

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: P142051

Luminaire Tested: **ECM-E04-LED-E1-T4-7050**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P142051  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33685)  
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-T4-7050  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4  
Light Source: (84) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11803.4 lumens  
Efficiency: N/A  
Efficacy: 121.4 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 - G3

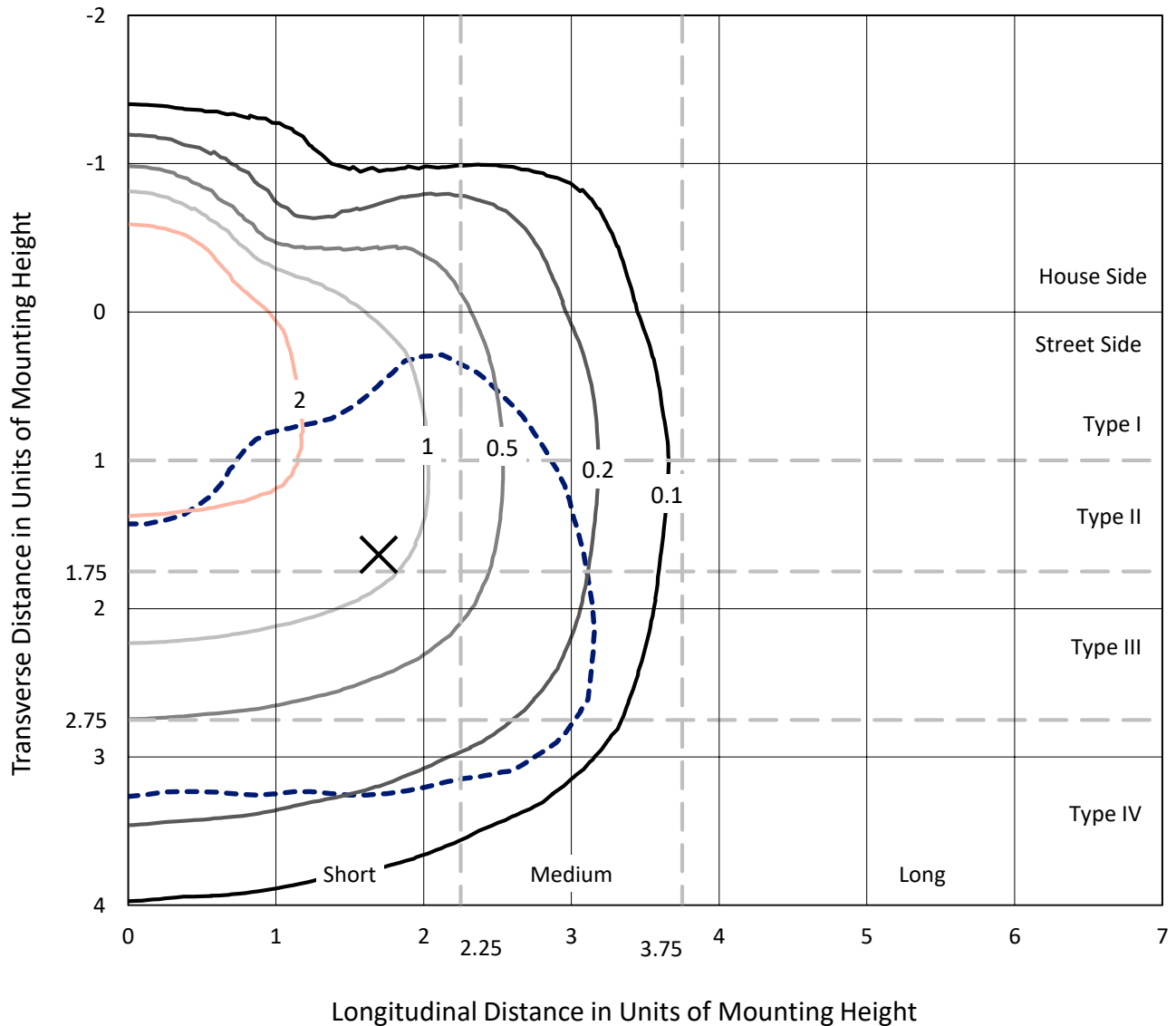
Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

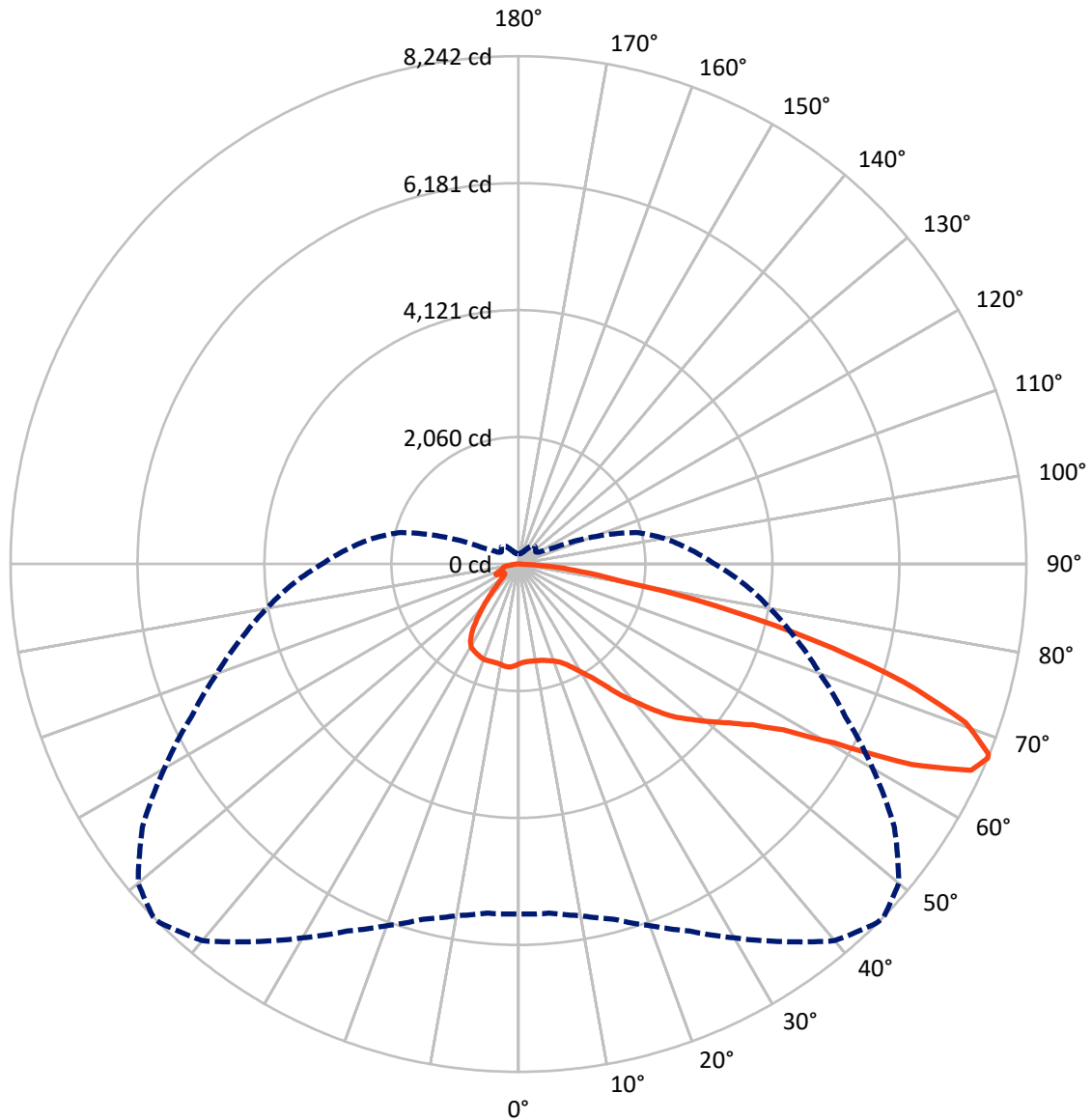
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2345.6	0.0	2345.6
	% Fixture	19.9	0.0	19.9
<b>Street Side</b>	Lumens	9457.8	0.0	9457.8
	% Fixture	80.1	0.0	80.1
<b>Total</b>	Lumens	11803.4	0.0	11803.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.6	1.3
10°-20°	464.6	3.9
20°-30°	781.1	6.6
30°-40°	1168.1	9.9
40°-50°	1521.5	12.9
50°-60°	2083.8	17.7
60°-70°	3294.2	27.9
70°-80°	2043.4	17.3
80°-90°	291.2	2.5
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°	11803.4	100.0
0°-180°	11803.4	100.0

**Coefficient of Utilization**



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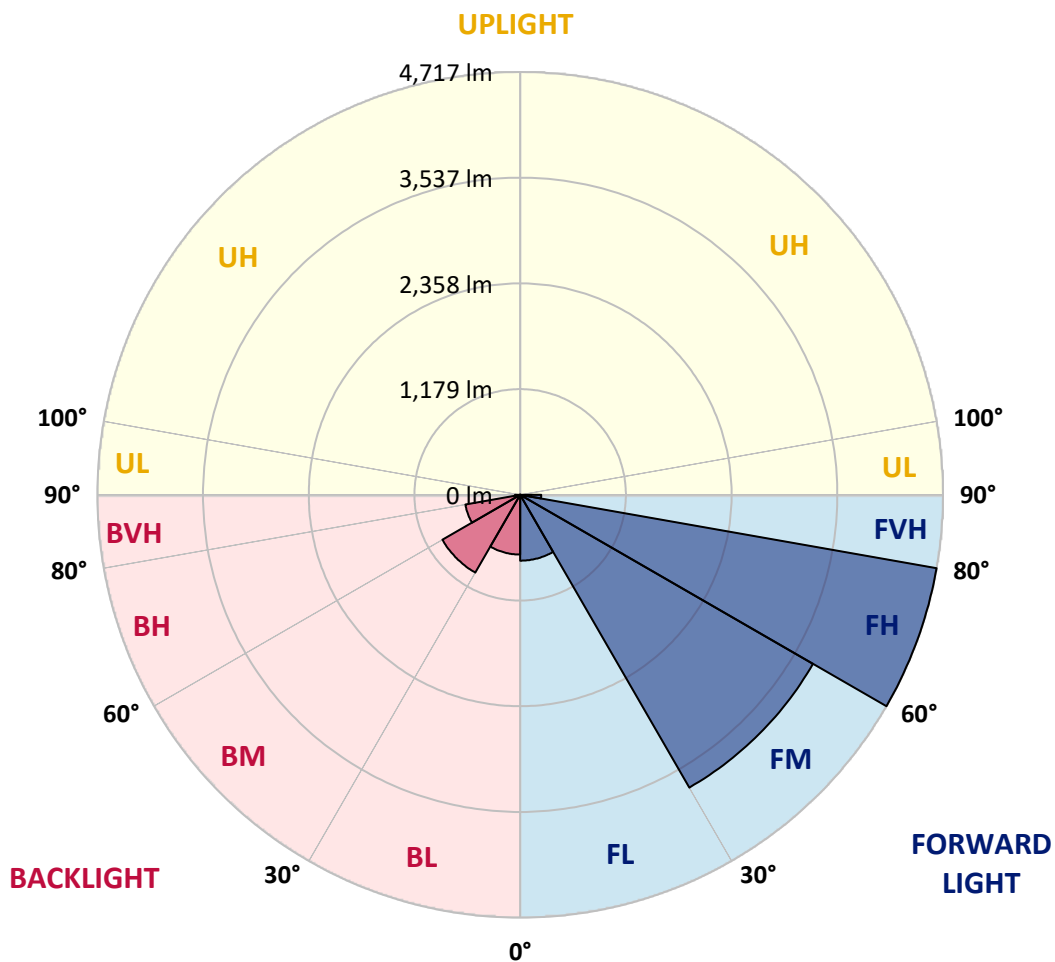
CATALOG NUMBER: ECM-E04-LED-E1-T4-7050

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	735.0	6.2			
FM (30°-60°)	3771.6	32.0			
FH (60°-80°)	4716.6	40.0			G2/5000
FVH (80°-90°)	234.5	2.0			G3/500
BL (0°-30°)	666.3	5.6	B2/1000		
BM (30°-60°)	1001.7	8.5	B2/2500		
BH (60°-80°)	620.9	5.3	B2/1000		G2/1000
BVH (80°-90°)	56.7	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	46°	
0°	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1
2.5°	1581.6	1585.7	1584.3	1582.9	1584.3	1585.7	1587.0	1591.1	1592.5	1593.9	1593.9	1595.3
5°	1552.8	1556.9	1555.6	1558.3	1559.7	1565.2	1569.3	1576.1	1580.2	1585.7	1585.7	1588.4
7.5°	1544.6	1547.4	1547.4	1550.1	1551.5	1556.9	1563.8	1572.0	1580.2	1588.4	1588.4	1591.1
10°	1566.5	1567.9	1567.9	1566.5	1567.9	1570.6	1573.4	1580.2	1587.0	1593.9	1593.9	1596.6
12.5°	1618.5	1614.4	1613.0	1608.9	1610.3	1604.8	1604.8	1603.5	1603.5	1604.8	1604.8	1604.8
15°	1673.2	1670.5	1667.8	1660.9	1660.9	1652.7	1650.0	1644.5	1630.8	1625.4	1625.4	1624.0
17.5°	1722.5	1719.8	1714.3	1708.8	1706.1	1695.1	1692.4	1682.8	1666.4	1654.1	1654.1	1650.0
20°	1781.3	1774.5	1762.2	1759.4	1752.6	1740.3	1736.2	1723.9	1702.0	1684.2	1684.2	1682.8
22.5°	1871.6	1860.7	1848.4	1838.8	1821.0	1808.7	1797.7	1781.3	1755.3	1734.8	1734.8	1729.3
25°	1961.9	1957.8	1946.9	1933.2	1920.9	1907.2	1893.5	1868.9	1834.7	1808.7	1808.7	1803.2
27.5°	2089.2	2079.6	2065.9	2044.0	2037.2	2013.9	2003.0	1982.4	1948.2	1915.4	1915.4	1909.9
30°	2221.9	2212.3	2190.4	2171.2	2167.1	2142.5	2135.7	2113.8	2083.7	2050.8	2050.8	2046.7
32.5°	2373.7	2364.1	2347.7	2336.8	2321.7	2308.1	2291.6	2271.1	2232.8	2205.4	2205.4	2200.0
35°	2568.0	2559.8	2540.6	2548.8	2535.2	2531.1	2521.5	2487.3	2444.9	2412.0	2412.0	2417.5
37.5°	2721.2	2719.9	2724.0	2719.9	2737.6	2755.4	2755.4	2758.2	2737.6	2702.1	2702.1	2695.2
40°	2864.9	2863.5	2874.5	2886.8	2934.7	2963.4	2996.2	3008.5	2986.7	2959.3	2959.3	2949.7
42.5°	2999.0	2996.2	3011.3	3056.4	3115.3	3168.6	3224.7	3272.6	3283.5	3253.4	3253.4	3246.6
45°	3131.7	3135.8	3154.9	3205.6	3283.5	3353.3	3449.1	3505.2	3540.7	3524.3	3524.3	3535.3
47.5°	3291.7	3295.9	3316.4	3376.6	3445.0	3532.5	3644.7	3740.5	3782.9	3782.9	3782.9	3769.2
50°	3481.9	3501.1	3523.0	3564.0	3643.4	3729.6	3866.4	3962.1	4030.5	4027.8	4027.8	4016.9
52.5°	3735.0	3739.1	3774.7	3807.5	3875.9	3963.5	4086.6	4218.0	4304.2	4296.0	4296.0	4283.6
55°	4075.7	4059.3	4082.5	4114.0	4187.9	4264.5	4398.6	4550.4	4638.0	4612.0	4612.0	4603.8
57.5°	4505.3	4491.6	4508.0	4546.3	4639.4	4702.3	4810.4	4949.9	5073.1	5095.0	5095.0	5075.8
60°	5125.1	5125.1	5157.9	5240.0	5334.4	5428.8	5567.0	5735.2	5862.5	5893.9	5893.9	5892.6
62.5°	5859.7	5906.3	5913.1	6019.8	6200.4	6363.2	6578.0	6874.9	7065.1	7200.5	7200.5	7165.0
65°	5977.4	5992.5	6052.7	6218.2	6463.1	6751.8	7085.6	7475.5	7870.9	8066.6	8066.6	8072.0
67°	5681.9	5687.4	5792.7	5966.5	6246.9	6572.5	7004.9	7479.6	7980.4	8233.5	8233.5	8241.7
67.5°	5590.2	5579.3	5673.7	5855.6	6162.1	6528.8	6935.1	7434.5	7951.6	8222.5	8222.5	8226.6
70°	4975.9	4981.4	5055.3	5257.8	5582.0	5925.4	6379.6	6892.7	7437.2	7684.8	7684.8	7697.2
72.5°	4290.5	4254.9	4322.0	4538.1	4692.7	5027.9	5445.2	5832.4	6311.2	6545.2	6545.2	6539.7
75°	3272.6	3174.1	3291.7	3417.6	3503.8	3836.3	4096.2	4363.0	4804.9	4982.8	4982.8	4973.2
77.5°	1763.5	1759.4	1888.0	1986.5	2115.1	2414.8	2643.2	2811.5	3183.7	3271.2	3271.2	3282.2
80°	957.7	993.3	1069.9	1179.3	1283.3	1427.0	1559.7	1665.0	1786.8	1730.7	1730.7	1718.4
82.5°	577.4	636.2	753.8	837.3	878.3	942.6	1037.1	1097.2	1145.1	1041.2	1041.2	1020.6
85°	91.7	165.5	425.5	508.9	552.7	582.8	603.4	643.0	586.9	550.0	550.0	559.6
87.5°	30.1	34.2	65.7	145.0	127.2	87.6	114.9	166.9	79.4	42.4	42.4	41.0
90°	0.0	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°	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1
2.5°	1596.6	1598.0	1602.1	1607.6	1610.3	1617.1	1617.1	1622.6	1622.6	1626.7	1630.8
5°	1592.5	1599.4	1604.8	1613.0	1617.1	1626.7	1630.8	1639.0	1643.1	1648.6	1654.1
7.5°	1599.4	1608.9	1615.8	1625.4	1632.2	1641.8	1645.9	1652.7	1656.8	1663.7	1666.4
10°	1604.8	1614.4	1622.6	1633.6	1639.0	1645.9	1650.0	1655.5	1656.8	1660.9	1663.7
12.5°	1611.7	1615.8	1622.6	1632.2	1637.7	1641.8	1645.9	1650.0	1654.1	1654.1	1654.1
15°	1621.2	1617.1	1618.5	1626.7	1632.2	1634.9	1639.0	1641.8	1643.1	1643.1	1640.4
17.5°	1641.8	1630.8	1624.0	1624.0	1626.7	1629.5	1629.5	1625.4	1622.6	1618.5	1613.0
20°	1671.9	1654.1	1640.4	1633.6	1628.1	1621.2	1610.3	1596.6	1584.3	1573.4	1566.5
22.5°	1714.3	1696.5	1680.1	1665.0	1647.2	1624.0	1600.7	1572.0	1548.7	1530.9	1524.1
25°	1793.6	1767.6	1755.3	1732.1	1704.7	1667.8	1632.2	1592.5	1565.2	1540.5	1529.6
27.5°	1900.3	1879.8	1852.5	1840.1	1804.6	1762.2	1722.5	1674.6	1636.3	1606.2	1585.7
30°	2035.8	2022.1	1998.9	1978.3	1944.1	1905.8	1847.0	1793.6	1726.6	1673.2	1643.1
32.5°	2191.8	2171.2	2150.7	2124.7	2100.1	2049.5	1994.7	1914.0	1821.0	1729.3	1673.2
35°	2387.4	2366.9	2353.2	2312.2	2271.1	2216.4	2142.5	2046.7	1916.8	1793.6	1697.9
37.5°	2656.9	2613.1	2546.1	2487.3	2413.4	2329.9	2246.5	2131.6	1986.5	1826.5	1695.1
40°	2890.9	2826.6	2751.3	2650.1	2546.1	2436.7	2338.2	2213.7	2044.0	1853.8	1676.0
42.5°	3194.6	3083.8	2956.6	2822.5	2680.2	2548.8	2427.1	2284.8	2086.4	1855.2	1630.8
45°	3468.2	3331.4	3163.1	2981.2	2807.4	2647.4	2507.8	2350.5	2122.0	1849.7	1578.8
47.5°	3711.8	3551.7	3346.5	3127.6	2922.3	2741.8	2588.5	2423.0	2168.5	1867.5	1559.7
50°	3947.1	3763.8	3532.5	3267.1	3038.6	2841.6	2681.6	2503.7	2246.5	1927.7	1589.8
52.5°	4198.8	3975.8	3714.5	3414.9	3165.9	2962.0	2782.8	2600.8	2339.5	2008.4	1644.5
55°	4506.7	4253.5	3955.3	3624.2	3338.3	3111.2	2908.7	2717.1	2450.3	2108.3	1708.8
57.5°	4917.1	4661.3	4317.9	3936.1	3636.5	3367.0	3123.5	2907.3	2618.6	2246.5	1804.6
60°	5707.9	5391.8	4934.9	4520.3	4196.1	3878.7	3584.5	3289.0	2941.5	2525.6	2050.8
62.5°	6977.5	6537.0	5970.6	5393.2	4955.4	4535.4	4146.8	3762.4	3328.7	2862.2	2343.6
65°	7855.9	7311.3	6599.9	5876.2	5283.8	4770.7	4306.9	3849.9	3367.0	2922.3	2470.9
67°	8057.0	7448.2	6638.2	5852.9	5208.5	4651.7	4146.8	3670.7	3185.0	2781.4	2395.6
67.5°	8048.8	7441.3	6608.1	5803.7	5157.9	4609.3	4100.3	3599.6	3122.1	2726.7	2358.7
70°	7561.7	6951.5	6114.2	5313.9	4691.4	4145.5	3632.4	3196.0	2708.9	2388.8	2112.4
72.5°	6407.0	5876.2	5200.3	4480.7	3947.1	3458.7	3048.2	2620.0	2197.2	1983.8	1766.3
75°	4871.9	4401.3	3781.5	3254.8	2848.5	2509.2	2097.4	1815.5	1518.6	1372.2	1294.3
77.5°	3219.2	2678.8	2250.6	1748.5	1450.2	1183.4	933.1	740.2	618.4	649.9	710.1
80°	1703.3	1351.7	1000.1	774.4	597.9	465.2	369.4	276.4	201.1	235.3	295.5
82.5°	927.6	790.8	584.2	465.2	380.3	314.7	242.2	169.6	125.9	139.6	201.1
85°	529.5	465.2	361.2	281.8	246.3	201.1	138.2	93.0	90.3	97.1	124.5
87.5°	87.6	117.7	95.8	65.7	73.9	72.5	64.3	49.3	36.9	52.0	67.0
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°	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1	1617.1
2.5°	1633.6	1637.7	1643.1	1644.5	1643.1	1647.2	1654.1	1659.6	1655.5	1652.7	1659.6
5°	1659.6	1662.3	1669.1	1669.1	1670.5	1673.2	1677.3	1681.4	1676.0	1676.0	1678.7
7.5°	1670.5	1670.5	1677.3	1674.6	1674.6	1673.2	1677.3	1678.7	1670.5	1669.1	1670.5
10°	1663.7	1663.7	1666.4	1660.9	1659.6	1658.2	1658.2	1659.6	1651.3	1648.6	1652.7
12.5°	1654.1	1654.1	1651.3	1648.6	1645.9	1643.1	1645.9	1647.2	1641.8	1641.8	1643.1
15°	1637.7	1633.6	1632.2	1632.2	1633.6	1634.9	1640.4	1644.5	1640.4	1637.7	1637.7
17.5°	1610.3	1607.6	1611.7	1619.9	1629.5	1636.3	1644.5	1647.2	1637.7	1626.7	1618.5
20°	1569.3	1576.1	1591.1	1614.4	1634.9	1645.9	1645.9	1636.3	1614.4	1592.5	1581.6
22.5°	1526.8	1546.0	1578.8	1614.4	1639.0	1643.1	1628.1	1607.6	1577.5	1554.2	1533.7
25°	1532.3	1555.6	1588.4	1618.5	1634.9	1628.1	1600.7	1574.7	1539.2	1514.5	1484.4
27.5°	1589.8	1611.7	1628.1	1637.7	1632.2	1610.3	1578.8	1543.3	1503.6	1469.4	1433.8
30°	1636.3	1645.9	1644.5	1636.3	1615.8	1581.6	1544.6	1502.2	1454.3	1417.4	1370.9
32.5°	1644.5	1626.7	1599.4	1569.3	1541.9	1503.6	1461.2	1411.9	1358.6	1310.7	1264.2
35°	1629.5	1562.4	1502.2	1442.0	1401.0	1353.1	1316.2	1258.7	1199.9	1158.8	1124.6
37.5°	1573.4	1457.1	1361.3	1276.5	1216.3	1161.6	1105.5	1049.4	1000.1	981.0	971.4
40°	1502.2	1327.1	1180.7	1063.0	998.7	945.4	887.9	842.8	819.5	801.7	794.9
42.5°	1398.2	1179.3	997.4	871.5	789.4	740.2	684.1	659.4	648.5	652.6	647.1
45°	1301.1	1024.7	796.3	656.7	600.6	554.1	526.7	515.8	510.3	507.6	511.7
47.5°	1232.7	905.7	641.7	499.4	452.9	420.0	409.1	405.0	403.6	398.1	396.8
50°	1216.3	835.9	525.4	388.6	353.0	335.2	329.7	325.6	322.9	318.8	309.2
52.5°	1235.4	816.8	467.9	333.8	303.7	290.0	285.9	279.1	276.4	265.4	253.1
55°	1268.3	823.6	450.1	318.8	288.7	273.6	268.2	265.4	255.8	243.5	228.5
57.5°	1336.7	866.0	458.3	322.9	291.4	277.7	275.0	272.3	259.9	242.2	223.0
60°	1535.1	989.2	500.7	351.6	313.3	303.7	305.1	299.6	281.8	258.6	229.8
62.5°	1841.5	1180.7	578.7	387.2	348.9	348.9	357.1	353.0	325.6	287.3	246.3
65°	2000.2	1295.6	611.6	398.1	359.8	377.6	403.6	399.5	359.8	302.4	247.6
67°	1975.6	1273.7	592.4	381.7	339.3	362.6	388.6	389.9	346.1	288.7	236.7
67.5°	1952.3	1258.7	582.8	374.9	333.8	357.1	381.7	377.6	340.7	283.2	234.0
70°	1754.0	1105.5	519.9	350.2	309.2	316.0	322.9	317.4	288.7	250.4	216.2
72.5°	1514.5	918.0	458.3	335.2	295.5	284.6	284.6	275.0	255.8	229.8	205.2
75°	1154.7	714.2	402.2	318.8	279.1	262.7	259.9	253.1	236.7	217.5	195.6
77.5°	704.6	511.7	348.9	294.2	258.6	244.9	246.3	242.2	225.7	208.0	187.4
80°	353.0	331.1	292.8	255.8	234.0	220.3	221.6	213.4	199.7	186.1	169.6
82.5°	216.2	228.5	205.2	194.3	180.6	165.5	128.6	150.5	146.4	134.1	127.2
85°	143.7	142.3	128.6	113.6	104.0	90.3	80.7	82.1	90.3	93.0	93.0
87.5°	69.8	67.0	61.6	57.5	54.7	45.1	42.4	47.9	47.9	50.6	49.3
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):**

	160°	165°	170°	175°	180°
0°	1617.1	1617.1	1617.1	1617.1	1617.1
2.5°	1660.9	1663.7	1662.3	1666.4	1662.3
5°	1680.1	1680.1	1681.4	1682.8	1681.4
7.5°	1670.5	1669.1	1671.9	1674.6	1673.2
10°	1652.7	1654.1	1656.8	1660.9	1660.9
12.5°	1645.9	1647.2	1652.7	1656.8	1656.8
15°	1640.4	1641.8	1644.5	1650.0	1645.9
17.5°	1615.8	1610.3	1610.3	1614.4	1610.3
20°	1572.0	1563.8	1563.8	1562.4	1561.0
22.5°	1520.0	1499.5	1494.0	1487.2	1488.5
25°	1455.7	1428.3	1413.3	1405.1	1402.3
27.5°	1403.7	1372.2	1357.2	1344.9	1340.8
30°	1338.0	1302.5	1290.2	1283.3	1280.6
32.5°	1242.3	1210.8	1194.4	1190.3	1182.1
35°	1097.2	1083.6	1076.7	1067.1	1068.5
37.5°	952.2	948.1	931.7	937.2	931.7
40°	796.3	794.9	797.6	793.5	803.1
42.5°	649.9	645.8	652.6	648.5	652.6
45°	503.5	511.7	521.3	517.2	522.6
47.5°	385.8	387.2	384.4	387.2	389.9
50°	296.9	294.2	291.4	285.9	288.7
52.5°	244.9	235.3	228.5	224.4	223.0
55°	216.2	206.6	201.1	195.6	195.6
57.5°	208.0	195.6	187.4	183.3	182.0
60°	209.3	192.9	182.0	175.1	173.8
62.5°	214.8	192.9	177.9	171.0	168.3
65°	213.4	190.2	175.1	168.3	165.5
67°	206.6	186.1	173.8	166.9	165.5
67.5°	203.9	184.7	173.8	166.9	164.2
70°	194.3	180.6	171.0	164.2	161.4
72.5°	186.1	175.1	164.2	158.7	156.0
75°	177.9	166.9	157.3	151.9	150.5
77.5°	169.6	157.3	150.5	143.7	138.2
80°	154.6	140.9	131.3	120.4	117.7
82.5°	127.2	116.3	106.7	97.1	95.8
85°	94.4	90.3	82.1	73.9	73.9
87.5°	52.0	57.5	50.6	46.5	43.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)