

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: P141251

Luminaire Tested: **ECM-E04-LED-E1-SL4-7050**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P141251  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33692)  
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-SL4-7050  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL  
Light Source: (84) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11588.7 lumens  
Efficiency: N/A  
Efficacy: 119.2 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

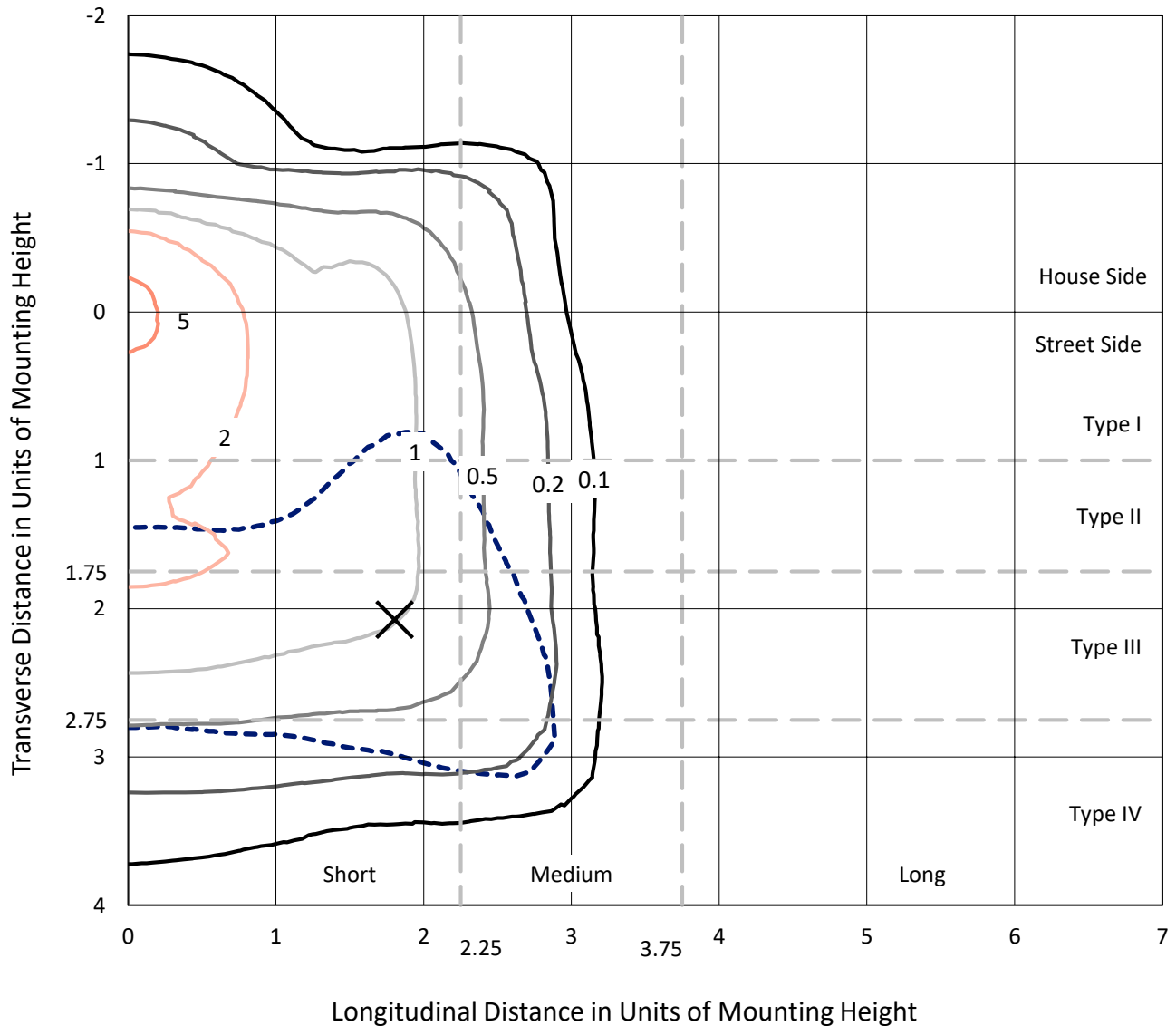
Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

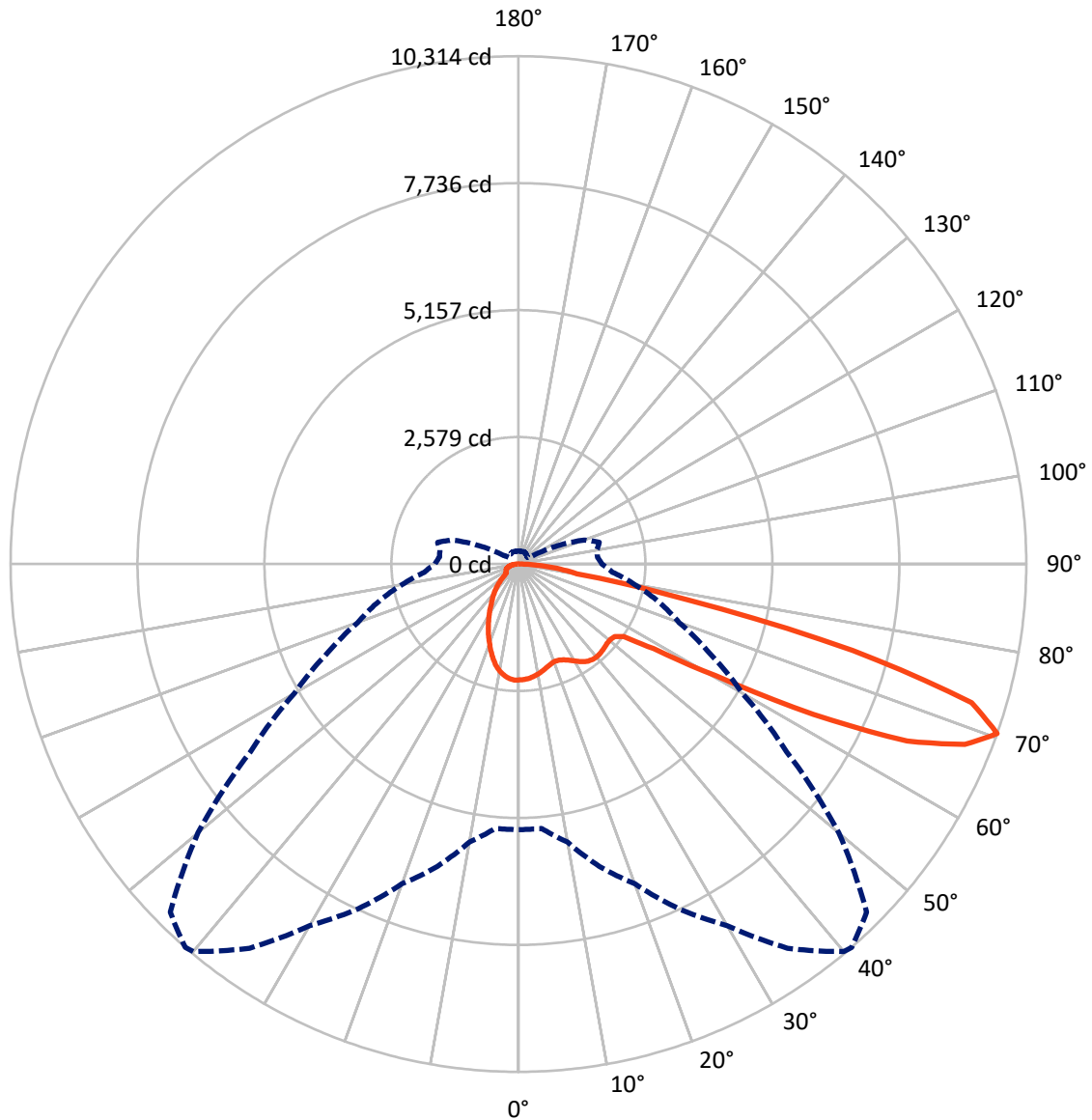
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.9 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 41-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2486.4	0.0	2486.4
	% Fixture	21.5	0.0	21.5
<b>Street Side</b>	Lumens	9102.3	0.0	9102.3
	% Fixture	78.5	0.0	78.5
<b>Total</b>	Lumens	11588.7	0.0	11588.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.1	1.9
10°-20°	587.3	5.1
20°-30°	849.1	7.3
30°-40°	1080.7	9.3
40°-50°	1273.5	11.0
50°-60°	1948.5	16.8
60°-70°	3621.6	31.3
70°-80°	1747.9	15.1
80°-90°	261.1	2.3
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°	11588.7	100.0
0°-180°	11588.7	100.0



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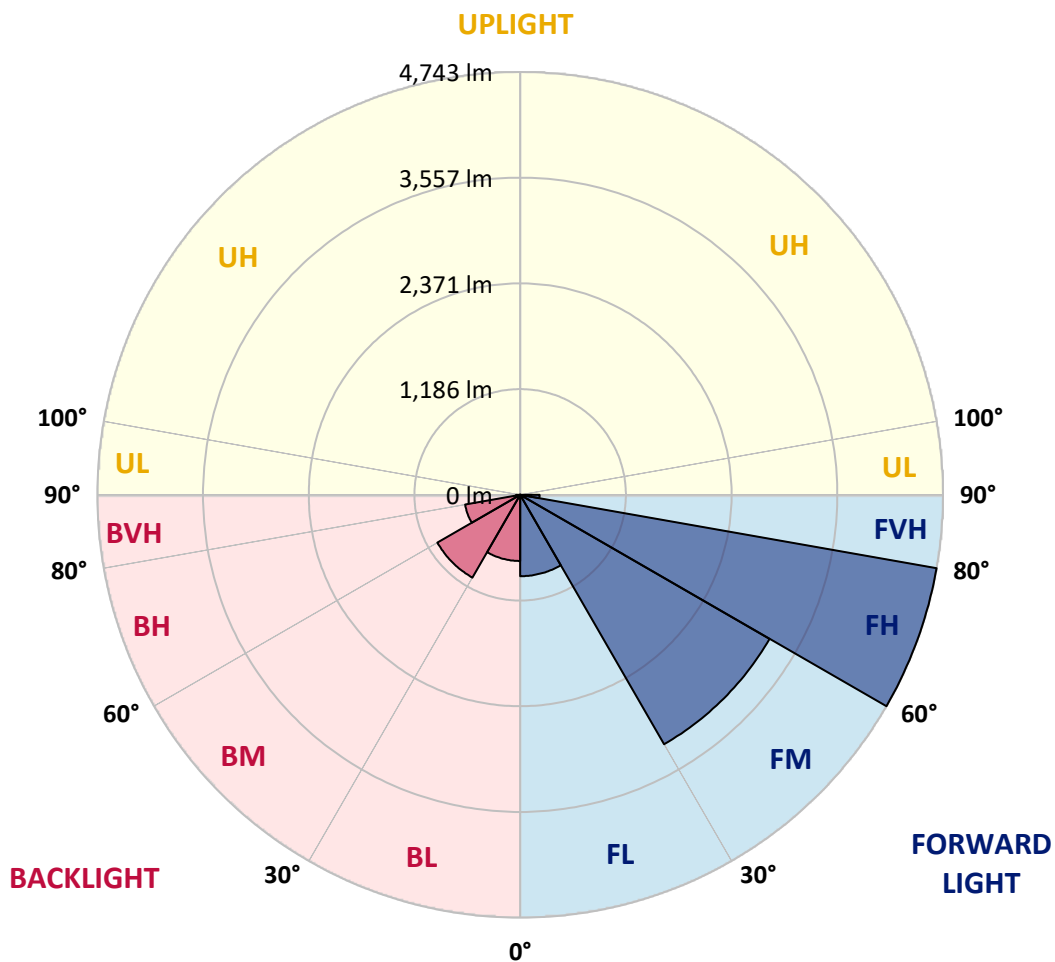
CATALOG NUMBER: ECM-E04-LED-E1-SL4-7050

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	912.7	7.9			
FM (30°-60°)	3230.0	27.9			
FH (60°-80°)	4742.6	40.9			G2/5000
FVH (80°-90°)	217.0	1.9			G2/225
BL (0°-30°)	742.7	6.4	B2/1000		
BM (30°-60°)	1072.7	9.3	B2/2500		
BH (60°-80°)	627.0	5.4	B2/1000		G2/1000
BVH (80°-90°)	44.1	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	41°	45°
0°	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6
2.5°	2354.6	2357.3	2355.9	2353.2	2350.5	2351.8	2350.5	2349.1	2349.1	2347.7	2346.4
5°	2343.6	2349.1	2345.0	2342.3	2338.2	2338.2	2336.8	2334.0	2331.3	2329.9	2327.2
7.5°	2320.4	2325.8	2323.1	2320.4	2316.3	2313.5	2308.1	2305.3	2302.6	2301.2	2297.1
10°	2288.9	2291.6	2288.9	2283.4	2280.7	2279.3	2276.6	2271.1	2265.6	2262.9	2258.8
12.5°	2247.9	2249.2	2246.5	2243.8	2239.6	2239.6	2235.5	2231.4	2223.2	2220.5	2210.9
15°	2212.3	2208.2	2205.4	2204.1	2202.7	2195.9	2197.2	2190.4	2176.7	2172.6	2161.7
17.5°	2202.7	2198.6	2197.2	2193.1	2190.4	2182.2	2174.0	2160.3	2137.0	2132.9	2116.5
20°	2230.1	2230.1	2226.0	2223.2	2219.1	2204.1	2186.3	2160.3	2117.9	2108.3	2087.8
22.5°	2295.7	2288.9	2286.2	2286.2	2284.8	2262.9	2230.1	2189.0	2132.9	2120.6	2085.0
25°	2398.4	2386.0	2390.1	2388.8	2386.0	2354.6	2306.7	2247.9	2171.2	2154.8	2108.3
27.5°	2520.1	2522.9	2521.5	2516.0	2507.8	2473.6	2405.2	2325.8	2230.1	2213.7	2153.5
30°	2647.4	2650.1	2658.3	2654.2	2648.7	2596.7	2511.9	2425.7	2309.4	2287.5	2213.7
32.5°	2795.1	2804.7	2811.5	2812.9	2791.0	2719.9	2620.0	2510.5	2387.4	2365.5	2273.8
35°	2966.1	2960.7	2973.0	2967.5	2929.2	2832.1	2708.9	2578.9	2453.1	2424.3	2325.8
37.5°	3138.5	3145.4	3133.0	3109.8	3049.6	2922.3	2770.5	2624.1	2484.5	2457.2	2354.6
40°	3305.4	3301.3	3272.6	3232.9	3142.6	2979.8	2804.7	2644.6	2495.5	2466.8	2361.4
42.5°	3429.9	3419.0	3375.2	3310.9	3194.6	3007.2	2814.3	2644.6	2488.6	2458.5	2351.8
45°	3484.7	3473.7	3431.3	3349.2	3211.0	3001.7	2797.8	2621.4	2465.4	2439.4	2332.7
47.5°	3484.7	3480.5	3434.0	3354.7	3206.9	2986.7	2773.2	2592.6	2442.1	2416.1	2316.3
50°	3457.3	3454.6	3413.5	3335.5	3193.2	2978.4	2766.4	2587.2	2440.8	2414.8	2323.1
52.5°	3549.0	3531.2	3488.8	3398.5	3243.9	3012.6	2800.6	2614.5	2473.6	2447.6	2353.2
55°	4664.0	4648.9	4434.1	4056.5	3661.1	3300.0	2990.8	2777.3	2635.0	2595.4	2527.0
57.5°	6467.2	6445.3	6225.0	5881.6	5201.7	4428.7	3822.6	3466.9	3267.1	3238.4	3197.3
60°	7199.2	7190.9	7097.9	6958.4	6701.2	6301.7	5738.0	5146.9	4687.2	4613.4	4618.8
62.5°	7619.2	7598.7	7553.5	7519.3	7431.7	7268.9	7163.6	6998.0	6775.0	6724.4	6404.3
65°	7854.5	7851.8	7876.4	7905.1	7899.6	7948.9	8002.3	8318.3	8689.1	8672.6	8334.7
67.5°	7504.3	7527.5	7656.1	7853.1	8059.7	8278.6	8686.3	9319.8	9778.1	9778.1	9481.2
70°	5394.6	5390.5	5732.5	6356.4	6911.8	7730.0	8481.1	9525.0	10274.7	10314.4	9999.7
72.5°	3232.9	3308.2	3518.9	3802.1	4274.1	5264.6	6661.5	8537.2	9583.8	9626.2	9250.0
75°	2271.1	2215.0	2206.8	2223.2	2303.9	2547.5	3316.4	5240.0	6947.4	7013.1	6649.2
77.5°	1453.0	1440.7	1446.1	1463.9	1468.0	1491.3	1528.2	1796.4	3220.6	3535.3	3518.9
80°	1253.2	1249.1	1250.5	1230.0	1190.3	1175.2	1221.7	1184.8	1150.6	1198.5	1132.8
82.5°	840.0	855.1	879.7	912.5	991.9	1019.3	1004.2	997.4	889.3	864.7	767.5
85°	622.5	614.3	623.9	623.9	603.4	582.8	597.9	582.8	515.8	483.0	426.9
87.5°	336.6	337.9	365.3	376.2	374.9	320.1	264.1	228.5	206.6	191.5	161.4
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):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6
2.5°	2347.7	2343.6	2345.0	2345.0	2343.6	2346.4	2342.3	2340.9	2342.3	2342.3	2342.3
5°	2324.5	2319.0	2319.0	2317.6	2314.9	2314.9	2309.4	2308.1	2305.3	2309.4	2306.7
7.5°	2291.6	2283.4	2276.6	2271.1	2268.4	2264.3	2257.4	2254.7	2252.0	2250.6	2247.9
10°	2252.0	2242.4	2228.7	2217.8	2212.3	2201.3	2193.1	2182.2	2182.2	2176.7	2171.2
12.5°	2204.1	2190.4	2176.7	2161.7	2152.1	2137.0	2123.4	2111.0	2101.5	2089.2	2080.9
15°	2156.2	2135.7	2120.6	2105.6	2087.8	2067.3	2050.8	2031.7	2013.9	1994.7	1989.3
17.5°	2104.2	2087.8	2074.1	2056.3	2037.2	2012.5	1990.6	1959.2	1937.3	1914.0	1896.2
20°	2070.0	2050.8	2035.8	2019.4	1998.9	1970.1	1941.4	1905.8	1873.0	1838.8	1812.8
22.5°	2052.2	2020.7	2007.1	1992.0	1971.5	1940.0	1907.2	1863.4	1822.4	1777.2	1736.2
25°	2059.1	2016.6	1989.3	1972.9	1955.1	1923.6	1881.2	1831.9	1785.4	1728.0	1681.4
27.5°	2089.2	2031.7	1989.3	1961.9	1942.8	1909.9	1866.1	1810.0	1754.0	1693.8	1637.7
30°	2128.8	2056.3	2001.6	1961.9	1933.2	1897.6	1849.7	1789.5	1728.0	1660.9	1596.6
32.5°	2174.0	2085.0	2019.4	1964.6	1918.1	1873.0	1823.7	1760.8	1696.5	1625.4	1562.4
35°	2209.5	2106.9	2031.7	1959.2	1897.6	1841.5	1784.1	1725.2	1660.9	1593.9	1526.8
37.5°	2230.1	2120.6	2031.7	1940.0	1864.8	1805.9	1745.7	1688.3	1626.7	1561.0	1502.2
40°	2238.3	2126.1	2023.5	1918.1	1830.6	1763.5	1707.4	1648.6	1593.9	1536.4	1484.4
42.5°	2234.2	2122.0	2012.5	1897.6	1803.2	1730.7	1669.1	1614.4	1569.3	1521.4	1477.6
45°	2217.8	2108.3	2001.6	1888.0	1793.6	1719.8	1656.8	1604.8	1562.4	1518.6	1484.4
47.5°	2204.1	2102.8	2008.4	1911.3	1821.0	1745.7	1677.3	1619.9	1584.3	1550.1	1528.2
50°	2215.0	2117.9	2023.5	1931.8	1844.3	1767.6	1697.9	1644.5	1624.0	1618.5	1611.7
52.5°	2245.1	2149.3	2070.0	2005.7	1966.0	1937.3	1866.1	1853.8	1836.0	1826.5	1803.2
55°	2440.8	2401.1	2472.2	2550.2	2563.9	2650.1	2684.3	2687.0	2656.9	2550.2	2301.2
57.5°	3237.0	3335.5	3365.6	3546.2	3595.5	3557.2	3505.2	3502.4	3409.4	3268.5	2905.9
60°	4659.9	4607.9	4543.6	4425.9	4315.1	4196.1	4031.9	3906.0	3787.0	3570.8	3189.1
62.5°	6148.4	5695.6	5365.8	5027.9	4754.3	4514.9	4276.8	4074.3	3881.4	3581.8	3172.7
65°	7439.9	6517.8	5848.8	5341.2	4917.1	4566.9	4250.8	3974.4	3730.9	3356.0	2941.5
67.5°	8280.0	6954.3	5954.1	5196.2	4597.0	4150.9	3685.8	3249.3	3009.9	2707.6	2496.9
70°	8494.8	6646.4	5250.9	4279.5	3472.3	2940.1	2391.5	1915.4	1695.1	1610.3	1617.1
72.5°	7663.0	5253.7	3722.7	2722.6	2131.6	1689.7	1373.6	1056.2	825.0	692.3	675.9
75°	5006.0	2923.7	1767.6	1231.3	979.6	779.8	614.3	517.2	446.0	359.8	301.0
77.5°	1892.1	1113.7	793.5	647.1	478.8	333.8	259.9	218.9	201.1	195.6	176.5
80°	970.0	773.0	552.7	363.9	254.5	203.9	171.0	145.0	134.1	128.6	131.3
82.5°	654.0	487.1	305.1	218.9	176.5	151.9	120.4	101.2	90.3	88.9	95.8
85°	363.9	243.5	177.9	147.8	130.0	113.6	91.7	75.2	69.8	73.9	86.2
87.5°	113.6	112.2	80.7	65.7	68.4	58.8	43.8	32.8	32.8	42.4	60.2
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):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6	2354.6
2.5°	2342.3	2345.0	2350.5	2346.4	2347.7	2349.1	2353.2	2358.7	2354.6	2351.8	2360.0
5°	2309.4	2309.4	2316.3	2313.5	2319.0	2324.5	2327.2	2336.8	2334.0	2331.3	2342.3
7.5°	2249.2	2250.6	2260.2	2257.4	2268.4	2269.7	2280.7	2288.9	2288.9	2294.4	2303.9
10°	2172.6	2172.6	2180.8	2182.2	2189.0	2194.5	2206.8	2221.9	2224.6	2234.2	2247.9
12.5°	2086.4	2083.7	2090.5	2090.5	2096.0	2102.8	2116.5	2134.3	2137.0	2152.1	2169.9
15°	1979.7	1975.6	1972.9	1975.6	1978.3	1979.7	2000.2	2018.0	2029.0	2045.4	2063.2
17.5°	1877.1	1862.0	1855.2	1855.2	1856.6	1856.6	1864.8	1885.3	1900.3	1926.3	1952.3
20°	1785.4	1759.4	1749.9	1728.0	1723.9	1714.3	1721.1	1744.4	1771.7	1792.3	1812.8
22.5°	1699.2	1671.9	1644.5	1618.5	1598.0	1585.7	1598.0	1613.0	1622.6	1639.0	1644.5
25°	1633.6	1588.4	1550.1	1509.1	1487.2	1476.2	1474.9	1473.5	1465.3	1462.5	1462.5
27.5°	1581.6	1528.2	1470.8	1425.6	1395.5	1375.0	1351.7	1335.3	1314.8	1287.4	1273.7
30°	1537.8	1480.3	1417.4	1364.0	1325.7	1286.1	1238.2	1201.2	1164.3	1131.5	1102.7
32.5°	1498.1	1439.3	1377.7	1321.6	1256.0	1187.5	1127.3	1083.6	1019.3	975.5	938.5
35°	1468.0	1409.2	1351.7	1277.8	1187.5	1100.0	1022.0	957.7	892.0	834.6	785.3
37.5°	1446.1	1396.9	1335.3	1235.4	1121.9	1016.5	934.4	857.8	779.8	701.9	640.3
40°	1439.3	1396.9	1318.9	1188.9	1058.9	945.4	851.0	756.6	670.4	586.9	524.0
42.5°	1443.4	1398.2	1292.9	1147.9	1007.0	883.8	777.1	667.7	565.0	476.1	413.2
45°	1458.4	1398.2	1265.5	1102.7	959.1	827.7	700.5	570.5	451.5	380.3	353.0
47.5°	1503.6	1407.8	1243.6	1069.9	916.7	766.2	614.3	466.5	365.3	335.2	335.2
50°	1573.4	1436.5	1240.9	1045.3	868.8	695.0	507.6	368.0	322.9	321.5	329.7
52.5°	1692.4	1487.2	1254.6	1028.8	818.1	599.2	395.4	317.4	307.8	316.0	328.4
55°	1923.6	1576.1	1273.7	998.7	733.3	469.3	324.2	301.0	305.1	314.7	325.6
57.5°	2346.4	1755.3	1294.3	934.4	593.8	355.7	294.2	295.5	302.4	311.9	321.5
60°	2637.8	1977.0	1335.3	826.4	441.9	294.2	281.8	292.8	301.0	307.8	316.0
62.5°	2662.4	2057.7	1365.4	704.6	328.4	268.2	270.9	287.3	298.3	301.0	305.1
65°	2514.6	1953.7	1279.2	581.5	272.3	254.5	264.1	279.1	290.0	291.4	295.5
67.5°	2191.8	1736.2	1091.8	441.9	249.0	244.9	255.8	265.4	273.6	280.5	285.9
70°	1697.9	1417.4	878.3	343.4	231.2	229.8	239.4	250.4	258.6	265.4	273.6
72.5°	894.8	1007.0	654.0	275.0	212.1	213.4	223.0	232.6	238.1	244.9	253.1
75°	277.7	426.9	403.6	220.3	188.8	194.3	199.7	208.0	217.5	221.6	225.7
77.5°	164.2	173.8	210.7	172.4	164.2	168.3	175.1	182.0	188.8	194.3	198.4
80°	132.7	135.4	136.8	136.8	136.8	142.3	147.8	157.3	162.8	165.5	166.9
82.5°	104.0	110.8	112.2	109.5	113.6	119.0	121.8	127.2	128.6	131.3	134.1
85°	86.2	84.8	87.6	88.9	83.5	83.5	80.7	80.7	86.2	95.8	97.1
87.5°	67.0	58.8	47.9	45.1	42.4	39.7	36.9	36.9	38.3	43.8	47.9
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):**

	160°	165°	170°	175°	180°
0°	2354.6	2354.6	2354.6	2354.6	2354.6
2.5°	2360.0	2358.7	2361.4	2365.5	2362.8
5°	2343.6	2343.6	2349.1	2353.2	2350.5
7.5°	2310.8	2312.2	2320.4	2325.8	2323.1
10°	2258.8	2261.5	2271.1	2279.3	2283.4
12.5°	2180.8	2190.4	2202.7	2210.9	2210.9
15°	2082.3	2097.4	2111.0	2123.4	2116.5
17.5°	1970.1	1987.9	2005.7	2012.5	2005.7
20°	1834.7	1836.0	1847.0	1853.8	1851.1
22.5°	1650.0	1644.5	1650.0	1652.7	1656.8
25°	1461.2	1451.6	1446.1	1454.3	1458.4
27.5°	1268.3	1254.6	1258.7	1249.1	1238.2
30°	1080.8	1068.5	1053.5	1049.4	1056.2
32.5°	915.3	883.8	871.5	848.2	857.8
35°	740.2	708.7	678.6	670.4	664.9
37.5°	596.5	558.2	521.3	508.9	506.2
40°	466.5	435.1	410.4	403.6	400.9
42.5°	379.0	365.3	361.2	361.2	362.6
45°	346.1	347.5	351.6	354.3	355.7
47.5°	339.3	344.8	350.2	355.7	357.1
50°	339.3	343.4	347.5	353.0	354.3
52.5°	336.6	340.7	342.0	344.8	347.5
55°	333.8	335.2	335.2	336.6	339.3
57.5°	327.0	328.4	325.6	327.0	332.5
60°	320.1	321.5	318.8	321.5	322.9
62.5°	310.6	310.6	309.2	310.6	311.9
65°	299.6	295.5	298.3	296.9	298.3
67.5°	285.9	280.5	279.1	279.1	280.5
70°	266.8	262.7	261.3	264.1	266.8
72.5°	243.5	246.3	250.4	254.5	261.3
75°	227.1	231.2	236.7	250.4	259.9
77.5°	203.9	202.5	208.0	223.0	236.7
80°	169.6	171.0	169.6	173.8	176.5
82.5°	130.0	128.6	124.5	124.5	121.8
85°	91.7	87.6	82.1	80.7	79.4
87.5°	46.5	49.3	45.1	41.0	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)