

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: P141253

Luminaire Tested: **ECM-F04-LED-E1-SL4-8030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141253
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-F04-LED-E1-SL4-8030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (28) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7868.9 lumens
Efficiency: N/A
Efficacy: 77.0 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

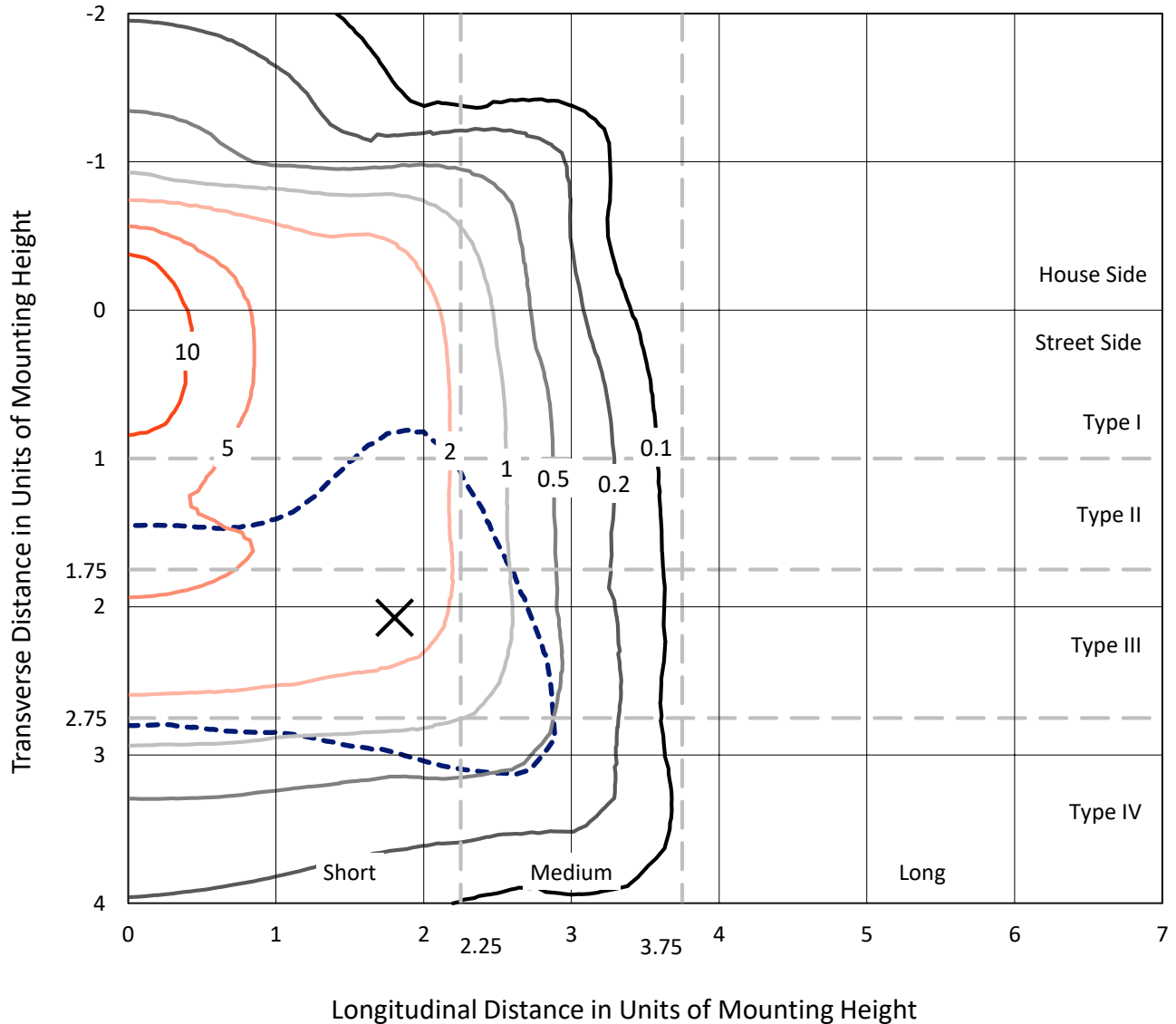
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

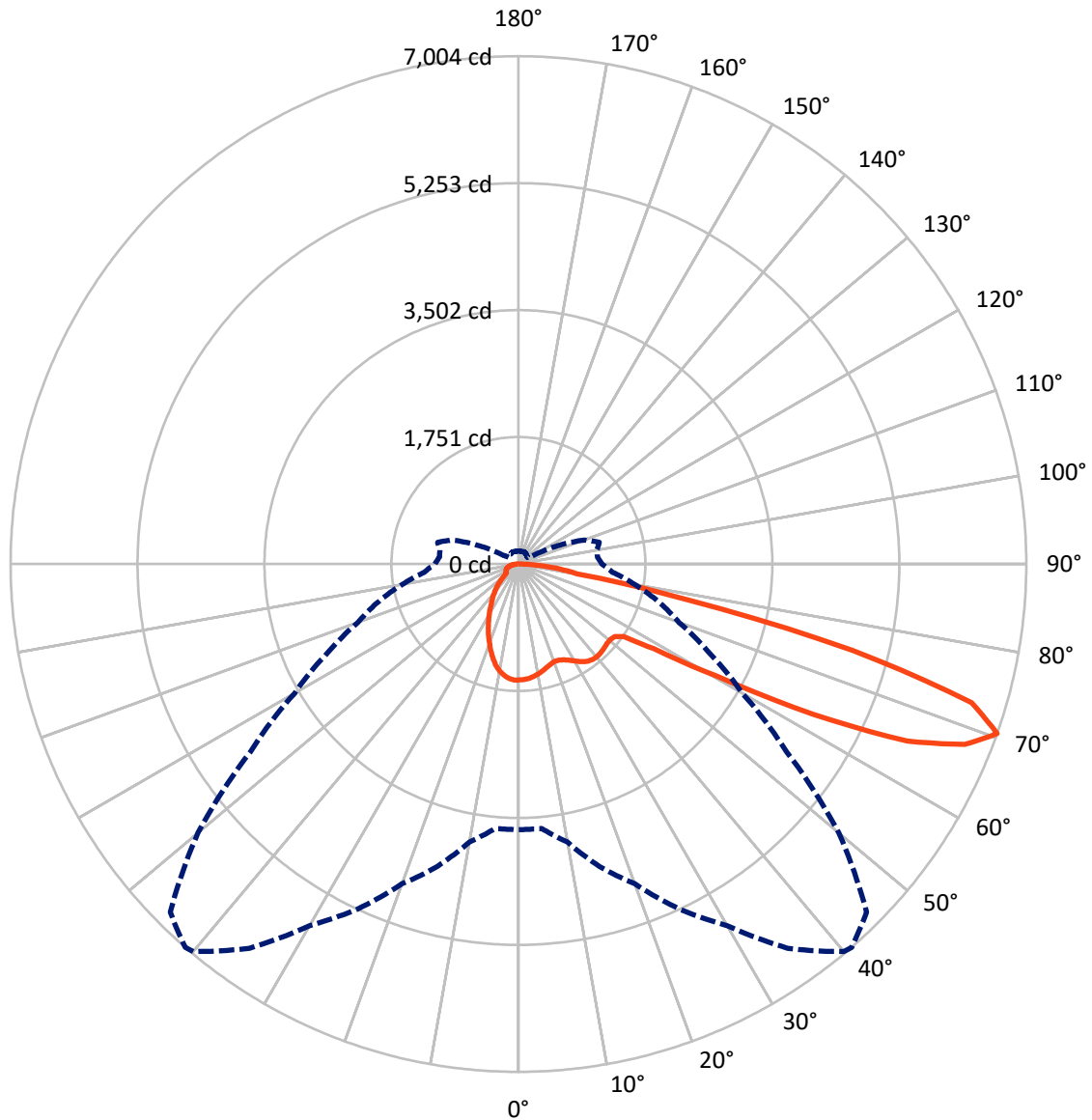
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16 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	1688.3	0.0	1688.3
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	6180.6	0.0	6180.6
	% Fixture	78.5	0.0	78.5
Total	Lumens	7868.9	0.0	7868.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.8	1.9
10°-20°	398.8	5.1
20°-30°	576.5	7.3
30°-40°	733.8	9.3
40°-50°	864.7	11.0
50°-60°	1323.1	16.8
60°-70°	2459.1	31.3
70°-80°	1186.9	15.1
80°-90°	177.3	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°	7868.9	100.0
0°-180°	7868.9	100.0

Coefficient of Utilization



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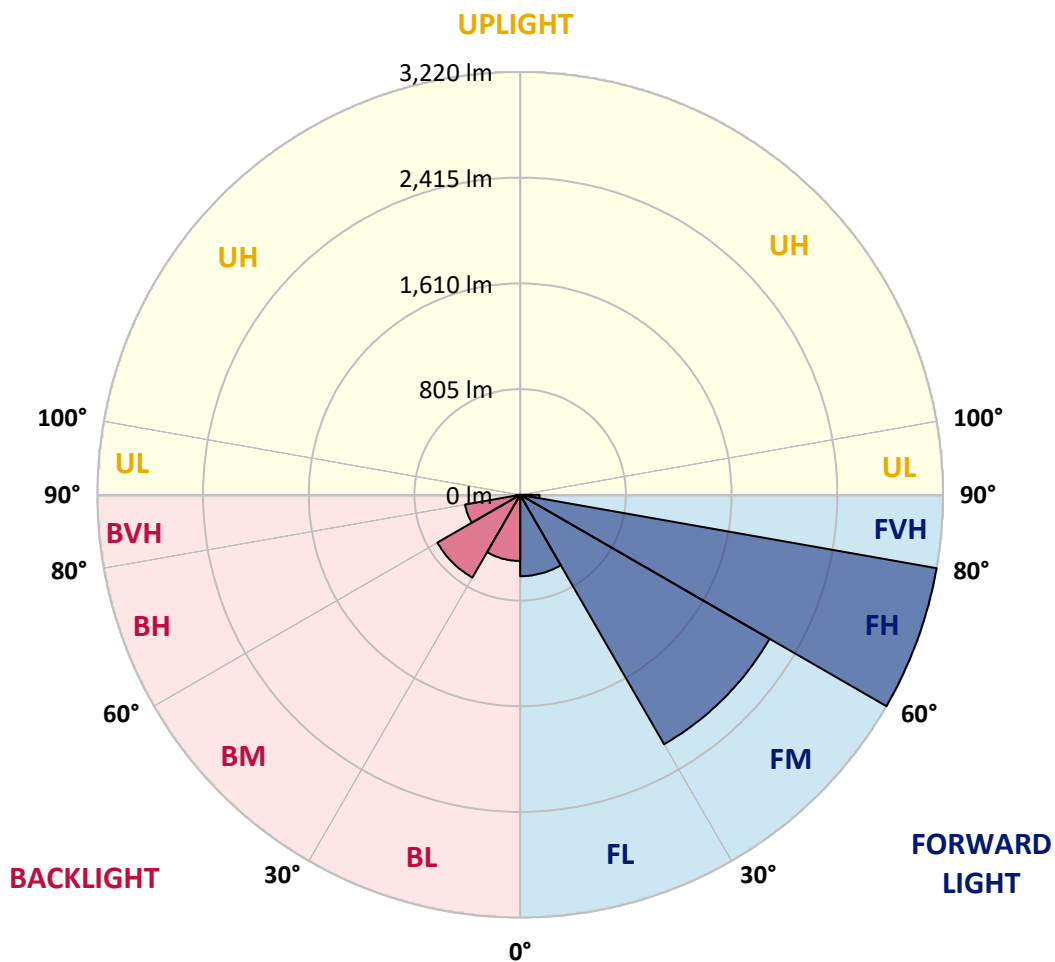
CATALOG NUMBER: ECM-F04-LED-E1-SL4-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	619.8	7.9			
FM (30°-60°)	2193.2	27.9			
FH (60°-80°)	3220.3	40.9			G2/5000
FVH (80°-90°)	147.3	1.9			G2/225
BL (0°-30°)	504.3	6.4	B2/1000		
BM (30°-60°)	728.4	9.3	B1/1000		
BH (60°-80°)	425.7	5.4	B1/500		G1/500
BVH (80°-90°)	29.9	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°	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8
2.5°	1598.8	1600.6	1599.7	1597.8	1596.0	1596.9	1596.0	1595.1	1595.1	1594.1	1593.2
5°	1591.3	1595.1	1592.3	1590.4	1587.6	1587.6	1586.7	1584.8	1583.0	1582.1	1580.2
7.5°	1575.6	1579.3	1577.4	1575.6	1572.8	1570.9	1567.2	1565.3	1563.5	1562.5	1559.8
10°	1554.2	1556.0	1554.2	1550.5	1548.6	1547.7	1545.8	1542.1	1538.4	1536.5	1533.7
12.5°	1526.3	1527.2	1525.4	1523.5	1520.7	1520.7	1518.0	1515.2	1509.6	1507.7	1501.2
15°	1502.2	1499.4	1497.5	1496.6	1495.7	1491.0	1491.9	1487.3	1478.0	1475.2	1467.8
17.5°	1495.7	1492.9	1491.9	1489.2	1487.3	1481.7	1476.2	1466.9	1451.1	1448.3	1437.1
20°	1514.2	1514.2	1511.5	1509.6	1506.8	1496.6	1484.5	1466.9	1438.1	1431.6	1417.6
22.5°	1558.8	1554.2	1552.3	1552.3	1551.4	1536.5	1514.2	1486.4	1448.3	1439.9	1415.8
25°	1628.5	1620.1	1622.9	1622.0	1620.1	1598.8	1566.3	1526.3	1474.3	1463.1	1431.6
27.5°	1711.2	1713.0	1712.1	1708.4	1702.8	1679.6	1633.1	1579.3	1514.2	1503.1	1462.2
30°	1797.6	1799.4	1805.0	1802.2	1798.5	1763.2	1705.6	1647.1	1568.1	1553.3	1503.1
32.5°	1897.9	1904.4	1909.1	1910.0	1895.1	1846.8	1779.0	1704.7	1621.1	1606.2	1544.0
35°	2014.0	2010.3	2018.7	2015.0	1988.9	1923.0	1839.4	1751.1	1665.7	1646.2	1579.3
37.5°	2131.1	2135.7	2127.4	2111.6	2070.7	1984.3	1881.2	1781.8	1687.0	1668.4	1598.8
40°	2244.4	2241.6	2222.1	2195.2	2133.9	2023.3	1904.4	1795.7	1694.5	1675.0	1603.4
42.5°	2329.0	2321.5	2291.8	2248.1	2169.2	2041.9	1910.9	1795.7	1689.8	1669.4	1596.9
45°	2366.1	2358.7	2329.9	2274.1	2180.3	2038.2	1899.8	1779.9	1674.0	1656.4	1583.9
47.5°	2366.1	2363.3	2331.7	2277.9	2177.5	2028.0	1883.0	1760.4	1658.2	1640.6	1572.8
50°	2347.5	2345.7	2317.8	2264.9	2168.2	2022.4	1878.4	1756.7	1657.3	1639.7	1577.4
52.5°	2409.8	2397.7	2368.9	2307.6	2202.6	2045.6	1901.6	1775.3	1679.6	1661.9	1597.8
55°	3166.9	3156.7	3010.8	2754.4	2486.0	2240.7	2030.8	1885.8	1789.2	1762.3	1715.8
57.5°	4391.3	4376.4	4226.9	3993.7	3532.0	3007.1	2595.6	2354.0	2218.4	2198.9	2171.0
60°	4888.3	4882.7	4819.6	4724.8	4550.1	4278.9	3896.1	3494.8	3182.7	3132.5	3136.2
62.5°	5173.5	5159.6	5128.9	5105.7	5046.2	4935.7	4864.1	4751.7	4600.3	4565.9	4348.6
65°	5333.3	5331.4	5348.1	5367.7	5363.9	5397.4	5433.6	5648.2	5900.0	5888.8	5659.4
67.5°	5095.5	5111.3	5198.6	5332.3	5472.6	5621.3	5898.1	6328.2	6639.4	6639.4	6437.8
70°	3663.0	3660.2	3892.4	4316.0	4693.2	5248.7	5758.8	6467.6	6976.6	7003.6	6789.9
72.5°	2195.2	2246.3	2389.3	2581.6	2902.1	3574.7	4523.2	5796.8	6507.5	6536.3	6280.8
75°	1542.1	1504.0	1498.4	1509.6	1564.4	1729.8	2251.8	3558.0	4717.4	4762.0	4514.8
77.5°	986.6	978.2	981.9	994.0	996.8	1012.6	1037.7	1219.8	2186.8	2400.5	2389.3
80°	850.9	848.2	849.1	835.2	808.2	798.0	829.6	804.5	781.3	813.8	769.2
82.5°	570.4	580.6	597.3	619.6	673.5	692.1	681.9	677.2	603.8	587.1	521.2
85°	422.7	417.1	423.6	423.6	409.7	395.7	406.0	395.7	350.2	327.9	289.8
87.5°	228.5	229.5	248.0	255.5	254.5	217.4	179.3	155.1	140.3	130.1	109.6
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°	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8
2.5°	1594.1	1591.3	1592.3	1592.3	1591.3	1593.2	1590.4	1589.5	1590.4	1590.4	1590.4
5°	1578.3	1574.6	1574.6	1573.7	1571.8	1571.8	1568.1	1567.2	1565.3	1568.1	1566.3
7.5°	1556.0	1550.5	1545.8	1542.1	1540.3	1537.5	1532.8	1531.0	1529.1	1528.2	1526.3
10°	1529.1	1522.6	1513.3	1505.9	1502.2	1494.7	1489.2	1481.7	1481.7	1478.0	1474.3
12.5°	1496.6	1487.3	1478.0	1467.8	1461.3	1451.1	1441.8	1433.4	1426.9	1418.6	1413.0
15°	1464.1	1450.1	1439.9	1429.7	1417.6	1403.7	1392.5	1379.5	1367.5	1354.5	1350.7
17.5°	1428.8	1417.6	1408.3	1396.3	1383.3	1366.5	1351.7	1330.3	1315.4	1299.6	1287.6
20°	1405.5	1392.5	1382.3	1371.2	1357.2	1337.7	1318.2	1294.1	1271.8	1248.6	1230.9
22.5°	1393.5	1372.1	1362.8	1352.6	1338.7	1317.3	1295.0	1265.3	1237.4	1206.7	1178.9
25°	1398.1	1369.3	1350.7	1339.6	1327.5	1306.1	1277.3	1243.9	1212.3	1173.3	1141.7
27.5°	1418.6	1379.5	1350.7	1332.2	1319.2	1296.9	1267.1	1229.0	1191.0	1150.1	1112.0
30°	1445.5	1396.3	1359.1	1332.2	1312.6	1288.5	1256.0	1215.1	1173.3	1127.8	1084.1
32.5°	1476.2	1415.8	1371.2	1334.0	1302.4	1271.8	1238.3	1195.6	1151.9	1103.6	1060.9
35°	1500.3	1430.6	1379.5	1330.3	1288.5	1250.4	1211.4	1171.4	1127.8	1082.3	1036.7
37.5°	1514.2	1439.9	1379.5	1317.3	1266.2	1226.3	1185.4	1146.4	1104.6	1060.0	1020.0
40°	1519.8	1443.6	1374.0	1302.4	1243.0	1197.5	1159.4	1119.4	1082.3	1043.2	1007.9
42.5°	1517.0	1440.8	1366.5	1288.5	1224.4	1175.2	1133.4	1096.2	1065.5	1033.0	1003.3
45°	1505.9	1431.6	1359.1	1282.0	1217.9	1167.7	1125.0	1089.7	1060.9	1031.2	1007.9
47.5°	1496.6	1427.8	1363.7	1297.8	1236.5	1185.4	1138.9	1099.9	1075.8	1052.5	1037.7
50°	1504.0	1438.1	1374.0	1311.7	1252.3	1200.2	1152.9	1116.6	1102.7	1099.0	1094.3
52.5°	1524.5	1459.4	1405.5	1361.9	1334.9	1315.4	1267.1	1258.8	1246.7	1240.2	1224.4
55°	1657.3	1630.4	1678.7	1731.6	1740.9	1799.4	1822.7	1824.5	1804.1	1731.6	1562.5
57.5°	2198.0	2264.9	2285.3	2407.9	2441.4	2415.3	2380.0	2378.2	2315.0	2219.3	1973.2
60°	3164.1	3128.8	3085.1	3005.3	2930.0	2849.2	2737.7	2652.2	2571.4	2424.6	2165.5
62.5°	4174.8	3867.3	3643.5	3414.0	3228.2	3065.6	2904.0	2766.5	2635.5	2432.1	2154.3
65°	5051.8	4425.7	3971.4	3626.7	3338.8	3100.9	2886.3	2698.7	2533.3	2278.8	1997.3
67.5°	5622.2	4722.0	4042.9	3528.3	3121.4	2818.5	2502.7	2206.3	2043.8	1838.5	1695.4
70°	5768.0	4513.0	3565.4	2905.9	2357.8	1996.4	1623.9	1300.6	1151.0	1093.4	1098.1
72.5°	5203.2	3567.3	2527.8	1848.7	1447.4	1147.3	932.7	717.2	560.2	470.1	458.9
75°	3399.1	1985.2	1200.2	836.1	665.2	529.5	417.1	351.2	302.8	244.3	204.4
77.5°	1284.8	756.2	538.8	439.4	325.1	226.7	176.5	148.6	136.6	132.8	119.8
80°	658.6	524.9	375.3	247.1	172.8	138.4	116.1	98.5	91.0	87.3	89.2
82.5°	444.1	330.7	207.2	148.6	119.8	103.1	81.8	68.7	61.3	60.4	65.0
85°	247.1	165.4	120.8	100.3	88.3	77.1	62.2	51.1	47.4	50.2	58.5
87.5°	77.1	76.2	54.8	44.6	46.4	39.9	29.7	22.3	22.3	28.8	40.9
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8
2.5°	1590.4	1592.3	1596.0	1593.2	1594.1	1595.1	1597.8	1601.6	1598.8	1596.9	1602.5
5°	1568.1	1568.1	1572.8	1570.9	1574.6	1578.3	1580.2	1586.7	1584.8	1583.0	1590.4
7.5°	1527.2	1528.2	1534.7	1532.8	1540.3	1541.2	1548.6	1554.2	1554.2	1557.9	1564.4
10°	1475.2	1475.2	1480.8	1481.7	1486.4	1490.1	1498.4	1508.7	1510.5	1517.0	1526.3
12.5°	1416.7	1414.8	1419.5	1419.5	1423.2	1427.8	1437.1	1449.2	1451.1	1461.3	1473.4
15°	1344.2	1341.4	1339.6	1341.4	1343.3	1344.2	1358.2	1370.2	1377.7	1388.8	1400.9
17.5°	1274.6	1264.3	1259.7	1259.7	1260.6	1260.6	1266.2	1280.1	1290.4	1308.0	1325.7
20°	1212.3	1194.7	1188.2	1173.3	1170.5	1164.0	1168.7	1184.5	1203.0	1217.0	1230.9
22.5°	1153.8	1135.2	1116.6	1099.0	1085.0	1076.7	1085.0	1095.3	1101.8	1112.9	1116.6
25°	1109.2	1078.5	1052.5	1024.7	1009.8	1002.4	1001.4	1000.5	994.9	993.1	993.1
27.5°	1073.9	1037.7	998.7	968.0	947.6	933.6	917.8	906.7	892.8	874.2	864.9
30°	1044.2	1005.2	962.4	926.2	900.2	873.2	840.7	815.6	790.6	768.3	748.8
32.5°	1017.2	977.3	935.5	897.4	852.8	806.4	765.5	735.8	692.1	662.4	637.3
35°	996.8	956.9	917.8	867.7	806.4	746.9	693.9	650.3	605.7	566.7	533.2
37.5°	981.9	948.5	906.7	838.9	761.8	690.2	634.5	582.5	529.5	476.6	434.8
40°	977.3	948.5	895.5	807.3	719.0	641.9	577.8	513.7	455.2	398.5	355.8
42.5°	980.1	949.4	877.9	779.4	683.7	600.1	527.7	453.3	383.7	323.3	280.6
45°	990.3	949.4	859.3	748.8	651.2	562.0	475.6	387.4	306.6	258.3	239.7
47.5°	1020.9	955.9	844.4	726.5	622.4	520.2	417.1	316.8	248.0	227.6	227.6
50°	1068.3	975.4	842.6	709.7	589.9	471.9	344.7	249.9	219.2	218.3	223.9
52.5°	1149.1	1009.8	851.9	698.6	555.5	406.9	268.5	215.5	209.0	214.6	223.0
55°	1306.1	1070.2	864.9	678.2	497.9	318.6	220.2	204.4	207.2	213.7	221.1
57.5°	1593.2	1191.9	878.8	634.5	403.2	241.5	199.7	200.7	205.3	211.8	218.3
60°	1791.1	1342.4	906.7	561.1	300.1	199.7	191.4	198.8	204.4	209.0	214.6
62.5°	1807.8	1397.2	927.1	478.4	223.0	182.1	183.9	195.1	202.5	204.4	207.2
65°	1707.5	1326.6	868.6	394.8	184.9	172.8	179.3	189.5	196.9	197.9	200.7
67.5°	1488.2	1178.9	741.3	300.1	169.1	166.3	173.7	180.2	185.8	190.4	194.2
70°	1152.9	962.4	596.4	233.2	157.0	156.1	162.6	170.0	175.6	180.2	185.8
72.5°	607.6	683.7	444.1	186.7	144.0	144.9	151.4	157.9	161.6	166.3	171.9
75°	188.6	289.8	274.0	149.6	128.2	131.9	135.6	141.2	147.7	150.5	153.3
77.5°	111.5	118.0	143.1	117.1	111.5	114.3	118.9	123.6	128.2	131.9	134.7
80°	90.1	92.0	92.9	92.9	92.9	96.6	100.3	106.8	110.5	112.4	113.3
82.5°	70.6	75.2	76.2	74.3	77.1	80.8	82.7	86.4	87.3	89.2	91.0
85°	58.5	57.6	59.5	60.4	56.7	56.7	54.8	54.8	58.5	65.0	66.0
87.5°	45.5	39.9	32.5	30.7	28.8	26.9	25.1	25.1	26.0	29.7	32.5
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):

	160°	165°	170°	175°	180°
0°	1598.8	1598.8	1598.8	1598.8	1598.8
2.5°	1602.5	1601.6	1603.4	1606.2	1604.3
5°	1591.3	1591.3	1595.1	1597.8	1596.0
7.5°	1569.0	1570.0	1575.6	1579.3	1577.4
10°	1533.7	1535.6	1542.1	1547.7	1550.5
12.5°	1480.8	1487.3	1495.7	1501.2	1501.2
15°	1413.9	1424.1	1433.4	1441.8	1437.1
17.5°	1337.7	1349.8	1361.9	1366.5	1361.9
20°	1245.8	1246.7	1254.1	1258.8	1256.9
22.5°	1120.4	1116.6	1120.4	1122.2	1125.0
25°	992.2	985.6	981.9	987.5	990.3
27.5°	861.2	851.9	854.7	848.2	840.7
30°	733.9	725.5	715.3	712.5	717.2
32.5°	621.5	600.1	591.8	576.0	582.5
35°	502.6	481.2	460.8	455.2	451.5
37.5°	405.0	379.0	353.9	345.6	343.7
40°	316.8	295.4	278.7	274.0	272.2
42.5°	257.3	248.0	245.3	245.3	246.2
45°	235.0	236.0	238.7	240.6	241.5
47.5°	230.4	234.1	237.8	241.5	242.5
50°	230.4	233.2	236.0	239.7	240.6
52.5°	228.5	231.3	232.2	234.1	236.0
55°	226.7	227.6	227.6	228.5	230.4
57.5°	222.0	223.0	221.1	222.0	225.7
60°	217.4	218.3	216.5	218.3	219.2
62.5°	210.9	210.9	209.9	210.9	211.8
65°	203.4	200.7	202.5	201.6	202.5
67.5°	194.2	190.4	189.5	189.5	190.4
70°	181.2	178.4	177.4	179.3	181.2
72.5°	165.4	167.2	170.0	172.8	177.4
75°	154.2	157.0	160.7	170.0	176.5
77.5°	138.4	137.5	141.2	151.4	160.7
80°	115.2	116.1	115.2	118.0	119.8
82.5°	88.3	87.3	84.5	84.5	82.7
85°	62.2	59.5	55.7	54.8	53.9
87.5°	31.6	33.4	30.7	27.9	27.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)