

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: P141294

Luminaire Tested: **EMM-F04-LED-E1-SL4-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141294
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: EMM-F04-LED-E1-SL4-7030
Description: EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (28) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8515.5 lumens
Efficiency: N/A
Efficacy: 83.3 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

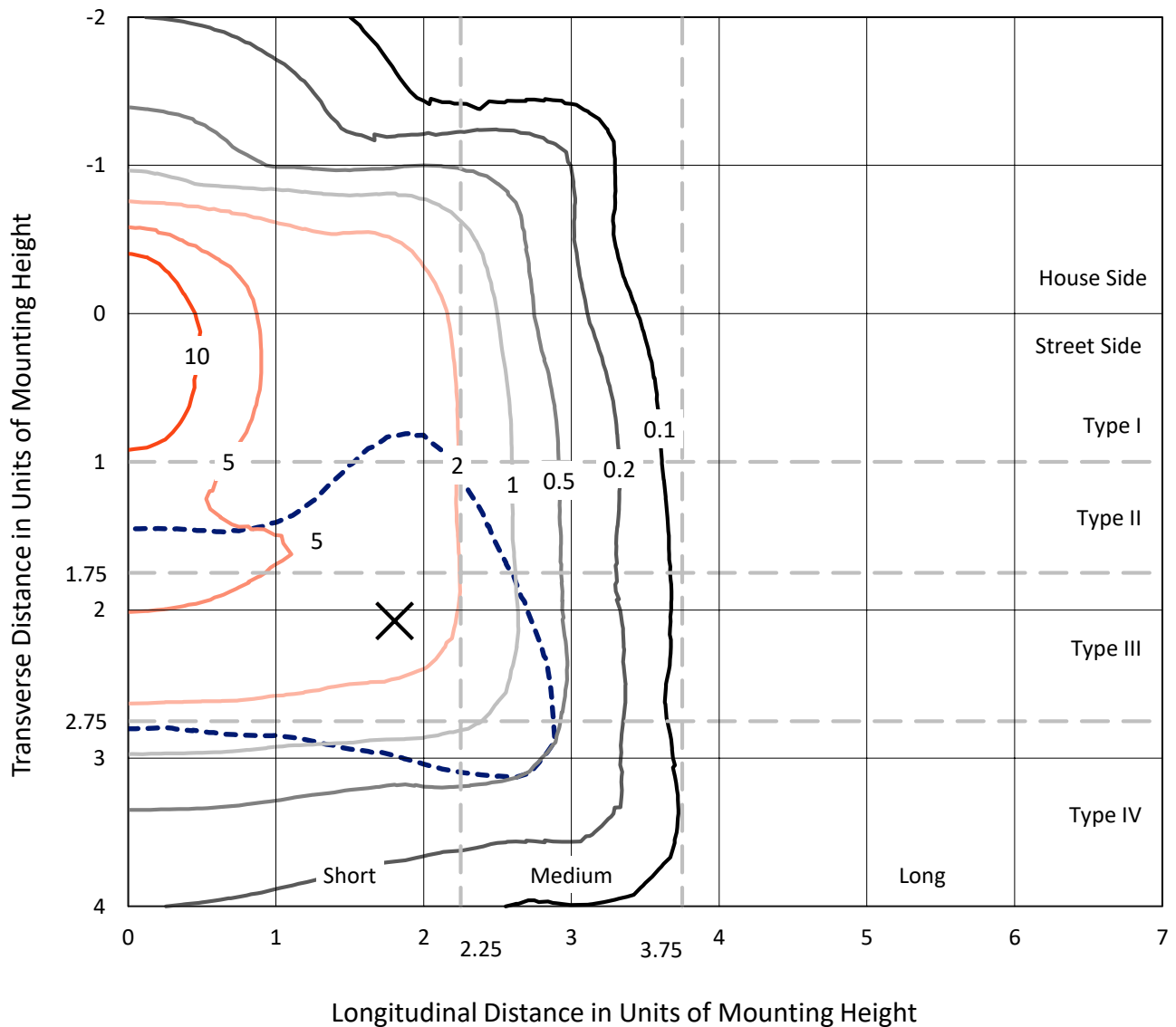
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

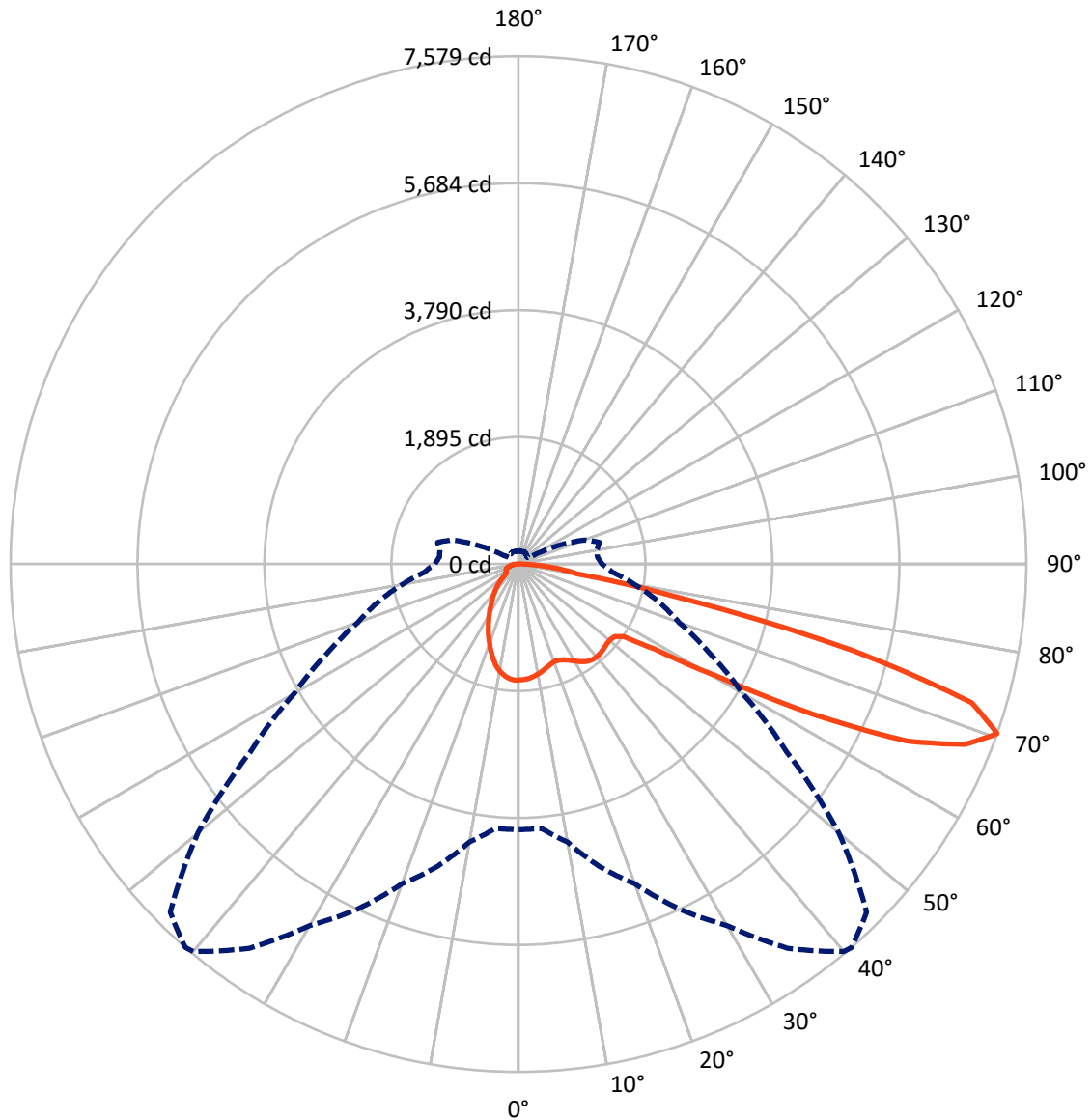
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.3 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	1827.0	0.0	1827.0
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	6688.5	0.0	6688.5
	% Fixture	78.5	0.0	78.5
Total	Lumens	8515.5	0.0	8515.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.0	1.9
10°-20°	431.5	5.1
20°-30°	623.9	7.3
30°-40°	794.1	9.3
40°-50°	935.8	11.0
50°-60°	1431.8	16.8
60°-70°	2661.2	31.3
70°-80°	1284.4	15.1
80°-90°	191.8	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°	8515.5	100.0
0°-180°	8515.5	100.0



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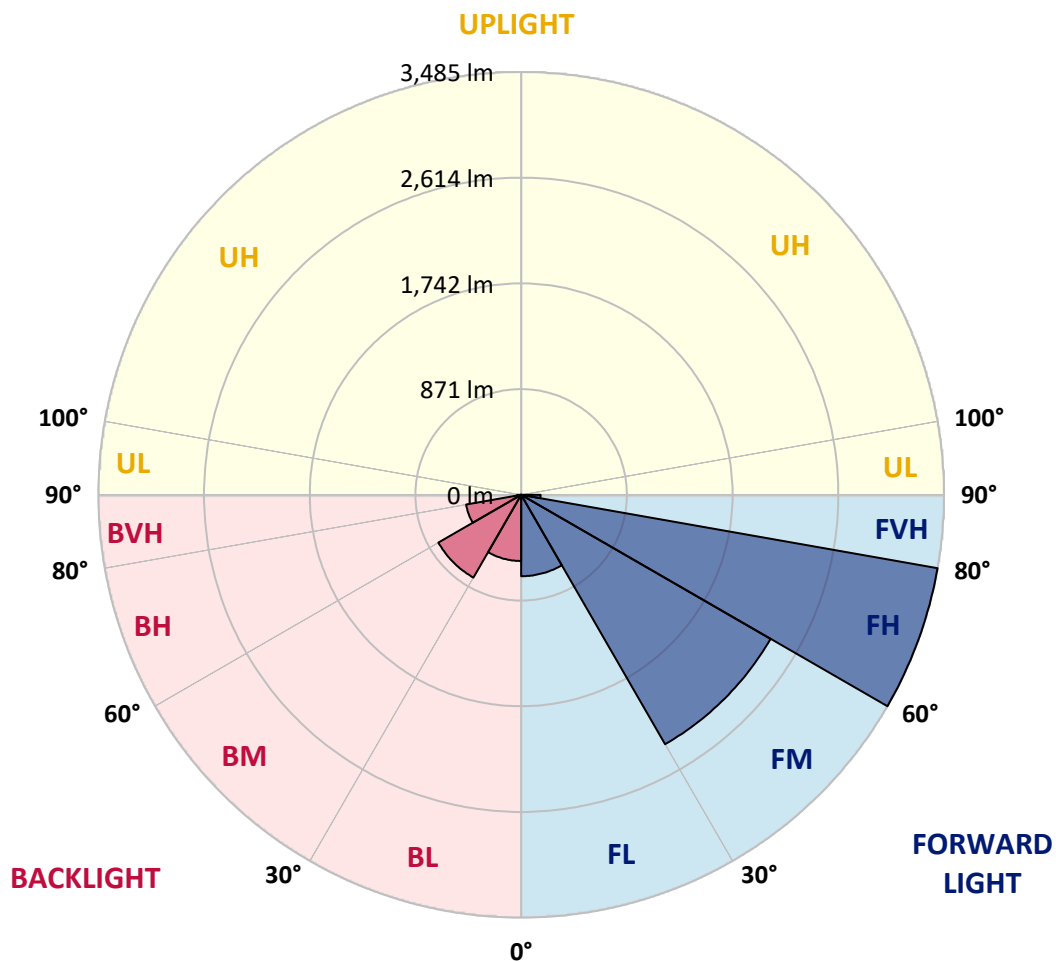
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	670.7	7.9			
FM (30°-60°)	2373.4	27.9			
FH (60°-80°)	3484.9	40.9			G2/5000
FVH (80°-90°)	159.5	1.9			G2/225
BL (0°-30°)	545.7	6.4	B2/1000		
BM (30°-60°)	788.2	9.3	B1/1000		
BH (60°-80°)	460.7	5.4	B1/500		G1/500
BVH (80°-90°)	32.4	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°	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2
2.5°	1730.2	1732.2	1731.2	1729.2	1727.1	1728.2	1727.1	1726.1	1726.1	1725.1	1724.1
5°	1722.1	1726.1	1723.1	1721.1	1718.1	1718.1	1717.1	1715.1	1713.1	1712.1	1710.1
7.5°	1705.0	1709.1	1707.0	1705.0	1702.0	1700.0	1696.0	1694.0	1692.0	1691.0	1687.9
10°	1681.9	1683.9	1681.9	1677.9	1675.9	1674.9	1672.9	1668.8	1664.8	1662.8	1659.8
12.5°	1651.7	1652.8	1650.7	1648.7	1645.7	1645.7	1642.7	1639.7	1633.7	1631.6	1624.6
15°	1625.6	1622.6	1620.6	1619.6	1618.6	1613.5	1614.6	1609.5	1599.5	1596.5	1588.4
17.5°	1618.6	1615.6	1614.6	1611.5	1609.5	1603.5	1597.5	1587.4	1570.3	1567.3	1555.2
20°	1638.7	1638.7	1635.7	1633.7	1630.6	1619.6	1606.5	1587.4	1556.2	1549.2	1534.1
22.5°	1686.9	1681.9	1679.9	1679.9	1678.9	1662.8	1638.7	1608.5	1567.3	1558.3	1532.1
25°	1762.3	1753.3	1756.3	1755.3	1753.3	1730.2	1695.0	1651.7	1595.5	1583.4	1549.2
27.5°	1851.8	1853.8	1852.8	1848.8	1842.8	1817.6	1767.4	1709.1	1638.7	1626.6	1582.4
30°	1945.3	1947.3	1953.3	1950.3	1946.3	1908.1	1845.8	1782.4	1697.0	1680.9	1626.6
32.5°	2053.9	2060.9	2065.9	2066.9	2050.9	1998.6	1925.2	1844.8	1754.3	1738.2	1670.8
35°	2179.5	2175.5	2184.6	2180.5	2152.4	2081.0	1990.5	1895.0	1802.5	1781.4	1709.1
37.5°	2306.2	2311.2	2302.2	2285.1	2240.9	2147.4	2035.8	1928.2	1825.7	1805.6	1730.2
40°	2428.9	2425.8	2404.7	2375.6	2309.2	2189.6	2060.9	1943.3	1833.7	1812.6	1735.2
42.5°	2520.3	2512.3	2480.1	2432.9	2347.4	2209.7	2068.0	1943.3	1828.7	1806.6	1728.2
45°	2560.6	2552.5	2521.4	2461.0	2359.5	2205.7	2055.9	1926.2	1811.6	1792.5	1714.1
47.5°	2560.6	2557.5	2523.4	2465.1	2356.5	2194.6	2037.8	1905.1	1794.5	1775.4	1702.0
50°	2540.5	2538.4	2508.3	2451.0	2346.4	2188.6	2032.8	1901.1	1793.5	1774.4	1707.0
52.5°	2607.8	2594.7	2563.6	2497.2	2383.6	2213.7	2057.9	1921.2	1817.6	1798.5	1729.2
55°	3427.2	3416.1	3258.3	2980.8	2690.2	2424.8	2197.6	2040.8	1936.3	1907.1	1856.8
57.5°	4752.2	4736.1	4574.2	4321.9	3822.2	3254.2	2808.9	2547.5	2400.7	2379.6	2349.4
60°	5290.0	5284.0	5215.6	5113.1	4924.1	4630.5	4216.3	3782.0	3444.2	3390.0	3394.0
62.5°	5598.7	5583.6	5550.4	5525.3	5460.9	5341.3	5263.9	5142.2	4978.4	4941.2	4705.9
65°	5771.6	5769.6	5787.7	5808.8	5804.7	5840.9	5880.1	6112.4	6384.8	6372.8	6124.4
67.5°	5514.2	5531.3	5625.8	5770.6	5922.4	6083.2	6382.8	6848.3	7185.1	7185.1	6966.9
70°	3964.0	3961.0	4212.3	4670.7	5078.9	5680.1	6232.0	6999.1	7550.0	7579.1	7347.9
72.5°	2375.6	2430.9	2585.7	2793.8	3140.6	3868.5	4894.9	6273.2	7042.3	7073.5	6797.0
75°	1668.8	1627.6	1621.6	1633.7	1693.0	1871.9	2436.9	3850.4	5105.0	5153.3	4885.9
77.5°	1067.7	1058.6	1062.6	1075.7	1078.7	1095.8	1122.9	1320.0	2366.5	2597.8	2585.7
80°	920.9	917.9	918.9	903.8	874.6	863.6	897.8	870.6	845.5	880.7	832.4
82.5°	617.3	628.3	646.4	670.6	728.9	749.0	737.9	732.9	653.5	635.4	564.0
85°	457.4	451.4	458.4	458.4	443.3	428.3	439.3	428.3	379.0	354.9	313.7
87.5°	247.3	248.3	268.4	276.5	275.5	235.2	194.0	167.9	151.8	140.7	118.6
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°	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2
2.5°	1725.1	1722.1	1723.1	1723.1	1722.1	1724.1	1721.1	1720.1	1721.1	1721.1	1721.1
5°	1708.0	1704.0	1704.0	1703.0	1701.0	1701.0	1697.0	1696.0	1694.0	1697.0	1695.0
7.5°	1683.9	1677.9	1672.9	1668.8	1666.8	1663.8	1658.8	1656.8	1654.8	1653.8	1651.7
10°	1654.8	1647.7	1637.7	1629.6	1625.6	1617.6	1611.5	1603.5	1603.5	1599.5	1595.5
12.5°	1619.6	1609.5	1599.5	1588.4	1581.4	1570.3	1560.3	1551.2	1544.2	1535.1	1529.1
15°	1584.4	1569.3	1558.3	1547.2	1534.1	1519.0	1507.0	1492.9	1479.8	1465.8	1461.7
17.5°	1546.2	1534.1	1524.1	1511.0	1496.9	1478.8	1462.7	1439.6	1423.5	1406.4	1393.4
20°	1521.1	1507.0	1495.9	1483.9	1468.8	1447.7	1426.6	1400.4	1376.3	1351.2	1332.1
22.5°	1508.0	1484.9	1474.8	1463.8	1448.7	1425.6	1401.4	1369.3	1339.1	1305.9	1275.8
25°	1513.0	1481.8	1461.7	1449.7	1436.6	1413.5	1382.3	1346.1	1311.9	1269.7	1235.5
27.5°	1535.1	1492.9	1461.7	1441.6	1427.6	1403.4	1371.3	1330.0	1288.8	1244.6	1203.4
30°	1564.3	1511.0	1470.8	1441.6	1420.5	1394.4	1359.2	1315.0	1269.7	1220.5	1173.2
32.5°	1597.5	1532.1	1483.9	1443.6	1409.5	1376.3	1340.1	1293.9	1246.6	1194.3	1148.1
35°	1623.6	1548.2	1492.9	1439.6	1394.4	1353.2	1310.9	1267.7	1220.5	1171.2	1121.9
37.5°	1638.7	1558.3	1492.9	1425.6	1370.3	1327.0	1282.8	1240.6	1195.3	1147.1	1103.8
40°	1644.7	1562.3	1486.9	1409.5	1345.1	1295.9	1254.6	1211.4	1171.2	1129.0	1090.8
42.5°	1641.7	1559.3	1478.8	1394.4	1325.0	1271.7	1226.5	1186.3	1153.1	1117.9	1085.8
45°	1629.6	1549.2	1470.8	1387.3	1318.0	1263.7	1217.4	1179.2	1148.1	1115.9	1090.8
47.5°	1619.6	1545.2	1475.8	1404.4	1338.1	1282.8	1232.5	1190.3	1164.2	1139.0	1122.9
50°	1627.6	1556.2	1486.9	1419.5	1355.2	1298.9	1247.6	1208.4	1193.3	1189.3	1184.3
52.5°	1649.7	1579.4	1521.1	1473.8	1444.7	1423.5	1371.3	1362.2	1349.1	1342.1	1325.0
55°	1793.5	1764.3	1816.6	1873.9	1884.0	1947.3	1972.4	1974.5	1952.3	1873.9	1691.0
57.5°	2378.6	2451.0	2473.1	2605.8	2642.0	2613.8	2575.6	2573.6	2505.3	2401.7	2135.3
60°	3424.1	3385.9	3338.7	3252.2	3170.8	3083.3	2962.7	2870.2	2782.7	2623.9	2343.4
62.5°	4517.9	4185.2	3942.9	3694.6	3493.5	3317.6	3142.6	2993.9	2852.1	2631.9	2331.3
65°	5467.0	4789.4	4297.8	3924.8	3613.1	3355.8	3123.5	2920.5	2741.5	2466.1	2161.4
67.5°	6084.2	5110.1	4375.2	3818.2	3377.9	3050.2	2708.3	2387.6	2211.7	1989.5	1834.7
70°	6242.1	4883.9	3858.4	3144.7	2551.5	2160.4	1757.3	1407.5	1245.6	1183.3	1188.3
72.5°	5630.8	3860.4	2735.5	2000.6	1566.3	1241.6	1009.3	776.1	606.2	508.7	496.6
75°	3678.5	2148.4	1298.9	904.8	719.8	573.0	451.4	380.0	327.7	264.4	221.2
77.5°	1390.4	818.3	583.1	475.5	351.9	245.3	191.0	160.9	147.8	143.8	129.7
80°	712.8	568.0	406.2	267.4	187.0	149.8	125.7	106.6	98.5	94.5	96.5
82.5°	480.5	357.9	224.2	160.9	129.7	111.6	88.5	74.4	66.4	65.3	70.4
85°	267.4	178.9	130.7	108.6	95.5	83.4	67.4	55.3	51.3	54.3	63.3
87.5°	83.4	82.4	59.3	48.3	50.3	43.2	32.2	24.1	24.1	31.2	44.2
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°	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2	1730.2
2.5°	1721.1	1723.1	1727.1	1724.1	1725.1	1726.1	1729.2	1733.2	1730.2	1728.2	1734.2
5°	1697.0	1697.0	1702.0	1700.0	1704.0	1708.0	1710.1	1717.1	1715.1	1713.1	1721.1
7.5°	1652.8	1653.8	1660.8	1658.8	1666.8	1667.8	1675.9	1681.9	1681.9	1685.9	1693.0
10°	1596.5	1596.5	1602.5	1603.5	1608.5	1612.5	1621.6	1632.6	1634.7	1641.7	1651.7
12.5°	1533.1	1531.1	1536.1	1536.1	1540.2	1545.2	1555.2	1568.3	1570.3	1581.4	1594.4
15°	1454.7	1451.7	1449.7	1451.7	1453.7	1454.7	1469.8	1482.9	1490.9	1503.0	1516.0
17.5°	1379.3	1368.2	1363.2	1363.2	1364.2	1364.2	1370.3	1385.3	1396.4	1415.5	1434.6
20°	1311.9	1292.8	1285.8	1269.7	1266.7	1259.7	1264.7	1281.8	1301.9	1317.0	1332.1
22.5°	1248.6	1228.5	1208.4	1189.3	1174.2	1165.2	1174.2	1185.3	1192.3	1204.4	1208.4
25°	1200.4	1167.2	1139.0	1108.9	1092.8	1084.7	1083.7	1082.7	1076.7	1074.7	1074.7
27.5°	1162.2	1122.9	1080.7	1047.5	1025.4	1010.4	993.3	981.2	966.1	946.0	936.0
30°	1130.0	1087.8	1041.5	1002.3	974.2	945.0	909.8	882.7	855.5	831.4	810.3
32.5°	1100.8	1057.6	1012.4	971.1	922.9	872.6	828.4	796.2	749.0	716.8	689.7
35°	1078.7	1035.5	993.3	939.0	872.6	808.3	751.0	703.7	655.5	613.2	577.1
37.5°	1062.6	1026.4	981.2	907.8	824.4	747.0	686.6	630.3	573.0	515.7	470.5
40°	1057.6	1026.4	969.1	873.6	778.1	694.7	625.3	555.9	492.6	431.3	385.0
42.5°	1060.6	1027.4	950.0	843.5	739.9	649.4	571.0	490.6	415.2	349.9	303.6
45°	1071.7	1027.4	929.9	810.3	704.7	608.2	514.7	419.2	331.8	279.5	259.4
47.5°	1104.9	1034.5	913.8	786.2	673.6	563.0	451.4	342.8	268.4	246.3	246.3
50°	1156.1	1055.6	911.8	768.1	638.4	510.7	373.0	270.4	237.3	236.3	242.3
52.5°	1243.6	1092.8	921.9	756.0	601.2	440.3	290.5	233.2	226.2	232.2	241.3
55°	1413.5	1158.1	936.0	733.9	538.9	344.8	238.3	221.2	224.2	231.2	239.3
57.5°	1724.1	1289.8	951.0	686.6	436.3	261.4	216.1	217.2	222.2	229.2	236.3
60°	1938.3	1452.7	981.2	607.2	324.7	216.1	207.1	215.1	221.2	226.2	232.2
62.5°	1956.4	1512.0	1003.3	517.7	241.3	197.0	199.1	211.1	219.2	221.2	224.2
65°	1847.8	1435.6	940.0	427.3	200.1	187.0	194.0	205.1	213.1	214.1	217.2
67.5°	1610.5	1275.8	802.2	324.7	183.0	180.0	188.0	195.0	201.1	206.1	210.1
70°	1247.6	1041.5	645.4	252.3	169.9	168.9	175.9	184.0	190.0	195.0	201.1
72.5°	657.5	739.9	480.5	202.1	155.8	156.8	163.9	170.9	174.9	180.0	186.0
75°	204.1	313.7	296.6	161.9	138.7	142.8	146.8	152.8	159.8	162.9	165.9
77.5°	120.6	127.7	154.8	126.7	120.6	123.7	128.7	133.7	138.7	142.8	145.8
80°	97.5	99.5	100.5	100.5	100.5	104.6	108.6	115.6	119.6	121.6	122.6
82.5°	76.4	81.4	82.4	80.4	83.4	87.5	89.5	93.5	94.5	96.5	98.5
85°	63.3	62.3	64.3	65.3	61.3	61.3	59.3	59.3	63.3	70.4	71.4
87.5°	49.3	43.2	35.2	33.2	31.2	29.2	27.1	27.1	28.1	32.2	35.2
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°	1730.2	1730.2	1730.2	1730.2	1730.2
2.5°	1734.2	1733.2	1735.2	1738.2	1736.2
5°	1722.1	1722.1	1726.1	1729.2	1727.1
7.5°	1698.0	1699.0	1705.0	1709.1	1707.0
10°	1659.8	1661.8	1668.8	1674.9	1677.9
12.5°	1602.5	1609.5	1618.6	1624.6	1624.6
15°	1530.1	1541.2	1551.2	1560.3	1555.2
17.5°	1447.7	1460.7	1473.8	1478.8	1473.8
20°	1348.1	1349.1	1357.2	1362.2	1360.2
22.5°	1212.4	1208.4	1212.4	1214.4	1217.4
25°	1073.7	1066.6	1062.6	1068.7	1071.7
27.5°	931.9	921.9	924.9	917.9	909.8
30°	794.2	785.2	774.1	771.1	776.1
32.5°	672.6	649.4	640.4	623.3	630.3
35°	543.9	520.8	498.6	492.6	488.6
37.5°	438.3	410.2	383.0	374.0	372.0
40°	342.8	319.7	301.6	296.6	294.6
42.5°	278.5	268.4	265.4	265.4	266.4
45°	254.3	255.4	258.4	260.4	261.4
47.5°	249.3	253.3	257.4	261.4	262.4
50°	249.3	252.3	255.4	259.4	260.4
52.5°	247.3	250.3	251.3	253.3	255.4
55°	245.3	246.3	246.3	247.3	249.3
57.5°	240.3	241.3	239.3	240.3	244.3
60°	235.2	236.3	234.2	236.3	237.3
62.5°	228.2	228.2	227.2	228.2	229.2
65°	220.2	217.2	219.2	218.2	219.2
67.5°	210.1	206.1	205.1	205.1	206.1
70°	196.0	193.0	192.0	194.0	196.0
72.5°	178.9	181.0	184.0	187.0	192.0
75°	166.9	169.9	173.9	184.0	191.0
77.5°	149.8	148.8	152.8	163.9	173.9
80°	124.7	125.7	124.7	127.7	129.7
82.5°	95.5	94.5	91.5	91.5	89.5
85°	67.4	64.3	60.3	59.3	58.3
87.5°	34.2	36.2	33.2	30.2	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)