

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: P141250

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141250
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
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11293.9 lumens
Efficiency: N/A
Efficacy: 116.2 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

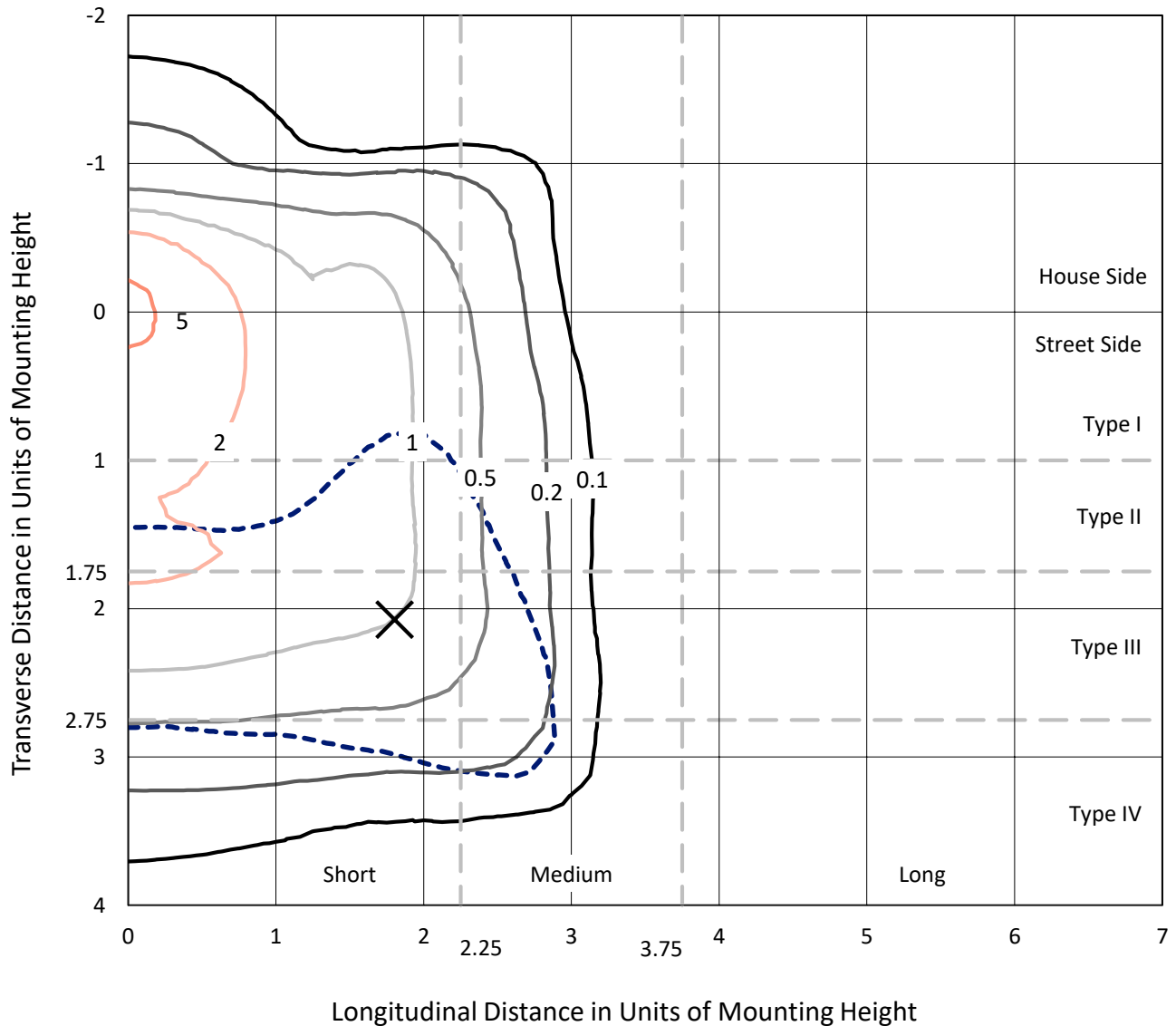
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

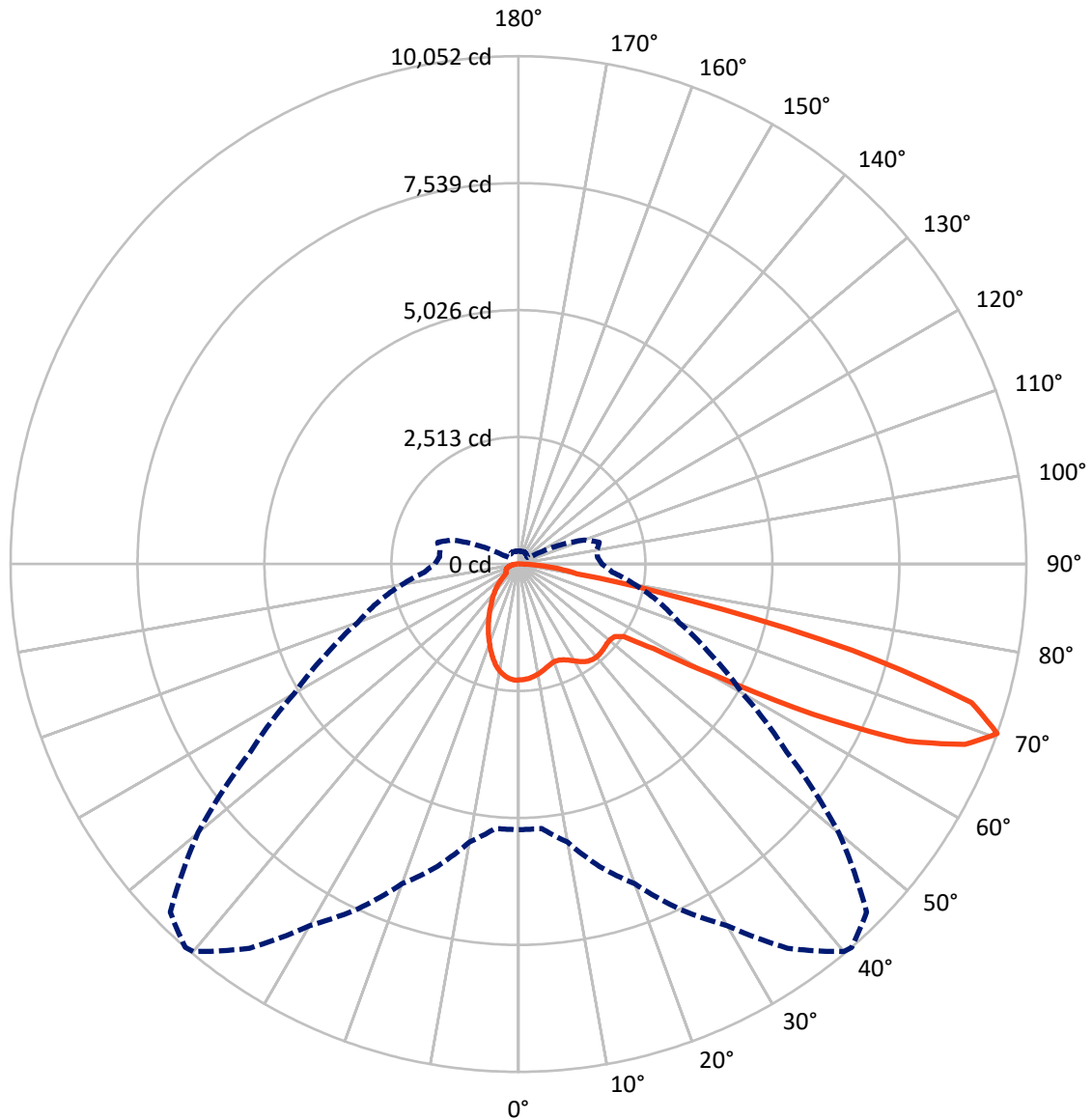


Based on 20 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - Semi-Cutoff

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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
House Side	Lumens	2423.1	0.0	2423.1
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	8870.8	0.0	8870.8
	% Fixture	78.5	0.0	78.5
Total	Lumens	11293.9	0.0	11293.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.5	1.9
10°-20°	572.3	5.1
20°-30°	827.5	7.3
30°-40°	1053.2	9.3
40°-50°	1241.1	11.0
50°-60°	1899.0	16.8
60°-70°	3529.5	31.3
70°-80°	1703.5	15.1
80°-90°	254.4	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°	11293.9	100.0
0°-180°	11293.9	100.0

Coefficient of Utilization



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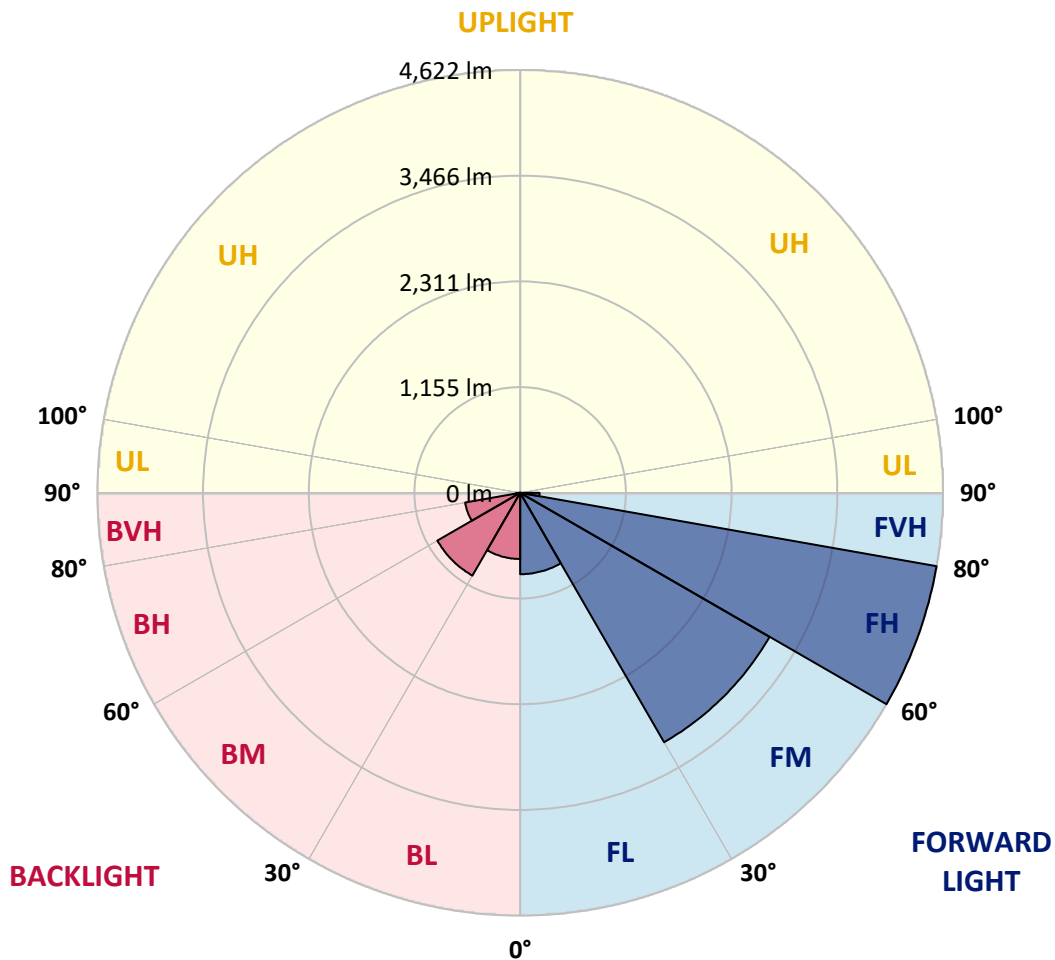
CATALOG NUMBER: ECM-E04-LED-E1-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	889.5	7.9			
FM (30°-60°)	3147.8	27.9			
FH (60°-80°)	4621.9	40.9			G2/5000
FVH (80°-90°)	211.5	1.9			G2/225
BL (0°-30°)	723.8	6.4	B2/1000		
BM (30°-60°)	1045.4	9.3	B2/2500		
BH (60°-80°)	611.0	5.4	B2/1000		G2/1000
BVH (80°-90°)	42.9	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°	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7
2.5°	2294.7	2297.3	2296.0	2293.3	2290.7	2292.0	2290.7	2289.3	2289.3	2288.0	2286.7
5°	2284.0	2289.3	2285.3	2282.7	2278.7	2278.7	2277.3	2274.7	2272.0	2270.7	2268.0
7.5°	2261.3	2266.7	2264.0	2261.3	2257.3	2254.7	2249.3	2246.7	2244.0	2242.7	2238.7
10°	2230.7	2233.3	2230.7	2225.3	2222.7	2221.3	2218.7	2213.3	2208.0	2205.3	2201.3
12.5°	2190.7	2192.0	2189.3	2186.7	2182.7	2182.7	2178.7	2174.7	2166.7	2164.0	2154.7
15°	2156.0	2152.0	2149.3	2148.0	2146.7	2140.0	2141.3	2134.7	2121.3	2117.3	2106.7
17.5°	2146.7	2142.7	2141.3	2137.3	2134.7	2126.7	2118.7	2105.3	2082.7	2078.7	2062.7
20°	2173.3	2173.3	2169.3	2166.7	2162.7	2148.0	2130.7	2105.3	2064.0	2054.7	2034.7
22.5°	2237.3	2230.7	2228.0	2228.0	2226.7	2205.3	2173.3	2133.3	2078.7	2066.7	2032.0
25°	2337.3	2325.3	2329.3	2328.0	2325.3	2294.7	2248.0	2190.7	2116.0	2100.0	2054.7
27.5°	2456.0	2458.7	2457.3	2452.0	2444.0	2410.7	2344.0	2266.7	2173.3	2157.3	2098.7
30°	2580.0	2582.7	2590.7	2586.7	2581.3	2530.7	2448.0	2364.0	2250.7	2229.3	2157.3
32.5°	2724.0	2733.3	2740.0	2741.3	2720.0	2650.7	2553.3	2446.7	2326.7	2305.3	2216.0
35°	2890.7	2885.3	2897.3	2892.0	2854.7	2760.0	2640.0	2513.3	2390.7	2362.7	2266.7
37.5°	3058.7	3065.3	3053.3	3030.7	2972.0	2848.0	2700.0	2557.3	2421.3	2394.7	2294.7
40°	3221.3	3217.3	3189.3	3150.7	3062.7	2904.0	2733.3	2577.3	2432.0	2404.0	2301.3
42.5°	3342.7	3332.0	3289.3	3226.7	3113.3	2930.7	2742.7	2577.3	2425.3	2396.0	2292.0
45°	3396.0	3385.3	3344.0	3264.0	3129.3	2925.3	2726.7	2554.7	2402.7	2377.3	2273.3
47.5°	3396.0	3392.0	3346.7	3269.3	3125.3	2910.7	2702.7	2526.7	2380.0	2354.7	2257.3
50°	3369.3	3366.7	3326.7	3250.7	3112.0	2902.7	2696.0	2521.3	2378.7	2353.3	2264.0
52.5°	3458.7	3441.3	3400.0	3312.0	3161.3	2936.0	2729.3	2548.0	2410.7	2385.3	2293.3
55°	4545.3	4530.7	4321.3	3953.3	3568.0	3216.0	2914.7	2706.7	2568.0	2529.3	2462.7
57.5°	6302.7	6281.3	6066.7	5732.0	5069.3	4316.0	3725.3	3378.7	3184.0	3156.0	3116.0
60°	7016.0	7008.0	6917.3	6781.3	6530.7	6141.3	5592.0	5016.0	4568.0	4496.0	4501.3
62.5°	7425.3	7405.3	7361.3	7328.0	7242.7	7084.0	6981.3	6820.0	6602.7	6553.3	6241.3
65°	7654.7	7652.0	7676.0	7704.0	7698.7	7746.7	7798.7	8106.7	8468.0	8452.0	8122.7
67.5°	7313.3	7336.0	7461.3	7653.3	7854.7	8068.0	8465.3	9082.7	9529.3	9529.3	9240.0
70°	5257.3	5253.3	5586.7	6194.7	6736.0	7533.3	8265.3	9282.7	10013.3	10052.0	9745.3
72.5°	3150.7	3224.0	3429.3	3705.3	4165.3	5130.7	6492.0	8320.0	9340.0	9381.3	9014.7
75°	2213.3	2158.7	2150.7	2166.7	2245.3	2482.7	3232.0	5106.7	6770.7	6834.7	6480.0
77.5°	1416.0	1404.0	1409.3	1426.7	1430.7	1453.3	1489.3	1750.7	3138.7	3445.3	3429.3
80°	1221.3	1217.3	1218.7	1198.7	1160.0	1145.3	1190.7	1154.7	1121.3	1168.0	1104.0
82.5°	818.7	833.3	857.3	889.3	966.7	993.3	978.7	972.0	866.7	842.7	748.0
85°	606.7	598.7	608.0	608.0	588.0	568.0	582.7	568.0	502.7	470.7	416.0
87.5°	328.0	329.3	356.0	366.7	365.3	312.0	257.3	222.7	201.3	186.7	157.3
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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CATALOG NUMBER: ECM-E04-LED-E1-SL4

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7
2.5°	2288.0	2284.0	2285.3	2285.3	2284.0	2286.7	2282.7	2281.3	2282.7	2282.7	2282.7
5°	2265.3	2260.0	2260.0	2258.7	2256.0	2256.0	2250.7	2249.3	2246.7	2250.7	2248.0
7.5°	2233.3	2225.3	2218.7	2213.3	2210.7	2206.7	2200.0	2197.3	2194.7	2193.3	2190.7
10°	2194.7	2185.3	2172.0	2161.3	2156.0	2145.3	2137.3	2126.7	2126.7	2121.3	2116.0
12.5°	2148.0	2134.7	2121.3	2106.7	2097.3	2082.7	2069.3	2057.3	2048.0	2036.0	2028.0
15°	2101.3	2081.3	2066.7	2052.0	2034.7	2014.7	1998.7	1980.0	1962.7	1944.0	1938.7
17.5°	2050.7	2034.7	2021.3	2004.0	1985.3	1961.3	1940.0	1909.3	1888.0	1865.3	1848.0
20°	2017.3	1998.7	1984.0	1968.0	1948.0	1920.0	1892.0	1857.3	1825.3	1792.0	1766.7
22.5°	2000.0	1969.3	1956.0	1941.3	1921.3	1890.7	1858.7	1816.0	1776.0	1732.0	1692.0
25°	2006.7	1965.3	1938.7	1922.7	1905.3	1874.7	1833.3	1785.3	1740.0	1684.0	1638.7
27.5°	2036.0	1980.0	1938.7	1912.0	1893.3	1861.3	1818.7	1764.0	1709.3	1650.7	1596.0
30°	2074.7	2004.0	1950.7	1912.0	1884.0	1849.3	1802.7	1744.0	1684.0	1618.7	1556.0
32.5°	2118.7	2032.0	1968.0	1914.7	1869.3	1825.3	1777.3	1716.0	1653.3	1584.0	1522.7
35°	2153.3	2053.3	1980.0	1909.3	1849.3	1794.7	1738.7	1681.3	1618.7	1553.3	1488.0
37.5°	2173.3	2066.7	1980.0	1890.7	1817.3	1760.0	1701.3	1645.3	1585.3	1521.3	1464.0
40°	2181.3	2072.0	1972.0	1869.3	1784.0	1718.7	1664.0	1606.7	1553.3	1497.3	1446.7
42.5°	2177.3	2068.0	1961.3	1849.3	1757.3	1686.7	1626.7	1573.3	1529.3	1482.7	1440.0
45°	2161.3	2054.7	1950.7	1840.0	1748.0	1676.0	1614.7	1564.0	1522.7	1480.0	1446.7
47.5°	2148.0	2049.3	1957.3	1862.7	1774.7	1701.3	1634.7	1578.7	1544.0	1510.7	1489.3
50°	2158.7	2064.0	1972.0	1882.7	1797.3	1722.7	1654.7	1602.7	1582.7	1577.3	1570.7
52.5°	2188.0	2094.7	2017.3	1954.7	1916.0	1888.0	1818.7	1806.7	1789.3	1780.0	1757.3
55°	2378.7	2340.0	2409.3	2485.3	2498.7	2582.7	2616.0	2618.7	2589.3	2485.3	2242.7
57.5°	3154.7	3250.7	3280.0	3456.0	3504.0	3466.7	3416.0	3413.3	3322.7	3185.3	2832.0
60°	4541.3	4490.7	4428.0	4313.3	4205.3	4089.3	3929.3	3806.7	3690.7	3480.0	3108.0
62.5°	5992.0	5550.7	5229.3	4900.0	4633.3	4400.0	4168.0	3970.7	3782.7	3490.7	3092.0
65°	7250.7	6352.0	5700.0	5205.3	4792.0	4450.7	4142.7	3873.3	3636.0	3270.7	2866.7
67.5°	8069.3	6777.3	5802.7	5064.0	4480.0	4045.3	3592.0	3166.7	2933.3	2638.7	2433.3
70°	8278.7	6477.3	5117.3	4170.7	3384.0	2865.3	2330.7	1866.7	1652.0	1569.3	1576.0
72.5°	7468.0	5120.0	3628.0	2653.3	2077.3	1646.7	1338.7	1029.3	804.0	674.7	658.7
75°	4878.7	2849.3	1722.7	1200.0	954.7	760.0	598.7	504.0	434.7	350.7	293.3
77.5°	1844.0	1085.3	773.3	630.7	466.7	325.3	253.3	213.3	196.0	190.7	172.0
80°	945.3	753.3	538.7	354.7	248.0	198.7	166.7	141.3	130.7	125.3	128.0
82.5°	637.3	474.7	297.3	213.3	172.0	148.0	117.3	98.7	88.0	86.7	93.3
85°	354.7	237.3	173.3	144.0	126.7	110.7	89.3	73.3	68.0	72.0	84.0
87.5°	110.7	109.3	78.7	64.0	66.7	57.3	42.7	32.0	32.0	41.3	58.7
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7	2294.7
2.5°	2282.7	2285.3	2290.7	2286.7	2288.0	2289.3	2293.3	2298.7	2294.7	2292.0	2300.0
5°	2250.7	2250.7	2257.3	2254.7	2260.0	2265.3	2268.0	2277.3	2274.7	2272.0	2282.7
7.5°	2192.0	2193.3	2202.7	2200.0	2210.7	2212.0	2222.7	2230.7	2230.7	2236.0	2245.3
10°	2117.3	2117.3	2125.3	2126.7	2133.3	2138.7	2150.7	2165.3	2168.0	2177.3	2190.7
12.5°	2033.3	2030.7	2037.3	2037.3	2042.7	2049.3	2062.7	2080.0	2082.7	2097.3	2114.7
15°	1929.3	1925.3	1922.7	1925.3	1928.0	1929.3	1949.3	1966.7	1977.3	1993.3	2010.7
17.5°	1829.3	1814.7	1808.0	1808.0	1809.3	1809.3	1817.3	1837.3	1852.0	1877.3	1902.7
20°	1740.0	1714.7	1705.3	1684.0	1680.0	1670.7	1677.3	1700.0	1726.7	1746.7	1766.7
22.5°	1656.0	1629.3	1602.7	1577.3	1557.3	1545.3	1557.3	1572.0	1581.3	1597.3	1602.7
25°	1592.0	1548.0	1510.7	1470.7	1449.3	1438.7	1437.3	1436.0	1428.0	1425.3	1425.3
27.5°	1541.3	1489.3	1433.3	1389.3	1360.0	1340.0	1317.3	1301.3	1281.3	1254.7	1241.3
30°	1498.7	1442.7	1381.3	1329.3	1292.0	1253.3	1206.7	1170.7	1134.7	1102.7	1074.7
32.5°	1460.0	1402.7	1342.7	1288.0	1224.0	1157.3	1098.7	1056.0	993.3	950.7	914.7
35°	1430.7	1373.3	1317.3	1245.3	1157.3	1072.0	996.0	933.3	869.3	813.3	765.3
37.5°	1409.3	1361.3	1301.3	1204.0	1093.3	990.7	910.7	836.0	760.0	684.0	624.0
40°	1402.7	1361.3	1285.3	1158.7	1032.0	921.3	829.3	737.3	653.3	572.0	510.7
42.5°	1406.7	1362.7	1260.0	1118.7	981.3	861.3	757.3	650.7	550.7	464.0	402.7
45°	1421.3	1362.7	1233.3	1074.7	934.7	806.7	682.7	556.0	440.0	370.7	344.0
47.5°	1465.3	1372.0	1212.0	1042.7	893.3	746.7	598.7	454.7	356.0	326.7	326.7
50°	1533.3	1400.0	1209.3	1018.7	846.7	677.3	494.7	358.7	314.7	313.3	321.3
52.5°	1649.3	1449.3	1222.7	1002.7	797.3	584.0	385.3	309.3	300.0	308.0	320.0
55°	1874.7	1536.0	1241.3	973.3	714.7	457.3	316.0	293.3	297.3	306.7	317.3
57.5°	2286.7	1710.7	1261.3	910.7	578.7	346.7	286.7	288.0	294.7	304.0	313.3
60°	2570.7	1926.7	1301.3	805.3	430.7	286.7	274.7	285.3	293.3	300.0	308.0
62.5°	2594.7	2005.3	1330.7	686.7	320.0	261.3	264.0	280.0	290.7	293.3	297.3
65°	2450.7	1904.0	1246.7	566.7	265.3	248.0	257.3	272.0	282.7	284.0	288.0
67.5°	2136.0	1692.0	1064.0	430.7	242.7	238.7	249.3	258.7	266.7	273.3	278.7
70°	1654.7	1381.3	856.0	334.7	225.3	224.0	233.3	244.0	252.0	258.7	266.7
72.5°	872.0	981.3	637.3	268.0	206.7	208.0	217.3	226.7	232.0	238.7	246.7
75°	270.7	416.0	393.3	214.7	184.0	189.3	194.7	202.7	212.0	216.0	220.0
77.5°	160.0	169.3	205.3	168.0	160.0	164.0	170.7	177.3	184.0	189.3	193.3
80°	129.3	132.0	133.3	133.3	133.3	138.7	144.0	153.3	158.7	161.3	162.7
82.5°	101.3	108.0	109.3	106.7	110.7	116.0	118.7	124.0	125.3	128.0	130.7
85°	84.0	82.7	85.3	86.7	81.3	81.3	78.7	78.7	84.0	93.3	94.7
87.5°	65.3	57.3	46.7	44.0	41.3	38.7	36.0	36.0	37.3	42.7	46.7
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):

	160°	165°	170°	175°	180°
0°	2294.7	2294.7	2294.7	2294.7	2294.7
2.5°	2300.0	2298.7	2301.3	2305.3	2302.7
5°	2284.0	2284.0	2289.3	2293.3	2290.7
7.5°	2252.0	2253.3	2261.3	2266.7	2264.0
10°	2201.3	2204.0	2213.3	2221.3	2225.3
12.5°	2125.3	2134.7	2146.7	2154.7	2154.7
15°	2029.3	2044.0	2057.3	2069.3	2062.7
17.5°	1920.0	1937.3	1954.7	1961.3	1954.7
20°	1788.0	1789.3	1800.0	1806.7	1804.0
22.5°	1608.0	1602.7	1608.0	1610.7	1614.7
25°	1424.0	1414.7	1409.3	1417.3	1421.3
27.5°	1236.0	1222.7	1226.7	1217.3	1206.7
30°	1053.3	1041.3	1026.7	1022.7	1029.3
32.5°	892.0	861.3	849.3	826.7	836.0
35°	721.3	690.7	661.3	653.3	648.0
37.5°	581.3	544.0	508.0	496.0	493.3
40°	454.7	424.0	400.0	393.3	390.7
42.5°	369.3	356.0	352.0	352.0	353.3
45°	337.3	338.7	342.7	345.3	346.7
47.5°	330.7	336.0	341.3	346.7	348.0
50°	330.7	334.7	338.7	344.0	345.3
52.5°	328.0	332.0	333.3	336.0	338.7
55°	325.3	326.7	326.7	328.0	330.7
57.5°	318.7	320.0	317.3	318.7	324.0
60°	312.0	313.3	310.7	313.3	314.7
62.5°	302.7	302.7	301.3	302.7	304.0
65°	292.0	288.0	290.7	289.3	290.7
67.5°	278.7	273.3	272.0	272.0	273.3
70°	260.0	256.0	254.7	257.3	260.0
72.5°	237.3	240.0	244.0	248.0	254.7
75°	221.3	225.3	230.7	244.0	253.3
77.5°	198.7	197.3	202.7	217.3	230.7
80°	165.3	166.7	165.3	169.3	172.0
82.5°	126.7	125.3	121.3	121.3	118.7
85°	89.3	85.3	80.0	78.7	77.3
87.5°	45.3	48.0	44.0	40.0	40.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)