

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: P142049

Luminaire Tested: **ECM-E04-LED-E1-T4-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P142049
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-T4-7030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (84) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10506.3 lumens
Efficiency: N/A
Efficacy: 108.1 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

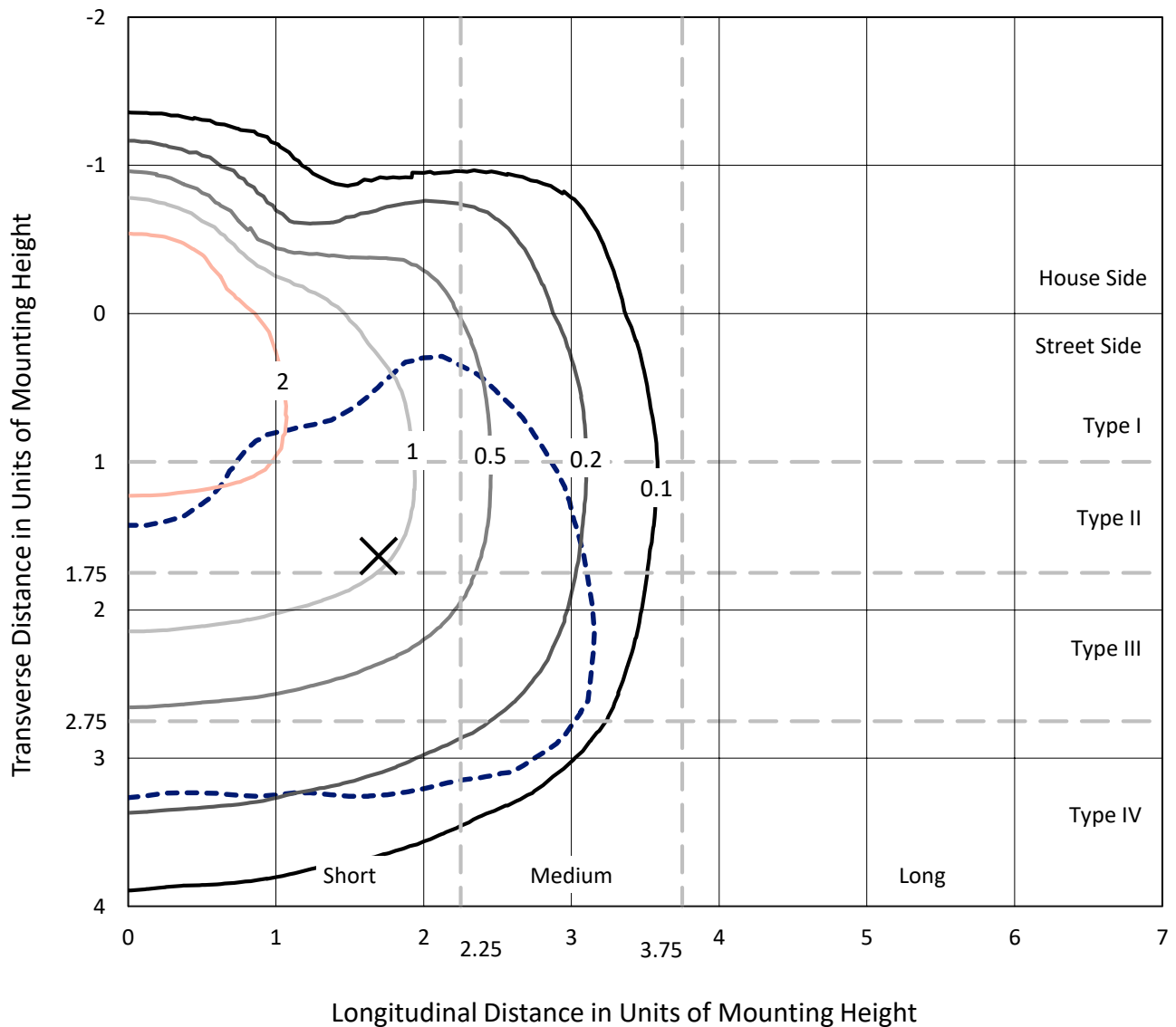
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

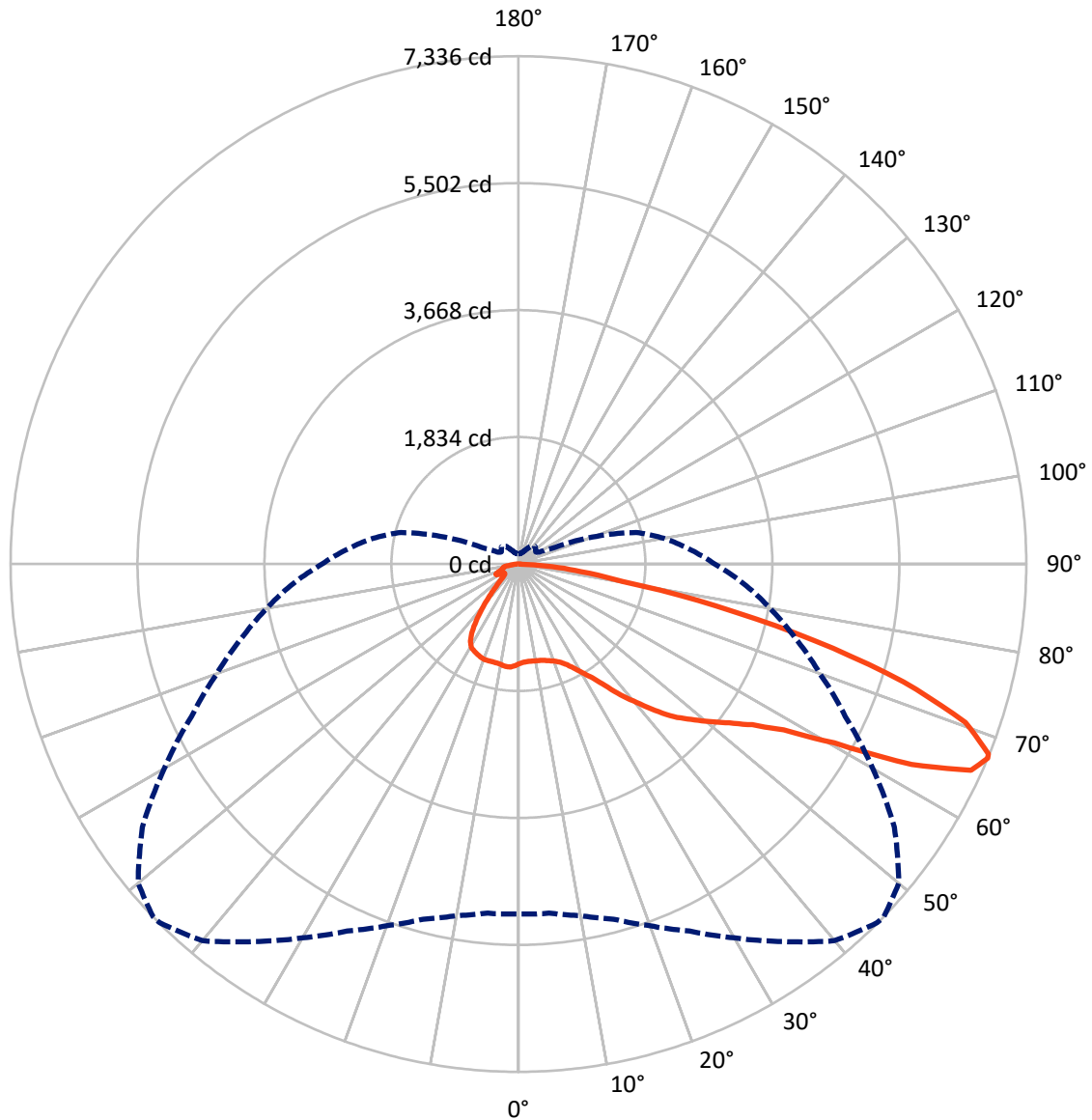
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.6 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
House Side	Lumens	2087.8	0.0	2087.8
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	8418.5	0.0	8418.5
	% Fixture	80.1	0.0	80.1
Total	Lumens	10506.3	0.0	10506.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.5	1.3
10°-20°	413.5	3.9
20°-30°	695.3	6.6
30°-40°	1039.7	9.9
40°-50°	1354.3	12.9
50°-60°	1854.8	17.7
60°-70°	2932.2	27.9
70°-80°	1818.8	17.3
80°-90°	259.2	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°	10506.3	100.0
0°-180°	10506.3	100.0



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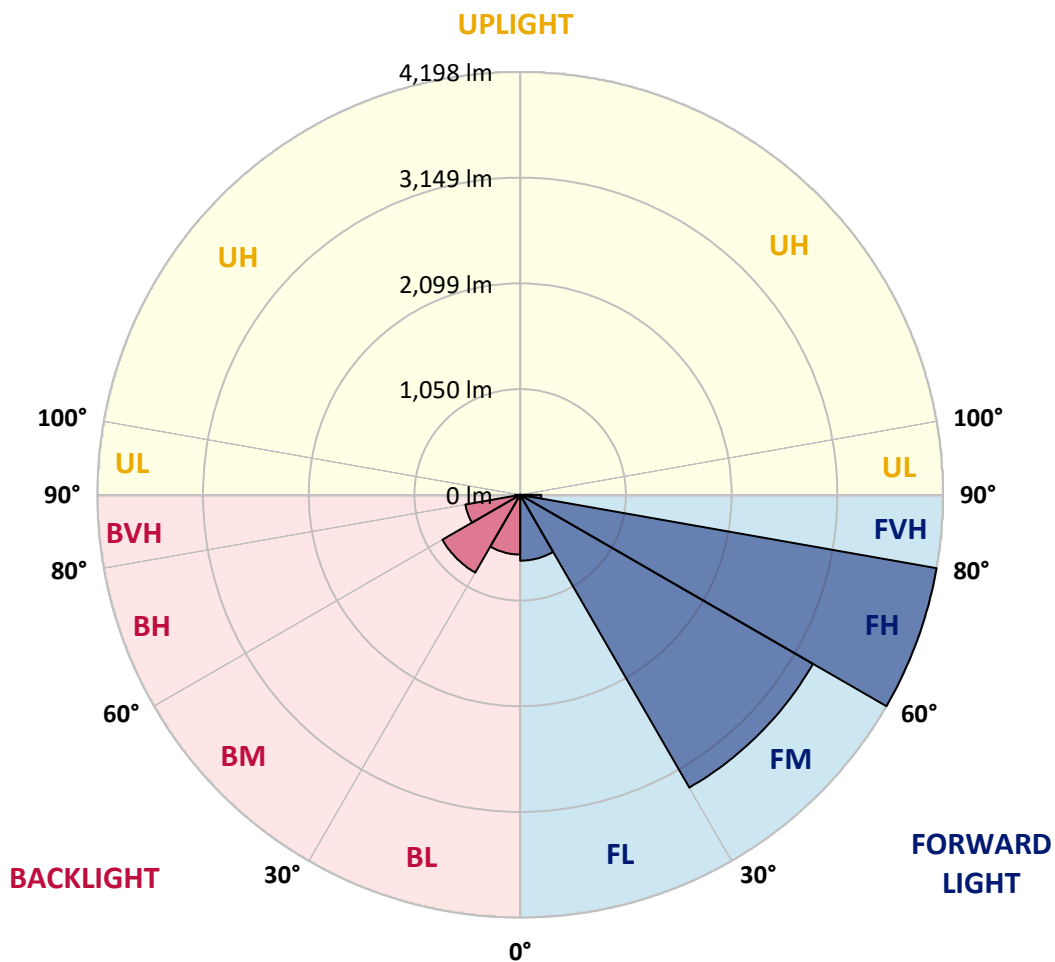
CATALOG NUMBER: ECM-E04-LED-E1-T4-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	654.2	6.2			
FM	(30°-60°)	3357.2	32.0			
FH	(60°-80°)	4198.3	40.0			G2/5000
FVH	(80°-90°)	208.7	2.0			G2/225
BL	(0°-30°)	593.0	5.6	B2/1000		
BM	(30°-60°)	891.6	8.5	B1/1000		
BH	(60°-80°)	552.7	5.3	B2/1000		G2/1000
BVH	(80°-90°)	50.5	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	46°
0°	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4
2.5°	1407.8	1411.4	1410.2	1409.0	1410.2	1411.4	1412.6	1416.3	1417.5	1418.7	1420.0
5°	1382.2	1385.9	1384.6	1387.1	1388.3	1393.2	1396.8	1402.9	1406.6	1411.4	1413.9
7.5°	1374.9	1377.3	1377.3	1379.8	1381.0	1385.9	1391.9	1399.3	1406.6	1413.9	1416.3
10°	1394.4	1395.6	1395.6	1394.4	1395.6	1398.0	1400.5	1406.6	1412.6	1418.7	1421.2
12.5°	1440.7	1437.0	1435.8	1432.1	1433.4	1428.5	1428.5	1427.3	1427.3	1428.5	1428.5
15°	1489.4	1486.9	1484.5	1478.4	1478.4	1471.1	1468.7	1463.8	1451.6	1446.7	1445.5
17.5°	1533.2	1530.8	1525.9	1521.0	1518.6	1508.9	1506.4	1497.9	1483.3	1472.3	1468.7
20°	1585.6	1579.5	1568.5	1566.1	1560.0	1549.0	1545.4	1534.4	1514.9	1499.1	1497.9
22.5°	1666.0	1656.2	1645.2	1636.7	1620.9	1609.9	1600.2	1585.6	1562.4	1544.2	1539.3
25°	1746.3	1742.7	1732.9	1720.8	1709.8	1697.6	1685.4	1663.5	1633.1	1609.9	1605.1
27.5°	1859.6	1851.1	1838.9	1819.4	1813.3	1792.6	1782.9	1764.6	1734.1	1704.9	1700.0
30°	1977.7	1969.2	1949.7	1932.6	1929.0	1907.1	1901.0	1881.5	1854.7	1825.5	1821.8
32.5°	2112.9	2104.4	2089.7	2080.0	2066.6	2054.4	2039.8	2021.5	1987.5	1963.1	1958.2
35°	2285.8	2278.5	2261.5	2268.8	2256.6	2252.9	2244.4	2214.0	2176.2	2147.0	2151.9
37.5°	2422.2	2421.0	2424.6	2421.0	2436.8	2452.7	2452.7	2455.1	2436.8	2405.2	2399.1
40°	2550.1	2548.9	2558.6	2569.6	2612.2	2637.8	2667.0	2677.9	2658.5	2634.1	2625.6
42.5°	2669.4	2667.0	2680.4	2720.6	2772.9	2820.4	2870.4	2913.0	2922.7	2895.9	2889.8
45°	2787.5	2791.2	2808.2	2853.3	2922.7	2984.8	3070.1	3120.0	3151.7	3137.1	3146.8
47.5°	2930.0	2933.7	2951.9	3005.5	3066.4	3144.4	3244.2	3329.5	3367.2	3367.2	3355.0
50°	3099.3	3116.4	3135.8	3172.4	3243.0	3319.7	3441.5	3526.8	3587.6	3585.2	3575.5
52.5°	3324.6	3328.2	3359.9	3389.1	3450.0	3528.0	3637.6	3754.5	3831.2	3823.9	3812.9
55°	3627.8	3613.2	3633.9	3661.9	3727.7	3795.9	3915.2	4050.4	4128.3	4105.2	4097.9
57.5°	4010.2	3998.0	4012.7	4046.8	4129.6	4185.6	4281.8	4406.0	4515.6	4535.1	4518.0
60°	4561.9	4561.9	4591.1	4664.2	4748.2	4832.2	4955.2	5105.0	5218.3	5246.3	5245.1
62.5°	5215.8	5257.2	5263.3	5358.3	5519.1	5664.0	5855.2	6119.4	6288.7	6409.3	6377.6
65°	5320.6	5334.0	5387.5	5534.9	5752.9	6009.8	6307.0	6654.1	7006.0	7180.2	7185.0
67°	5057.5	5062.4	5156.2	5310.8	5560.5	5850.3	6235.1	6657.7	7103.4	7328.7	7336.0
67.5°	4975.9	4966.2	5050.2	5212.2	5485.0	5811.3	6173.0	6617.5	7077.9	7319.0	7322.6
70°	4429.1	4434.0	4499.8	4680.0	4968.6	5274.3	5678.6	6135.3	6620.0	6840.4	6851.3
72.5°	3819.0	3787.4	3847.0	4039.4	4177.1	4475.4	4846.8	5191.5	5617.7	5826.0	5821.1
75°	2913.0	2825.3	2930.0	3042.1	3118.8	3414.7	3646.1	3883.6	4276.9	4435.2	4426.7
77.5°	1569.7	1566.1	1680.6	1768.2	1882.7	2149.4	2352.8	2502.6	2833.8	2911.8	2921.5
80°	852.5	884.1	952.3	1049.7	1142.3	1270.2	1388.3	1482.1	1590.4	1540.5	1529.6
82.5°	513.9	566.3	671.0	745.3	781.8	839.1	923.1	976.7	1019.3	926.7	908.5
85°	81.6	147.4	378.7	453.0	492.0	518.8	537.0	572.4	522.4	489.6	498.1
87.5°	26.8	30.4	58.5	129.1	113.3	77.9	102.3	148.6	70.6	37.8	36.5
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°	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4
2.5°	1421.2	1422.4	1426.0	1430.9	1433.4	1439.4	1439.4	1444.3	1444.3	1448.0	1451.6
5°	1417.5	1423.6	1428.5	1435.8	1439.4	1448.0	1451.6	1458.9	1462.6	1467.4	1472.3
7.5°	1423.6	1432.1	1438.2	1446.7	1452.8	1461.4	1465.0	1471.1	1474.8	1480.8	1483.3
10°	1428.5	1437.0	1444.3	1454.1	1458.9	1465.0	1468.7	1473.5	1474.8	1478.4	1480.8
12.5°	1434.6	1438.2	1444.3	1452.8	1457.7	1461.4	1465.0	1468.7	1472.3	1472.3	1472.3
15°	1443.1	1439.4	1440.7	1448.0	1452.8	1455.3	1458.9	1461.4	1462.6	1462.6	1460.1
17.5°	1461.4	1451.6	1445.5	1445.5	1448.0	1450.4	1450.4	1446.7	1444.3	1440.7	1435.8
20°	1488.2	1472.3	1460.1	1454.1	1449.2	1443.1	1433.4	1421.2	1410.2	1400.5	1394.4
22.5°	1525.9	1510.1	1495.5	1482.1	1466.2	1445.5	1424.8	1399.3	1378.6	1362.7	1356.6
25°	1596.5	1573.4	1562.4	1541.7	1517.4	1484.5	1452.8	1417.5	1393.2	1371.2	1361.5
27.5°	1691.5	1673.3	1648.9	1637.9	1606.3	1568.5	1533.2	1490.6	1456.5	1429.7	1411.4
30°	1812.1	1799.9	1779.2	1760.9	1730.5	1696.4	1644.0	1596.5	1536.9	1489.4	1462.6
32.5°	1950.9	1932.6	1914.4	1891.2	1869.3	1824.3	1775.6	1703.7	1620.9	1539.3	1489.4
35°	2125.1	2106.8	2094.6	2058.1	2021.5	1972.8	1907.1	1821.8	1706.1	1596.5	1511.3
37.5°	2365.0	2326.0	2266.3	2214.0	2148.2	2073.9	1999.6	1897.3	1768.2	1625.8	1508.9
40°	2573.2	2516.0	2449.0	2358.9	2266.3	2168.9	2081.2	1970.4	1819.4	1650.1	1491.8
42.5°	2843.6	2744.9	2631.7	2512.3	2385.7	2268.8	2160.4	2033.7	1857.1	1651.3	1451.6
45°	3087.1	2965.3	2815.6	2653.6	2498.9	2356.4	2232.2	2092.2	1888.8	1646.5	1405.3
47.5°	3303.9	3161.4	2978.7	2783.9	2601.2	2440.5	2304.1	2156.7	1930.2	1662.3	1388.3
50°	3513.4	3350.2	3144.4	2908.1	2704.7	2529.4	2386.9	2228.6	1999.6	1715.9	1415.1
52.5°	3737.4	3538.9	3306.3	3039.6	2818.0	2636.5	2477.0	2315.0	2082.4	1787.7	1463.8
55°	4011.4	3786.1	3520.7	3226.0	2971.4	2769.3	2589.0	2418.6	2181.1	1876.6	1521.0
57.5°	4376.8	4149.0	3843.4	3503.6	3236.9	2997.0	2780.2	2587.8	2330.9	1999.6	1606.3
60°	5080.7	4799.4	4392.6	4023.6	3735.0	3452.5	3190.6	2927.6	2618.3	2248.1	1825.5
62.5°	6210.8	5818.7	5314.5	4800.6	4410.9	4037.0	3691.2	3349.0	2962.9	2547.6	2086.1
65°	6992.6	6507.9	5874.7	5230.5	4703.1	4246.5	3833.6	3426.9	2997.0	2601.2	2199.3
67°	7171.6	6629.7	5908.8	5209.8	4636.2	4140.5	3691.2	3267.4	2835.0	2475.8	2132.4
67.5°	7164.3	6623.6	5882.0	5165.9	4591.1	4102.8	3649.7	3204.0	2779.0	2427.1	2099.5
70°	6730.8	6187.6	5442.4	4729.9	4175.8	3689.9	3233.3	2844.8	2411.2	2126.3	1880.3
72.5°	5703.0	5230.5	4628.9	3988.3	3513.4	3078.6	2713.3	2332.1	1955.8	1765.8	1572.2
75°	4336.6	3917.7	3366.0	2897.1	2535.5	2233.4	1866.9	1616.0	1351.8	1221.5	1152.0
77.5°	2865.5	2384.5	2003.3	1556.3	1290.9	1053.4	830.5	658.8	550.4	578.5	632.0
80°	1516.2	1203.2	890.2	689.3	532.2	414.1	328.8	246.0	179.0	209.5	263.0
82.5°	825.7	703.9	520.0	414.1	338.5	280.1	215.6	151.0	112.0	124.2	179.0
85°	471.3	414.1	321.5	250.9	219.2	179.0	123.0	82.8	80.4	86.5	110.8
87.5°	77.9	104.7	85.2	58.5	65.8	64.5	57.2	43.8	32.9	46.3	59.7
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°	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4	1439.4
2.5°	1454.1	1457.7	1462.6	1463.8	1462.6	1466.2	1472.3	1477.2	1473.5	1471.1	1477.2
5°	1477.2	1479.6	1485.7	1485.7	1486.9	1489.4	1493.0	1496.7	1491.8	1491.8	1494.2
7.5°	1486.9	1486.9	1493.0	1490.6	1490.6	1489.4	1493.0	1494.2	1486.9	1485.7	1486.9
10°	1480.8	1480.8	1483.3	1478.4	1477.2	1476.0	1476.0	1477.2	1469.9	1467.4	1471.1
12.5°	1472.3	1472.3	1469.9	1467.4	1465.0	1462.6	1465.0	1466.2	1461.4	1461.4	1462.6
15°	1457.7	1454.1	1452.8	1452.8	1454.1	1455.3	1460.1	1463.8	1460.1	1457.7	1457.7
17.5°	1433.4	1430.9	1434.6	1441.9	1450.4	1456.5	1463.8	1466.2	1457.7	1448.0	1440.7
20°	1396.8	1402.9	1416.3	1437.0	1455.3	1465.0	1465.0	1456.5	1437.0	1417.5	1407.8
22.5°	1359.1	1376.1	1405.3	1437.0	1458.9	1462.6	1449.2	1430.9	1404.1	1383.4	1365.2
25°	1363.9	1384.6	1413.9	1440.7	1455.3	1449.2	1424.8	1401.7	1370.0	1348.1	1321.3
27.5°	1415.1	1434.6	1449.2	1457.7	1452.8	1433.4	1405.3	1373.7	1338.4	1307.9	1276.3
30°	1456.5	1465.0	1463.8	1456.5	1438.2	1407.8	1374.9	1337.1	1294.5	1261.6	1220.2
32.5°	1463.8	1448.0	1423.6	1396.8	1372.5	1338.4	1300.6	1256.8	1209.3	1166.7	1125.2
35°	1450.4	1390.7	1337.1	1283.6	1247.0	1204.4	1171.5	1120.4	1068.0	1031.5	1001.0
37.5°	1400.5	1297.0	1211.7	1136.2	1082.6	1033.9	984.0	934.1	890.2	873.2	864.6
40°	1337.1	1181.3	1051.0	946.2	889.0	841.5	790.4	750.2	729.5	713.6	707.5
42.5°	1244.6	1049.7	887.8	775.7	702.7	658.8	608.9	587.0	577.2	580.9	576.0
45°	1158.1	912.1	708.8	584.5	534.6	493.2	468.9	459.1	454.2	451.8	455.5
47.5°	1097.2	806.2	571.1	444.5	403.1	373.9	364.1	360.5	359.3	354.4	353.2
50°	1082.6	744.1	467.6	345.9	314.2	298.4	293.5	289.8	287.4	283.7	275.2
52.5°	1099.7	727.0	416.5	297.1	270.4	258.2	254.5	248.4	246.0	236.3	225.3
55°	1128.9	733.1	400.7	283.7	257.0	243.6	238.7	236.3	227.7	216.8	203.4
57.5°	1189.8	770.9	408.0	287.4	259.4	247.2	244.8	242.3	231.4	215.6	198.5
60°	1366.4	880.5	445.7	313.0	278.9	270.4	271.6	266.7	250.9	230.2	204.6
62.5°	1639.2	1051.0	515.1	344.6	310.5	310.5	317.8	314.2	289.8	255.7	219.2
65°	1780.4	1153.3	544.4	354.4	320.3	336.1	359.3	355.6	320.3	269.1	220.4
67°	1758.5	1133.8	527.3	339.8	302.0	322.7	345.9	347.1	308.1	257.0	210.7
67.5°	1737.8	1120.4	518.8	333.7	297.1	317.8	339.8	336.1	303.2	252.1	208.2
70°	1561.2	984.0	462.8	311.8	275.2	281.3	287.4	282.5	257.0	222.9	192.4
72.5°	1348.1	817.1	408.0	298.4	263.0	253.3	253.3	244.8	227.7	204.6	182.7
75°	1027.8	635.7	358.0	283.7	248.4	233.8	231.4	225.3	210.7	193.6	174.1
77.5°	627.2	455.5	310.5	261.8	230.2	218.0	219.2	215.6	200.9	185.1	166.8
80°	314.2	294.7	260.6	227.7	208.2	196.1	197.3	190.0	177.8	165.6	151.0
82.5°	192.4	203.4	182.7	172.9	160.7	147.4	114.5	134.0	130.3	119.3	113.3
85°	127.9	126.7	114.5	101.1	92.6	80.4	71.9	73.1	80.4	82.8	82.8
87.5°	62.1	59.7	54.8	51.1	48.7	40.2	37.8	42.6	42.6	45.1	43.8
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°	1439.4	1439.4	1439.4	1439.4	1439.4
2.5°	1478.4	1480.8	1479.6	1483.3	1479.6
5°	1495.5	1495.5	1496.7	1497.9	1496.7
7.5°	1486.9	1485.7	1488.2	1490.6	1489.4
10°	1471.1	1472.3	1474.8	1478.4	1478.4
12.5°	1465.0	1466.2	1471.1	1474.8	1474.8
15°	1460.1	1461.4	1463.8	1468.7	1465.0
17.5°	1438.2	1433.4	1433.4	1437.0	1433.4
20°	1399.3	1391.9	1391.9	1390.7	1389.5
22.5°	1353.0	1334.7	1329.8	1323.7	1325.0
25°	1295.7	1271.4	1258.0	1250.7	1248.2
27.5°	1249.5	1221.5	1208.1	1197.1	1193.4
30°	1191.0	1159.3	1148.4	1142.3	1139.9
32.5°	1105.8	1077.8	1063.1	1059.5	1052.2
35°	976.7	964.5	958.4	949.9	951.1
37.5°	847.6	843.9	829.3	834.2	829.3
40°	708.8	707.5	710.0	706.3	714.8
42.5°	578.5	574.8	580.9	577.2	580.9
45°	448.2	455.5	464.0	460.3	465.2
47.5°	343.4	344.6	342.2	344.6	347.1
50°	264.3	261.8	259.4	254.5	257.0
52.5°	218.0	209.5	203.4	199.7	198.5
55°	192.4	183.9	179.0	174.1	174.1
57.5°	185.1	174.1	166.8	163.2	162.0
60°	186.3	171.7	162.0	155.9	154.7
62.5°	191.2	171.7	158.3	152.2	149.8
65°	190.0	169.3	155.9	149.8	147.4
67°	183.9	165.6	154.7	148.6	147.4
67.5°	181.5	164.4	154.7	148.6	146.1
70°	172.9	160.7	152.2	146.1	143.7
72.5°	165.6	155.9	146.1	141.3	138.8
75°	158.3	148.6	140.0	135.2	134.0
77.5°	151.0	140.0	134.0	127.9	123.0
80°	137.6	125.4	116.9	107.2	104.7
82.5°	113.3	103.5	95.0	86.5	85.2
85°	84.0	80.4	73.1	65.8	65.8
87.5°	46.3	51.1	45.1	41.4	39.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)