

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:

Luminaire Tested: **ENT-SA1E-740-U-SL3-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401670 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1E-740-U-SL3-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7667.9 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Short
BUG Rating: B1 - U5 - G2

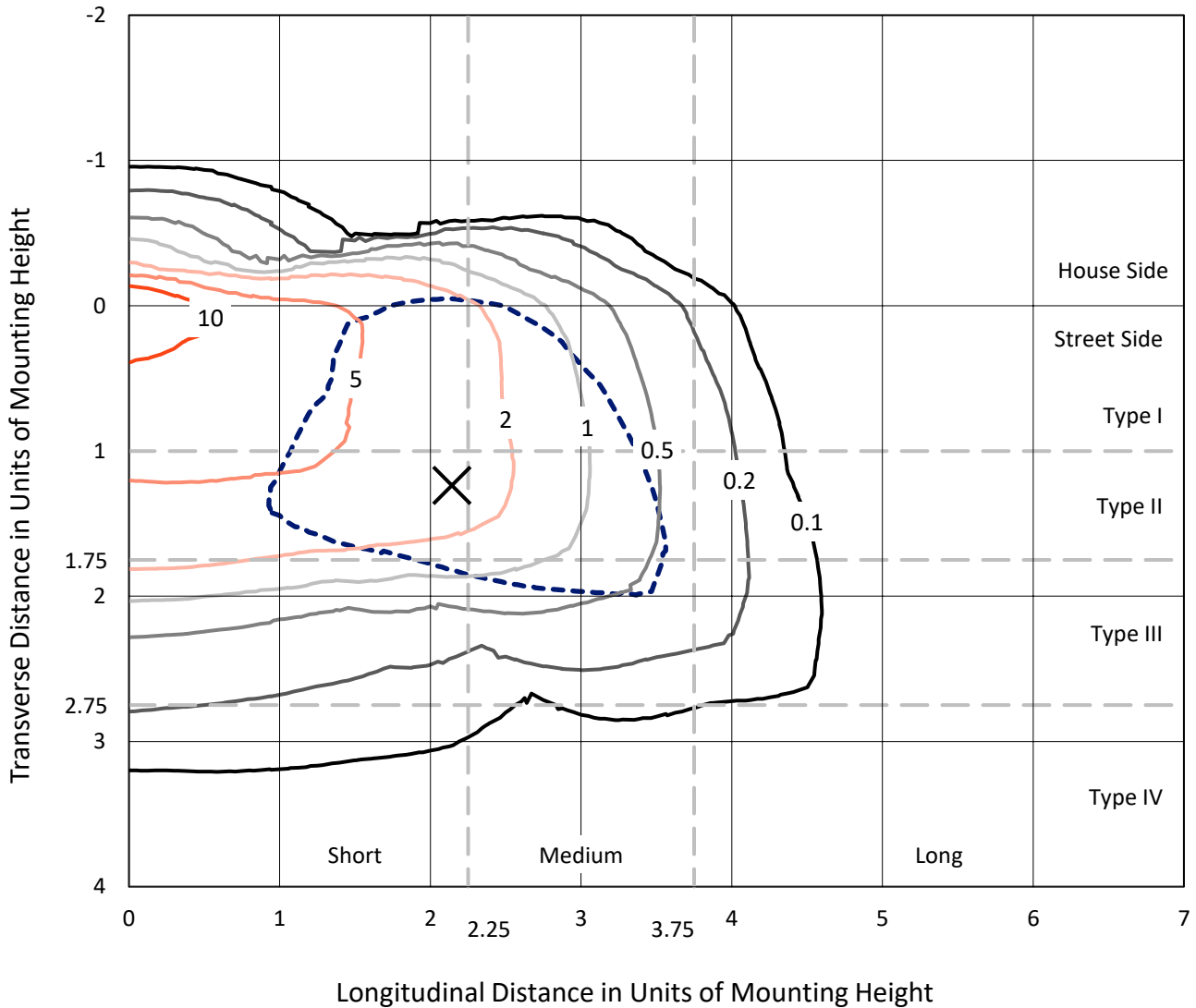
Input Watts (W): 73.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

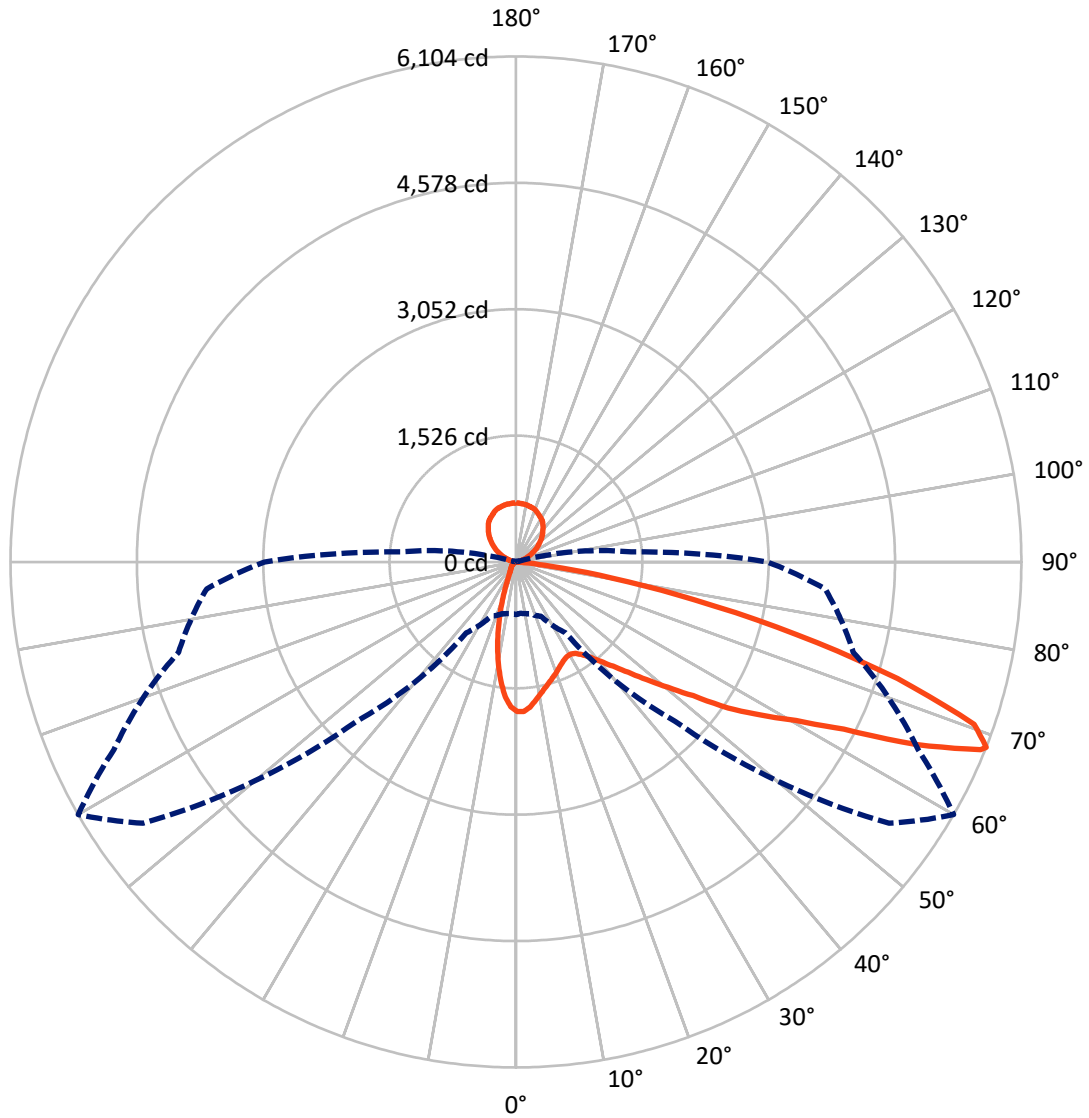
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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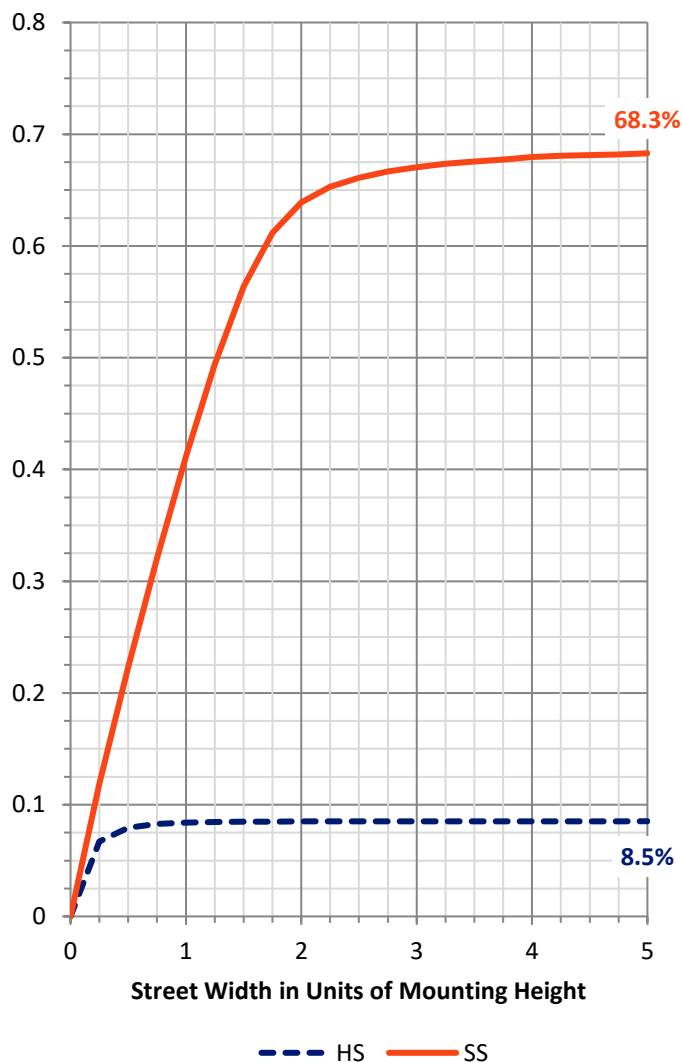
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	659.0	887.0	1545.9
	% Fixture	8.6	11.6	20.2
Street Side	Lumens	5235.0	887.0	6122.0
	% Fixture	68.3	11.6	79.8
Total	Lumens	5894.0	1773.9	7667.9
	% Fixture	76.9	23.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	1.9
10°-20°	298.6	3.9
20°-30°	393.1	5.1
30°-40°	542.5	7.1
40°-50°	822.4	10.7
50°-60°	1327.1	17.3
60°-70°	1576.4	20.6
70°-80°	743.1	9.7
80°-90°	44.4	0.6
90°-100°	8.4	0.1
100°-110°	58.7	0.8
110°-120°	169.9	2.2
120°-130°	279.4	3.6
130°-140°	344.6	4.5
140°-150°	352.5	4.6
150°-160°	297.0	3.9
160°-170°	195.5	2.6
170°-180°	67.8	0.9
0°-90°	5894.0	76.9
0°-180°	7667.9	100.0

Coefficient of Utilization



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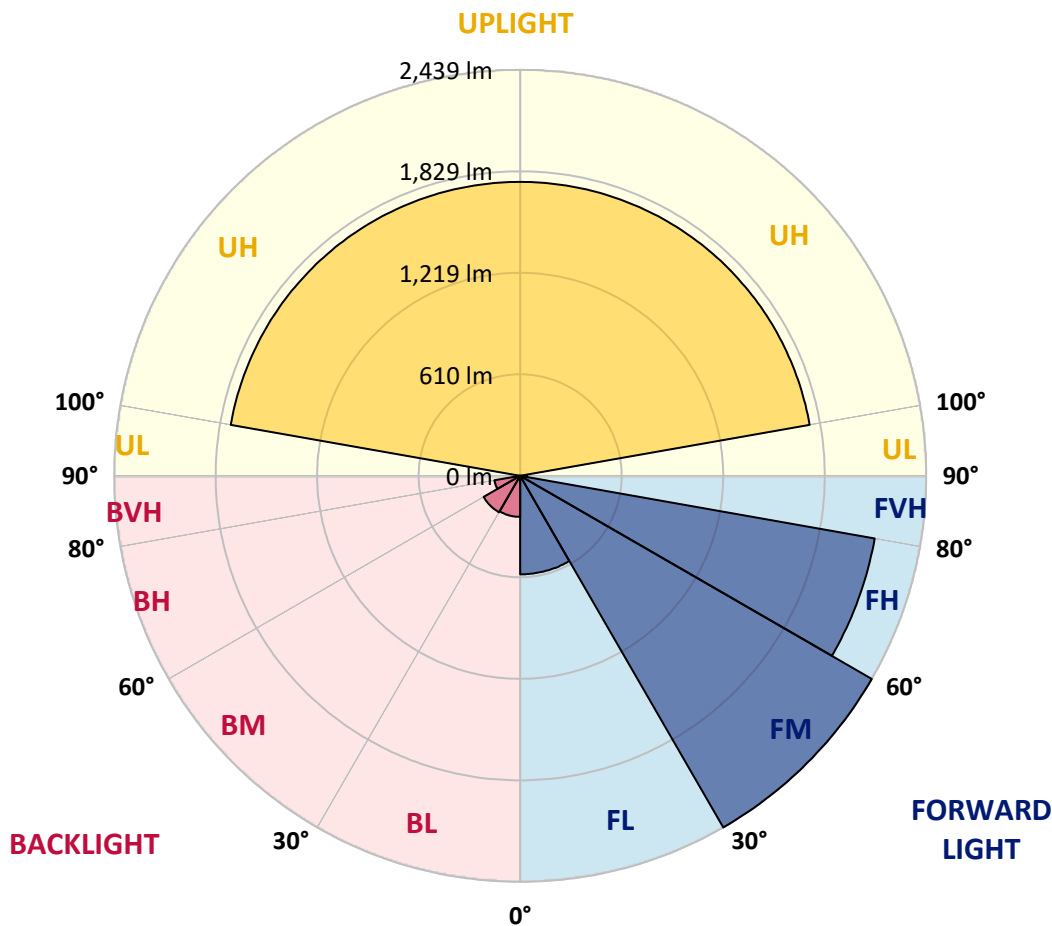
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	591.6	7.7			
FM (30°-60°)	2438.7	31.8			
FH (60°-80°)	2162.3	28.2			G2/5000
FVH (80°-90°)	42.5	0.6			G1/100
BL (0°-30°)	246.6	3.2	B1/500		
BM (30°-60°)	253.3	3.3	B1/1000		
BH (60°-80°)	157.2	2.1	B1/500		G1/500
BVH (80°-90°)	1.9	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	23.0		U5	

BUG Rating: B1-U5-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1
2.5°	1788.1	1784.1	1795.1	1798.1	1801.1	1807.1	1806.1	1807.1	1808.1	1806.1	1794.1
5°	1666.1	1673.1	1683.1	1696.1	1709.1	1739.1	1751.1	1763.1	1771.1	1777.1	1766.1
7.5°	1546.1	1560.1	1568.1	1592.1	1612.1	1643.1	1669.1	1690.1	1710.1	1732.1	1721.1
10°	1450.1	1455.1	1462.1	1484.1	1514.1	1561.1	1595.1	1621.1	1645.1	1682.1	1673.1
12.5°	1356.1	1359.1	1373.1	1397.1	1428.1	1486.1	1531.1	1561.1	1588.1	1634.1	1635.1
15°	1287.1	1288.1	1297.1	1319.1	1355.1	1417.1	1475.1	1508.1	1546.1	1602.1	1605.1
17.5°	1242.1	1241.1	1243.1	1257.1	1291.1	1350.1	1420.1	1459.1	1504.1	1576.1	1579.1
20°	1228.1	1226.1	1222.1	1219.1	1240.1	1291.1	1370.1	1413.1	1466.1	1557.1	1558.1
22.5°	1240.1	1236.1	1227.1	1210.1	1216.1	1249.1	1315.1	1367.1	1432.1	1547.1	1540.1
25°	1269.1	1269.1	1257.1	1230.1	1216.1	1223.1	1276.1	1326.1	1398.1	1542.1	1527.1
27.5°	1317.1	1315.1	1299.1	1271.1	1245.1	1226.1	1252.1	1299.1	1373.1	1548.1	1521.1
30°	1375.1	1369.1	1352.1	1332.1	1300.1	1259.1	1257.1	1292.1	1361.1	1567.1	1525.1
32.5°	1430.1	1430.1	1423.1	1404.1	1373.1	1319.1	1288.1	1316.1	1376.1	1598.1	1538.1
35°	1498.1	1497.1	1499.1	1492.1	1465.1	1408.1	1358.1	1372.1	1422.1	1650.1	1569.1
37.5°	1552.1	1553.1	1570.1	1582.1	1570.1	1510.1	1458.1	1458.1	1500.1	1728.1	1622.1
40°	1605.1	1607.1	1639.1	1674.1	1677.1	1629.1	1579.1	1578.1	1602.1	1824.1	1704.1
42.5°	1653.1	1661.1	1707.1	1767.1	1802.1	1770.1	1733.1	1721.1	1733.1	1969.1	1837.1
45°	1704.1	1720.1	1784.1	1871.1	1928.1	1929.1	1915.1	1901.1	1907.1	2132.1	2015.1
47.5°	1770.1	1788.1	1868.1	1975.1	2083.1	2111.1	2124.1	2119.1	2103.1	2338.1	2245.1
50°	1877.1	1894.1	1969.1	2089.1	2237.1	2338.1	2373.1	2379.1	2358.1	2566.1	2506.1
52.5°	2059.1	2069.1	2139.1	2234.1	2400.1	2589.1	2681.1	2682.1	2635.1	2833.1	2788.1
55°	2254.1	2280.1	2362.1	2472.1	2643.1	2855.1	3085.1	3110.2	2965.1	3067.1	2994.1
57.5°	2257.1	2282.1	2418.1	2629.1	2987.1	3268.2	3473.2	3491.2	3330.2	3255.2	3188.2
60°	2019.1	2032.1	2221.1	2530.1	3110.2	3825.2	3915.2	3888.2	3586.2	3449.2	3431.2
62.5°	1425.1	1431.1	1655.1	2062.1	2838.1	4091.2	4588.2	4443.2	3950.2	3735.2	3795.2
65°	897.0	894.0	987.0	1312.1	2111.1	3829.2	5420.3	5314.3	4619.2	4093.2	4079.2
67.5°	662.0	646.0	671.0	772.0	1206.1	3006.1	5573.3	6051.3	5256.3	4242.2	3833.2
68°	635.0	621.0	647.0	725.0	1043.1	2721.1	5499.3	6104.3	5357.3	4218.2	3749.2
70°	539.0	526.0	548.0	607.0	726.0	1766.1	4852.2	5869.3	5449.3	4014.2	3304.2
72.5°	383.0	390.0	448.0	521.0	615.0	906.0	3573.2	4820.2	4687.2	3570.2	2514.1
75°	227.0	240.0	316.0	420.0	565.0	598.0	2305.1	3504.2	3439.2	2472.1	1362.1
77.5°	80.0	85.0	157.0	280.0	466.0	474.0	1284.1	2203.1	2049.1	1010.0	402.0
80°	29.0	29.0	58.0	156.0	301.0	362.0	682.0	1176.1	809.0	262.0	111.0
82.5°	5.0	5.0	13.0	53.0	133.0	193.0	317.0	418.0	240.0	58.0	55.0
85°	0.0	0.0	0.0	0.0	2.0	2.0	93.0	94.0	44.0	8.0	24.0
87.5°	0.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	2.0	2.0	3.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	7.2	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.7	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	11.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	28.1	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	49.6	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	72.6	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.7	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.3	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	152.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	184.6	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	217.9	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	253.7	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	287.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	321.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.4	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	387.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	423.0	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	455.7	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	484.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	512.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	542.2	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	571.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	595.9	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	612.2	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	626.6	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	642.9	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	660.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	676.2	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	684.4	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	690.0	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	696.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	703.3	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	706.3	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	708.4	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	712.5	715.0	717.1	714.0
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1
2.5°	1789.1	1787.1	1776.1	1756.1	1739.1	1711.1	1706.1	1679.1	1669.1	1661.1	1669.1
5°	1758.1	1747.1	1710.1	1665.1	1604.1	1532.1	1490.1	1432.1	1420.1	1388.1	1407.1
7.5°	1707.1	1682.1	1613.1	1516.1	1404.1	1294.1	1210.1	1129.1	1060.1	1036.1	1029.0
10°	1653.1	1618.1	1502.1	1352.1	1190.1	1021.0	896.0	779.0	714.0	653.0	651.0
12.5°	1602.1	1549.1	1381.1	1172.1	946.0	745.0	583.0	460.0	383.0	341.0	352.0
15°	1561.1	1490.1	1259.1	992.0	706.0	480.0	330.0	251.0	224.0	211.0	213.0
17.5°	1521.1	1427.1	1141.1	804.0	503.0	296.0	214.0	187.0	179.0	176.0	174.0
20°	1485.1	1366.1	1017.0	634.0	332.0	205.0	176.0	167.0	164.0	162.0	162.0
22.5°	1449.1	1302.1	893.0	470.0	227.0	168.0	158.0	154.0	152.0	149.0	149.0
25°	1416.1	1240.1	769.0	329.0	174.0	150.0	143.0	139.0	135.0	132.0	132.0
27.5°	1391.1	1193.1	654.0	233.0	146.0	135.0	128.0	121.0	116.0	112.0	112.0
30°	1375.1	1147.1	543.0	176.0	130.0	120.0	111.0	102.0	94.0	89.0	88.0
32.5°	1366.1	1109.1	440.0	144.0	116.0	105.0	94.0	84.0	75.0	69.0	69.0
35°	1370.1	1079.1	337.0	122.0	105.0	92.0	80.0	68.0	60.0	55.0	54.0
37.5°	1396.1	1062.1	251.0	108.0	94.0	80.0	68.0	56.0	48.0	44.0	43.0
40°	1445.1	1066.1	191.0	98.0	86.0	70.0	56.0	46.0	39.0	35.0	35.0
42.5°	1544.1	1095.1	151.0	90.0	77.0	60.0	47.0	38.0	32.0	29.0	28.0
45°	1675.1	1150.1	124.0	83.0	68.0	51.0	40.0	32.0	26.0	23.0	23.0
47.5°	1873.1	1238.1	107.0	76.0	59.0	43.0	33.0	26.0	20.0	18.0	17.0
50°	2102.1	1361.1	94.0	68.0	52.0	36.0	28.0	20.0	16.0	13.0	13.0
52.5°	2336.1	1498.1	85.0	61.0	45.0	31.0	22.0	15.0	11.0	9.0	9.0
55°	2551.1	1613.1	76.0	55.0	38.0	26.0	18.0	12.0	8.0	6.0	6.0
57.5°	2759.1	1718.1	66.0	48.0	31.0	21.0	14.0	9.0	6.0	4.0	4.0
60°	3020.1	1854.1	57.0	41.0	25.0	17.0	11.0	7.0	4.0	3.0	2.0
62.5°	3335.2	1953.1	48.0	33.0	20.0	13.0	8.0	5.0	3.0	1.0	1.0
65°	3451.2	1822.1	40.0	27.0	16.0	10.0	6.0	4.0	2.0	1.0	1.0
67.5°	3127.2	1468.1	32.0	21.0	12.0	7.0	5.0	3.0	2.0	1.0	1.0
68°	3037.1	1396.1	31.0	20.0	11.0	7.0	4.0	3.0	1.0	1.0	0.0
70°	2564.1	1121.1	25.0	15.0	9.0	6.0	4.0	2.0	1.0	1.0	0.0
72.5°	1901.1	773.0	18.0	10.0	6.0	4.0	3.0	2.0	1.0	1.0	0.0
75°	1003.0	301.0	14.0	8.0	5.0	4.0	3.0	3.0	2.0	1.0	1.0
77.5°	288.0	95.0	11.0	6.0	5.0	5.0	5.0	4.0	4.0	3.0	2.0
80°	84.0	31.0	7.0	4.0	5.0	5.0	6.0	5.0	5.0	4.0	4.0
82.5°	45.0	12.0	4.0	3.0	3.0	4.0	5.0	4.0	3.0	2.0	1.0
85°	19.0	4.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0
87.5°	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1	5.1	4.1	4.1
95°	7.2	7.2	7.2	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	38.9	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	88.0	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5
112.5°	150.4	150.4	152.4	153.4	151.4	146.3	137.1	123.8	108.4	101.3	101.3
115°	182.1	181.1	183.1	186.2	183.1	178.0	171.9	162.6	150.4	142.2	143.2
117.5°	213.8	212.8	214.8	219.9	215.8	209.7	206.6	201.5	193.3	188.2	188.2
120°	248.6	248.6	250.6	255.7	251.6	248.6	242.4	238.3	231.2	228.1	230.2
122.5°	283.4	282.3	284.4	289.5	285.4	283.4	277.2	273.1	267.0	266.0	269.0
125°	317.1	317.1	317.1	322.2	320.2	317.1	312.0	305.9	302.8	300.7	304.8
127.5°	355.0	352.9	353.9	353.9	352.9	347.8	346.8	340.6	336.6	336.6	337.6
130°	388.7	387.7	389.7	389.7	385.7	380.5	378.5	374.4	370.3	369.3	371.3
132.5°	424.5	423.5	423.5	425.5	420.4	414.3	413.3	410.2	402.0	403.0	405.1
135°	461.4	460.3	457.3	458.3	453.2	447.0	445.0	441.9	435.8	435.8	438.8
137.5°	493.1	492.0	486.9	485.9	483.9	478.7	474.6	470.6	469.5	467.5	470.6
140°	522.7	520.7	515.6	513.5	511.5	508.4	502.3	500.2	498.2	496.1	499.2
142.5°	548.3	546.3	545.2	545.2	539.1	537.0	533.0	529.9	528.9	526.8	529.9
145°	572.9	570.8	573.9	574.9	568.8	563.6	562.6	559.6	556.5	558.5	562.6
147.5°	598.4	596.4	599.4	598.4	593.3	588.2	587.2	587.2	584.1	585.1	588.2
150°	624.0	619.9	616.8	613.8	610.7	606.6	606.6	606.6	606.6	605.6	608.7
152.5°	642.4	637.3	632.2	628.1	625.0	624.0	624.0	623.0	622.0	622.0	625.0
155°	655.7	652.6	650.6	645.5	640.4	642.4	644.5	641.4	639.3	639.3	643.4
157.5°	670.0	664.9	664.9	662.9	658.8	659.8	660.8	658.8	657.8	657.8	660.8
160°	681.3	675.1	676.2	679.2	673.1	670.0	670.0	671.1	674.1	675.1	678.2
162.5°	689.5	683.3	685.4	686.4	682.3	678.2	676.2	680.3	684.4	684.4	688.4
165°	697.7	693.6	695.6	692.5	687.4	688.4	688.4	691.5	691.5	693.6	696.6
167.5°	709.9	703.8	703.8	699.7	693.6	700.7	703.8	701.7	699.7	702.8	705.8
170°	717.1	712.0	709.9	704.8	701.7	706.9	708.9	707.9	707.9	711.0	714.0
172.5°	717.1	712.0	709.9	707.9	704.8	705.8	705.8	708.9	711.0	713.0	715.0
175°	715.0	709.9	712.0	711.0	705.8	705.8	706.9	711.0	713.0	714.0	716.1
177.5°	718.1	714.0	717.1	715.0	709.9	711.0	713.0	715.0	716.1	721.2	723.2
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

(END OF REPORT)