1772.4	1744.8	1701.5	1468.8	425.7	123.2	63.9	53.7	52.3	50.1
62.5°	2066.1	2016.6	1971.0	1926.8	1654.8	425.1	111.1	60.2	51.5	51.2	47.8
64°	2082.1	2026.7	1975.8	1928.2	1660.7	397.2	100.2	57.7	51.5	51.5	46.4
65°	2055.7	2000.0	1947.4	1897.9	1626.9	375.9	92.8	56.5	52.3	52.0	45.6
67.5°	1920.9	1864.9	1805.9	1752.7	1484.0	294.6	73.4	54.6	56.8	54.9	44.7
70°	1682.6	1619.1	1574.6	1536.3	1273.9	205.7	58.2	55.7	62.2	58.2	47.0
72.5°	1219.6	1167.8	1167.2	1123.9	964.4	130.5	47.0	55.4	61.9	57.7	48.7
75°	473.8	406.2	404.0	419.2	410.2	70.6	40.5	49.0	50.6	48.1	43.0
77.5°	81.0	79.6	78.8	83.0	91.4	39.1	37.1	41.6	37.7	34.0	35.7
80°	45.0	43.0	42.5	42.5	39.9	32.1	32.9	33.2	27.3	25.3	29.5
82.5°	31.2	29.0	27.9	27.0	26.2	28.7	29.3	26.2	19.7	19.4	27.6
85°	15.2	14.3	14.1	14.1	16.0	27.0	24.2	20.3	13.2	13.2	29.8
87.5°	6.5	6.5	5.6	5.6	8.7	17.2	11.0	8.4	5.3	6.2	12.1
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):**

	165°	175°	180°
0°	254.0	254.0	254.0
2.5°	256.3	256.9	256.6
5°	258.3	258.3	257.7
7.5°	258.0	256.9	256.3
10°	256.3	253.2	252.9
12.5°	251.8	246.7	245.3
15°	238.8	232.1	230.4
17.5°	222.5	214.7	212.4
20°	204.0	195.0	191.9
22.5°	186.0	175.6	172.5
25°	166.3	155.9	154.2
27.5°	144.6	134.8	132.2
30°	124.6	116.2	114.2
32.5°	106.6	100.7	100.7
35°	94.8	89.7	89.7
37.5°	85.5	83.3	83.0
40°	79.3	77.4	77.1
42.5°	74.6	72.3	72.0
45°	69.5	67.2	67.2
47.5°	64.7	62.2	62.5
50°	59.9	58.0	58.0
52.5°	56.0	54.0	53.7
55°	52.3	50.4	50.1
57.5°	49.0	46.7	46.4
60°	45.6	43.3	42.8
62.5°	42.8	40.2	39.7
64°	41.1	38.5	38.0
65°	40.2	37.4	37.1
67.5°	39.4	35.7	35.4
70°	42.5	35.2	33.8
72.5°	42.8	34.3	32.6
75°	40.5	32.6	31.2
77.5°	35.7	29.8	28.1
80°	34.3	23.4	20.5
82.5°	31.5	19.1	16.0
85°	25.9	12.4	11.5
87.5°	14.9	8.2	5.9
90°	0.0	0.0	0.0

(END OF REPORT)