

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: P141890

Luminaire Tested: **ECM-E04-LED-E1-T3**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141890
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33683)
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-T3
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11745 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

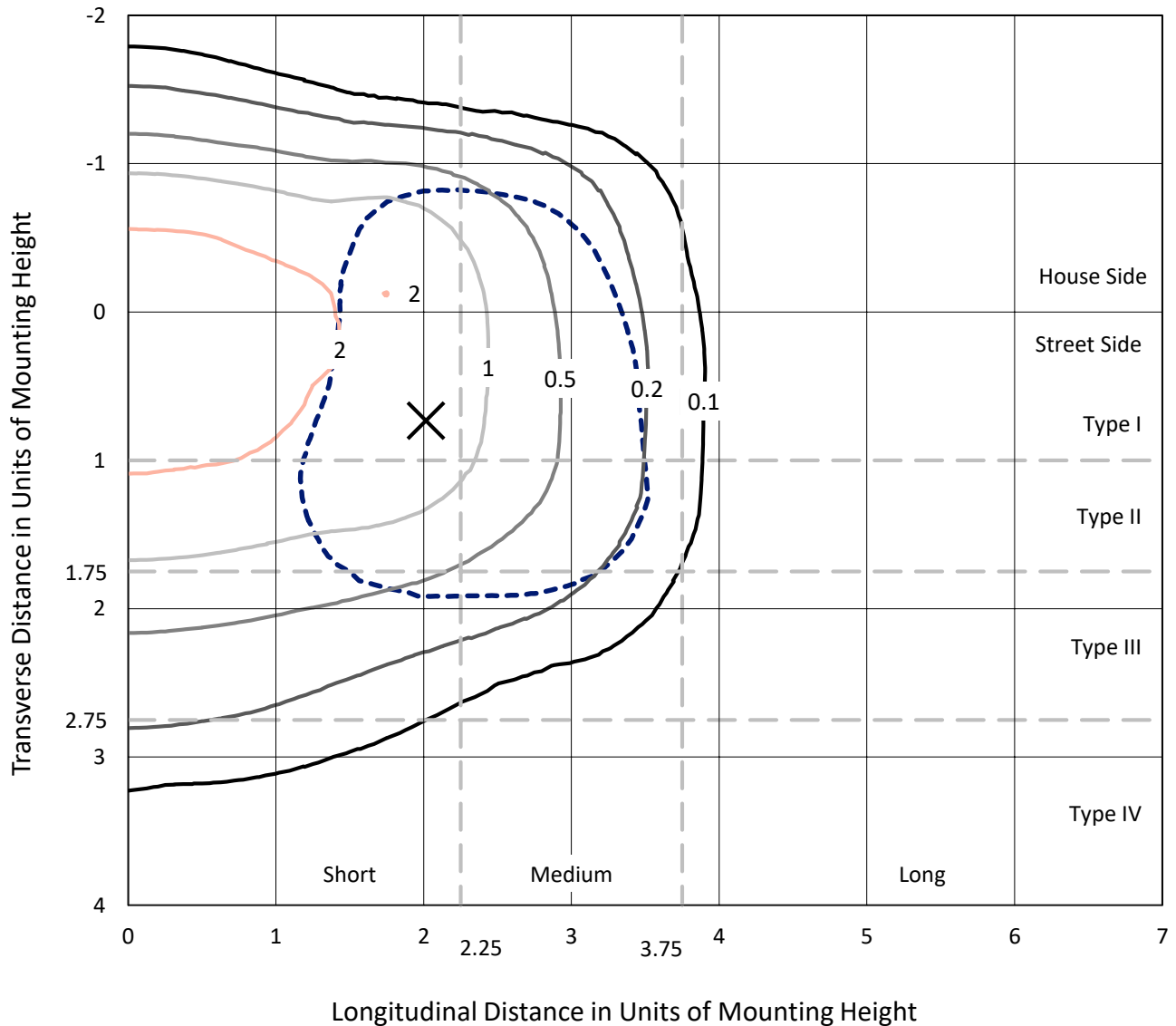
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

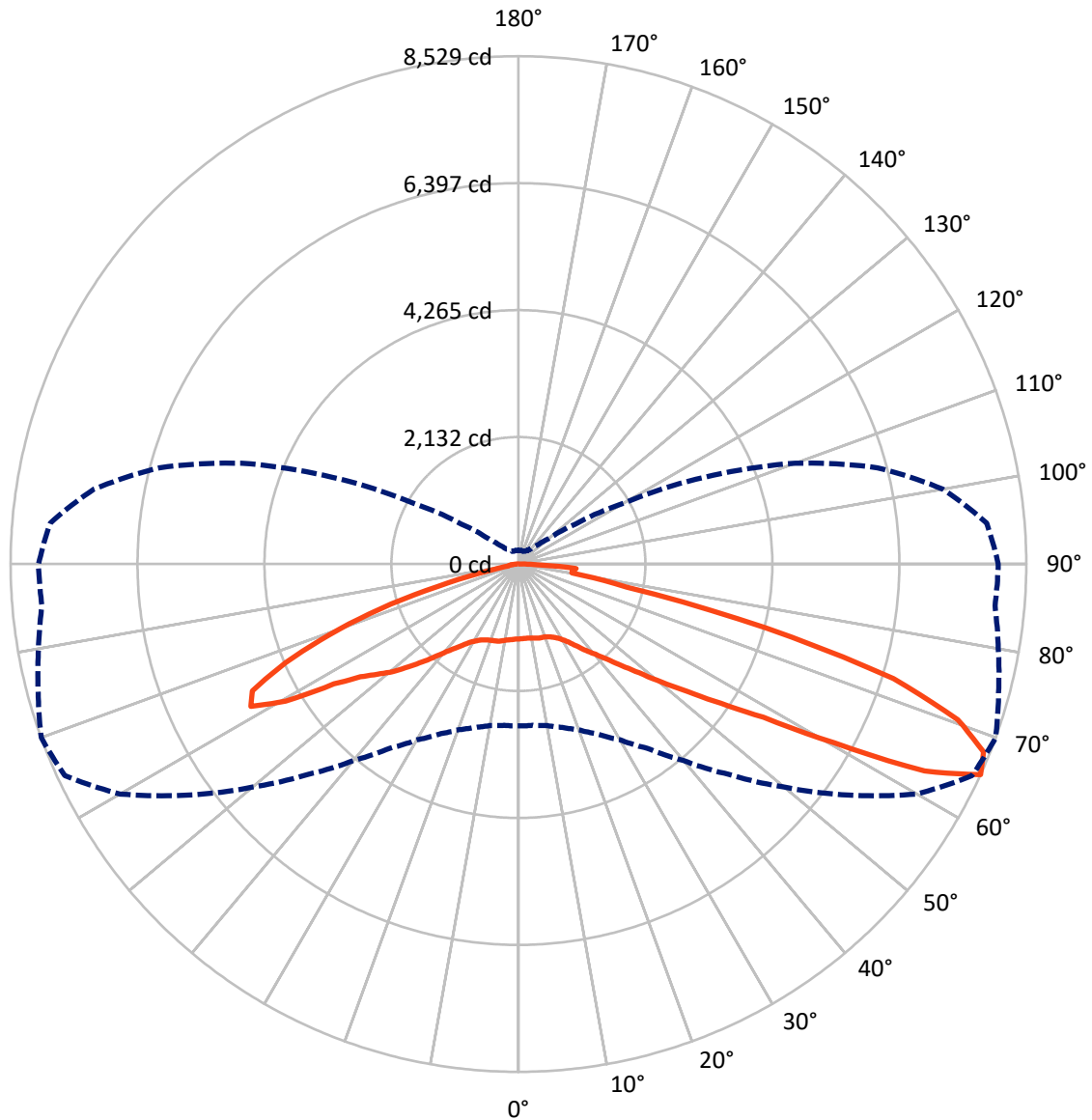
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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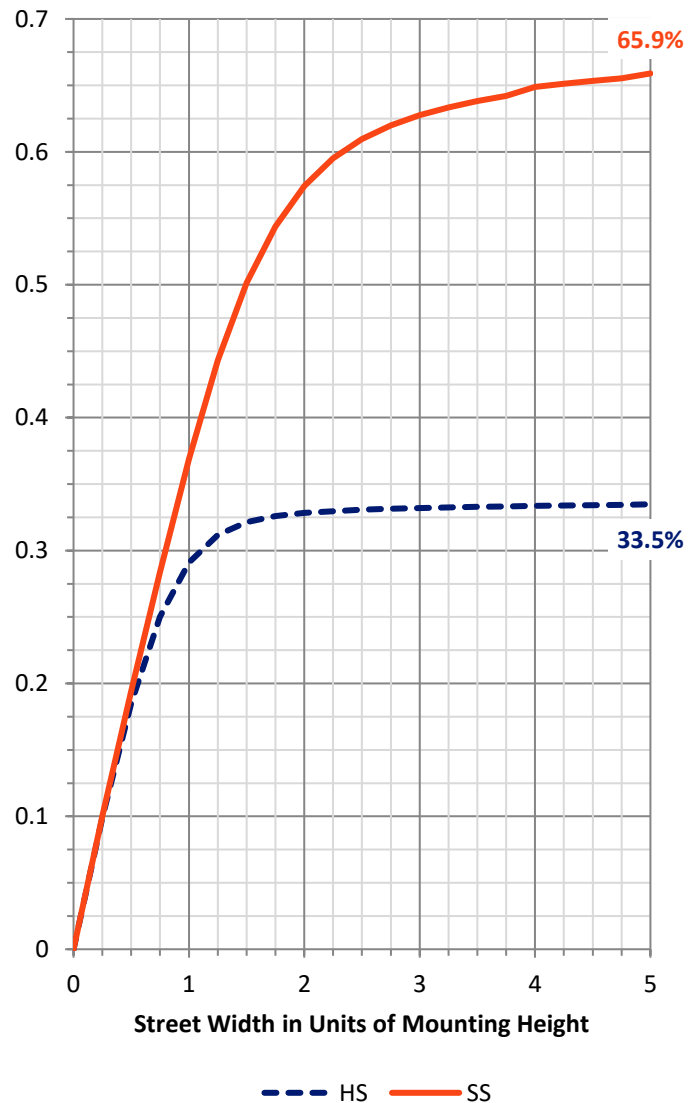
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3964.8	0.0	3964.8
	% Fixture	33.8	0.0	33.8
Street Side	Lumens	7780.2	0.0	7780.2
	% Fixture	66.2	0.0	66.2
Total	Lumens	11745.0	0.0	11745.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.2	1.0
10°-20°	358.8	3.1
20°-30°	616.9	5.3
30°-40°	988.9	8.4
40°-50°	1619.1	13.8
50°-60°	2534.2	21.6
60°-70°	3561.5	30.3
70°-80°	1685.4	14.4
80°-90°	258.9	2.2
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°	11745.0	100.0
0°-180°	11745.0	100.0

Coefficient of Utilization



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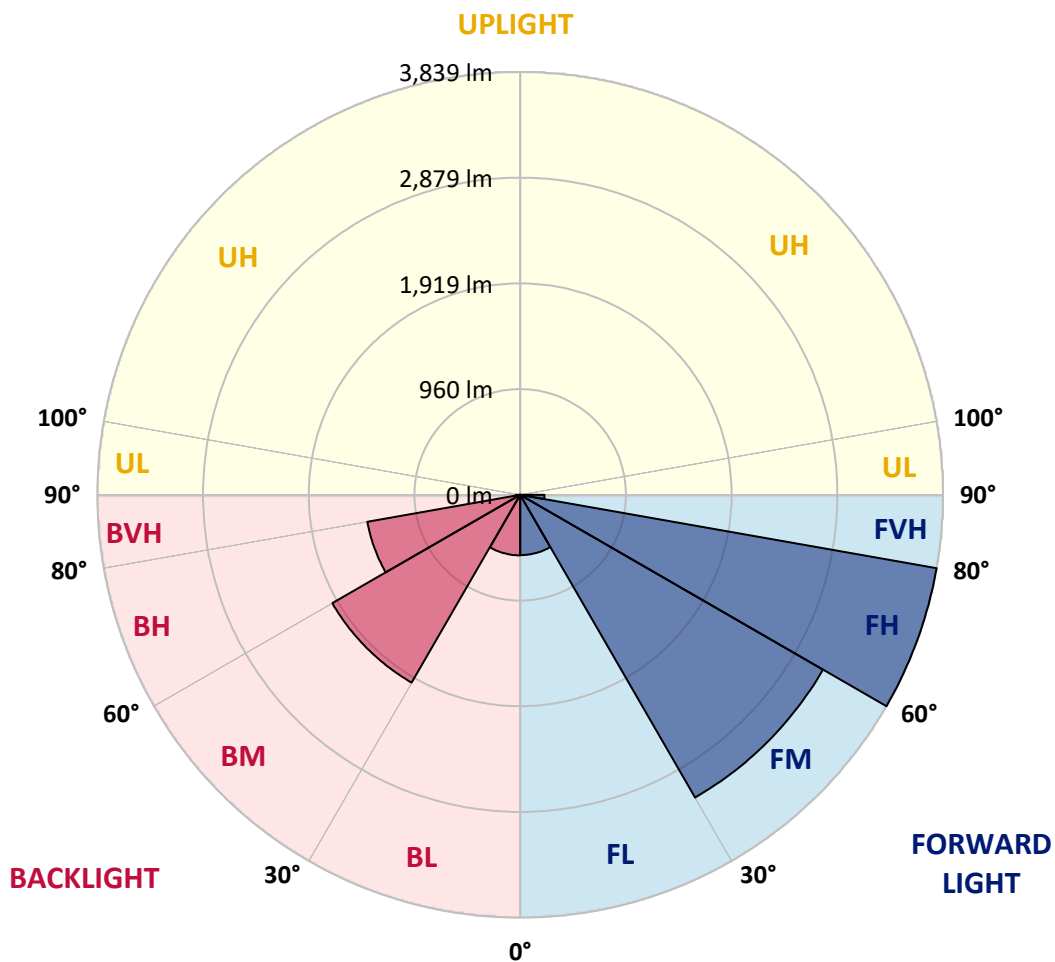
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	547.2	4.7			
FM	(30°-60°)	3173.8	27.0			
FH	(60°-80°)	3838.6	32.7			G2/5000
FVH	(80°-90°)	220.7	1.9			G2/225
BL	(0°-30°)	549.8	4.7	B2/1000		
BM	(30°-60°)	1968.4	16.8	B2/2500		
BH	(60°-80°)	1408.4	12.0	B3/2500		G3/2500
BVH	(80°-90°)	38.3	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7
2.5°	1252.0	1253.3	1253.3	1250.7	1250.7	1252.0	1252.0	1253.3	1253.3	1253.3	1254.7
5°	1252.0	1253.3	1253.3	1252.0	1250.7	1253.3	1252.0	1253.3	1253.3	1253.3	1253.3
7.5°	1249.3	1250.7	1250.7	1249.3	1250.7	1252.0	1252.0	1254.7	1256.0	1256.0	1257.3
10°	1236.0	1237.3	1238.7	1238.7	1241.3	1245.3	1246.7	1252.0	1253.3	1257.3	1260.0
12.5°	1212.0	1212.0	1214.7	1217.3	1221.3	1229.3	1233.3	1241.3	1248.0	1253.3	1262.7
15°	1190.7	1190.7	1193.3	1194.7	1202.7	1208.0	1216.0	1225.3	1237.3	1248.0	1262.7
17.5°	1201.3	1201.3	1200.0	1198.7	1200.0	1200.0	1206.7	1216.0	1226.7	1241.3	1260.0
20°	1242.7	1241.3	1236.0	1233.3	1232.0	1226.7	1222.7	1221.3	1226.7	1237.3	1256.0
22.5°	1278.7	1276.0	1274.7	1272.0	1276.0	1273.3	1268.0	1261.3	1253.3	1249.3	1260.0
25°	1300.0	1301.3	1301.3	1301.3	1309.3	1312.0	1314.7	1306.7	1297.3	1284.0	1285.3
27.5°	1329.3	1330.7	1328.0	1333.3	1342.7	1349.3	1356.0	1361.3	1356.0	1348.0	1338.7
30°	1392.0	1392.0	1388.0	1392.0	1400.0	1406.7	1416.0	1425.3	1425.3	1417.3	1408.0
32.5°	1457.3	1458.7	1458.7	1461.3	1473.3	1478.7	1492.0	1501.3	1508.0	1502.7	1508.0
35°	1536.0	1534.7	1538.7	1540.0	1558.7	1565.3	1592.0	1598.7	1609.3	1612.0	1616.0
37.5°	1666.7	1669.3	1661.3	1656.0	1672.0	1672.0	1706.7	1725.3	1722.7	1741.3	1754.7
40°	1877.3	1865.3	1861.3	1858.7	1868.0	1866.7	1865.3	1890.7	1902.7	1905.3	1912.0
42.5°	2110.7	2114.7	2110.7	2120.0	2120.0	2113.3	2108.0	2104.0	2126.7	2141.3	2144.0
45°	2384.0	2389.3	2381.3	2374.7	2392.0	2401.3	2401.3	2412.0	2430.7	2437.3	2433.3
47.5°	2602.7	2617.3	2610.7	2620.0	2648.0	2680.0	2722.7	2750.7	2770.7	2789.3	2818.7
50°	2800.0	2806.7	2822.7	2853.3	2894.7	2945.3	3014.7	3084.0	3124.0	3170.7	3205.3
52.5°	2920.0	2940.0	2964.0	3014.7	3084.0	3154.7	3261.3	3374.7	3476.0	3528.0	3569.3
55°	2992.0	3006.7	3038.7	3108.0	3205.3	3310.7	3444.0	3600.0	3734.7	3849.3	3938.7
57.5°	2989.3	3001.3	3045.3	3121.3	3237.3	3369.3	3536.0	3730.7	3929.3	4120.0	4288.0
60°	2932.0	2942.7	2986.7	3068.0	3194.7	3352.0	3552.0	3790.7	4060.0	4346.7	4641.3
62.5°	2844.0	2852.0	2890.7	2972.0	3100.0	3268.0	3502.7	3816.0	4198.7	4650.7	5222.7
65°	2720.0	2720.0	2756.0	2840.0	2962.7	3150.7	3409.3	3777.3	4306.7	4994.7	5826.7
67.5°	2537.3	2537.3	2566.7	2636.0	2732.0	2862.7	3121.3	3504.0	4062.7	4886.7	5860.0
70°	2192.0	2197.3	2197.3	2240.0	2282.7	2341.3	2464.0	2757.3	3281.3	4086.7	5044.0
72.5°	1606.7	1509.3	1585.3	1654.7	1702.7	1734.7	1805.3	1897.3	2161.3	2765.3	3632.0
75°	1012.0	1037.3	1094.7	1173.3	1292.0	1414.7	1549.3	1606.7	1582.7	1654.7	2237.3
77.5°	613.3	592.0	648.0	765.3	898.7	1065.3	1317.3	1536.0	1661.3	1653.3	1584.0
80°	265.3	258.7	296.0	352.0	417.3	568.0	798.7	1098.7	1432.0	1625.3	1596.0
82.5°	94.7	96.0	121.3	144.0	173.3	222.7	316.0	505.3	801.3	1141.3	1410.7
85°	28.0	30.7	42.7	60.0	68.0	77.3	106.7	158.7	270.7	432.0	768.0
87.5°	8.0	9.3	12.0	21.3	20.0	18.7	21.3	33.3	25.3	21.3	106.7
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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CATALOG NUMBER: ECM-E04-LED-E1-T3

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7
2.5°	1253.3	1253.3	1253.3	1254.7	1253.3	1253.3	1254.7	1254.7	1256.0	1257.3	1260.0
5°	1252.0	1252.0	1253.3	1253.3	1253.3	1254.7	1256.0	1257.3	1260.0	1264.0	1268.0
7.5°	1256.0	1256.0	1254.7	1256.0	1256.0	1257.3	1260.0	1261.3	1266.7	1270.7	1277.3
10°	1260.0	1260.0	1261.3	1262.7	1262.7	1265.3	1269.3	1270.7	1276.0	1284.0	1290.7
12.5°	1265.3	1269.3	1274.7	1277.3	1280.0	1282.7	1286.7	1289.3	1296.0	1306.7	1314.7
15°	1269.3	1278.7	1284.0	1290.7	1294.7	1296.0	1300.0	1305.3	1312.0	1322.7	1332.0
17.5°	1269.3	1281.3	1289.3	1296.0	1302.7	1306.7	1310.7	1316.0	1325.3	1336.0	1345.3
20°	1268.0	1285.3	1296.0	1306.7	1318.7	1322.7	1329.3	1334.7	1345.3	1358.7	1365.3
22.5°	1274.7	1294.7	1309.3	1328.0	1341.3	1352.0	1360.0	1369.3	1377.3	1386.7	1389.3
25°	1294.7	1314.7	1338.7	1361.3	1380.0	1396.0	1406.7	1414.7	1424.0	1428.0	1422.7
27.5°	1328.0	1342.7	1376.0	1409.3	1438.7	1458.7	1470.7	1481.3	1484.0	1492.0	1472.0
30°	1388.0	1394.7	1429.3	1477.3	1510.7	1544.0	1560.0	1570.7	1572.0	1566.7	1532.0
32.5°	1486.7	1474.7	1505.3	1569.3	1620.0	1648.0	1673.3	1680.0	1676.0	1658.7	1602.7
35°	1606.7	1588.0	1602.7	1696.0	1752.0	1793.3	1817.3	1824.0	1814.7	1784.0	1706.7
37.5°	1754.7	1748.0	1754.7	1844.0	1941.3	1980.0	1990.7	1998.7	1976.0	1920.0	1818.7
40°	1918.7	1920.0	1912.0	1993.3	2116.0	2172.0	2197.3	2180.0	2152.0	2072.0	1960.0
42.5°	2145.3	2137.3	2109.3	2182.7	2340.0	2397.3	2420.0	2406.7	2378.7	2277.3	2146.7
45°	2445.3	2418.7	2392.0	2430.7	2582.7	2657.3	2690.7	2681.3	2632.0	2509.3	2386.7
47.5°	2812.0	2784.0	2734.7	2728.0	2881.3	2969.3	2981.3	2966.7	2929.3	2806.7	2656.0
50°	3197.3	3189.3	3166.7	3113.3	3250.7	3338.7	3330.7	3320.0	3278.7	3122.7	2968.0
52.5°	3596.0	3612.0	3597.3	3560.0	3706.7	3742.7	3745.3	3713.3	3665.3	3521.3	3310.7
55°	4014.7	4074.7	4097.3	4126.7	4242.7	4237.3	4206.7	4130.7	4142.7	3978.7	3686.7
57.5°	4458.7	4642.7	4788.0	4853.3	4964.0	4996.0	4918.7	4944.0	4933.3	4764.0	4304.0
60°	5044.0	5484.0	5862.7	6096.0	6245.3	6188.0	6296.0	6301.3	6484.0	6112.0	5394.7
62.5°	5977.3	6785.3	7457.3	7658.7	7697.3	7684.0	7556.0	7684.0	7649.3	7196.0	6266.7
65°	6762.7	7724.0	8406.7	8529.3	8349.3	8184.0	8034.7	8060.0	7894.7	7238.7	6241.3
67.5°	6869.3	7826.7	8460.0	8425.3	8032.0	7725.3	7477.3	7282.7	6945.3	6352.0	5482.7
70°	6025.3	7040.0	7856.0	7829.3	7282.7	6873.3	6470.7	6177.3	5833.3	5374.7	4552.0
72.5°	4686.7	5590.7	6381.3	6586.7	6048.0	5596.0	5226.7	4853.3	4498.7	4062.7	3544.0
75°	3190.7	3870.7	4238.7	4294.7	3801.3	3462.7	3320.0	3014.7	2638.7	2545.3	2161.3
77.5°	1853.3	2114.7	2002.7	1853.3	1492.0	1096.0	837.3	716.0	718.7	825.3	790.7
80°	1506.7	1434.7	1132.0	908.0	617.3	314.7	210.7	181.3	182.7	212.0	205.3
82.5°	1553.3	1594.7	1310.7	917.3	632.0	333.3	160.0	118.7	138.7	150.7	148.0
85°	1150.7	1508.0	1352.0	973.3	678.7	354.7	104.0	65.3	92.0	112.0	120.0
87.5°	322.7	506.7	393.3	260.0	189.3	64.0	41.3	34.7	42.7	58.7	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7	1258.7
2.5°	1261.3	1266.7	1265.3	1268.0	1269.3	1273.3	1276.0	1274.7	1274.7	1277.3	1280.0
5°	1272.0	1278.7	1278.7	1282.7	1286.7	1292.0	1296.0	1293.3	1294.7	1297.3	1300.0
7.5°	1282.7	1290.7	1292.0	1296.0	1298.7	1301.3	1304.0	1300.0	1298.7	1298.7	1297.3
10°	1296.0	1304.0	1302.7	1302.7	1301.3	1298.7	1293.3	1284.0	1277.3	1273.3	1270.7
12.5°	1318.7	1324.0	1316.0	1308.0	1294.7	1285.3	1273.3	1262.7	1254.7	1248.0	1245.3
15°	1338.7	1336.0	1326.7	1312.0	1293.3	1278.7	1266.7	1252.0	1242.7	1234.7	1230.7
17.5°	1349.3	1340.0	1326.7	1313.3	1297.3	1284.0	1269.3	1252.0	1237.3	1226.7	1221.3
20°	1360.0	1345.3	1328.0	1314.7	1302.7	1292.0	1281.3	1260.0	1241.3	1225.3	1217.3
22.5°	1376.0	1356.0	1338.7	1326.7	1314.7	1304.0	1293.3	1273.3	1253.3	1232.0	1220.0
25°	1398.7	1372.0	1360.0	1348.0	1334.7	1324.0	1309.3	1290.7	1269.3	1244.0	1226.7
27.5°	1434.7	1410.7	1397.3	1385.3	1369.3	1352.0	1336.0	1310.7	1290.7	1261.3	1238.7
30°	1486.7	1461.3	1449.3	1437.3	1418.7	1396.0	1373.3	1341.3	1313.3	1280.0	1250.7
32.5°	1552.0	1538.7	1524.0	1504.0	1478.7	1450.7	1417.3	1374.7	1334.7	1293.3	1256.0
35°	1653.3	1630.7	1606.7	1586.7	1549.3	1510.7	1460.0	1397.3	1344.0	1293.3	1248.0
37.5°	1769.3	1745.3	1713.3	1677.3	1621.3	1560.0	1489.3	1410.7	1340.0	1278.7	1228.0
40°	1909.3	1878.7	1836.0	1768.0	1685.3	1593.3	1498.7	1400.0	1317.3	1246.7	1188.0
42.5°	2094.7	2032.0	1949.3	1849.3	1732.0	1606.7	1486.7	1372.0	1278.7	1201.3	1142.7
45°	2304.0	2204.0	2070.7	1921.3	1758.7	1601.3	1460.0	1326.7	1221.3	1136.0	1074.7
47.5°	2529.3	2373.3	2177.3	1966.7	1761.3	1572.0	1408.0	1258.7	1140.0	1049.3	973.3
50°	2784.0	2526.7	2252.0	1989.3	1744.0	1520.0	1333.3	1161.3	1038.7	930.7	861.3
52.5°	3002.7	2661.3	2304.0	1980.0	1682.7	1429.3	1210.7	1044.0	900.0	804.0	736.0
55°	3261.3	2792.0	2332.0	1933.3	1584.0	1288.0	1078.7	893.3	757.3	672.0	613.3
57.5°	3697.3	3013.3	2356.0	1838.7	1421.3	1110.7	896.0	722.7	616.0	541.3	500.0
60°	4538.7	3442.7	2454.7	1697.3	1214.7	897.3	692.0	565.3	473.3	424.0	394.7
62.5°	5089.3	3734.7	2410.7	1480.0	949.3	672.0	506.7	408.0	354.7	318.7	305.3
65°	4949.3	3440.0	2045.3	1173.3	661.3	446.7	340.0	280.0	256.0	237.3	229.3
67.5°	4250.7	2774.7	1482.7	758.7	418.7	272.0	222.7	198.7	188.0	180.0	178.7
70°	3386.7	1956.0	881.3	402.7	232.0	180.0	158.7	149.3	145.3	145.3	145.3
72.5°	2457.3	1126.7	433.3	217.3	156.0	137.3	128.0	125.3	124.0	124.0	125.3
75°	1404.0	488.0	222.7	149.3	128.0	118.7	113.3	113.3	113.3	113.3	114.7
77.5°	489.3	222.7	157.3	125.3	110.7	105.3	102.7	105.3	106.7	106.7	106.7
80°	178.7	157.3	134.7	109.3	98.7	93.3	93.3	97.3	100.0	97.3	96.0
82.5°	141.3	124.0	109.3	94.7	86.7	84.0	85.3	88.0	86.7	85.3	81.3
85°	108.0	81.3	76.0	70.7	69.3	69.3	74.7	76.0	70.7	68.0	64.0
87.5°	53.3	42.7	38.7	45.3	44.0	40.0	41.3	41.3	34.7	32.0	33.3
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):

	165°	170°	175°	180°
0°	1258.7	1258.7	1258.7	1258.7
2.5°	1280.0	1281.3	1285.3	1284.0
5°	1298.7	1300.0	1302.7	1302.7
7.5°	1294.7	1296.0	1296.0	1296.0
10°	1264.0	1264.0	1266.7	1266.7
12.5°	1240.0	1238.7	1238.7	1236.0
15°	1225.3	1222.7	1224.0	1220.0
17.5°	1214.7	1213.3	1213.3	1210.7
20°	1210.7	1208.0	1206.7	1204.0
22.5°	1208.0	1206.7	1204.0	1201.3
25°	1214.7	1208.0	1206.7	1204.0
27.5°	1221.3	1214.7	1209.3	1208.0
30°	1228.0	1216.0	1209.3	1206.7
32.5°	1226.7	1210.7	1201.3	1197.3
35°	1212.0	1192.0	1180.0	1176.0
37.5°	1184.0	1161.3	1142.7	1136.0
40°	1144.0	1114.7	1097.3	1088.0
42.5°	1096.0	1062.7	1048.0	1040.0
45°	1017.3	990.7	973.3	966.7
47.5°	929.3	893.3	877.3	870.7
50°	816.0	786.7	773.3	764.0
52.5°	696.0	669.3	657.3	652.0
55°	580.0	566.7	548.0	544.0
57.5°	470.7	466.7	453.3	452.0
60°	382.7	376.0	366.7	366.7
62.5°	301.3	294.7	290.7	290.7
65°	232.0	230.7	228.0	226.7
67.5°	178.7	182.7	184.0	181.3
70°	149.3	150.7	150.7	150.7
72.5°	129.3	129.3	129.3	128.0
75°	117.3	117.3	114.7	113.3
77.5°	108.0	106.7	108.0	106.7
80°	94.7	93.3	90.7	88.0
82.5°	78.7	77.3	70.7	70.7
85°	61.3	57.3	52.0	46.7
87.5°	34.7	30.7	22.7	16.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)