

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: McGRAW-EDISON

Report Number: P301938

Luminaire Tested: **GLNA-AF-04-LED-E1-SL4-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301938
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-SL4-7027-600-HSS
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10134.5 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 129
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

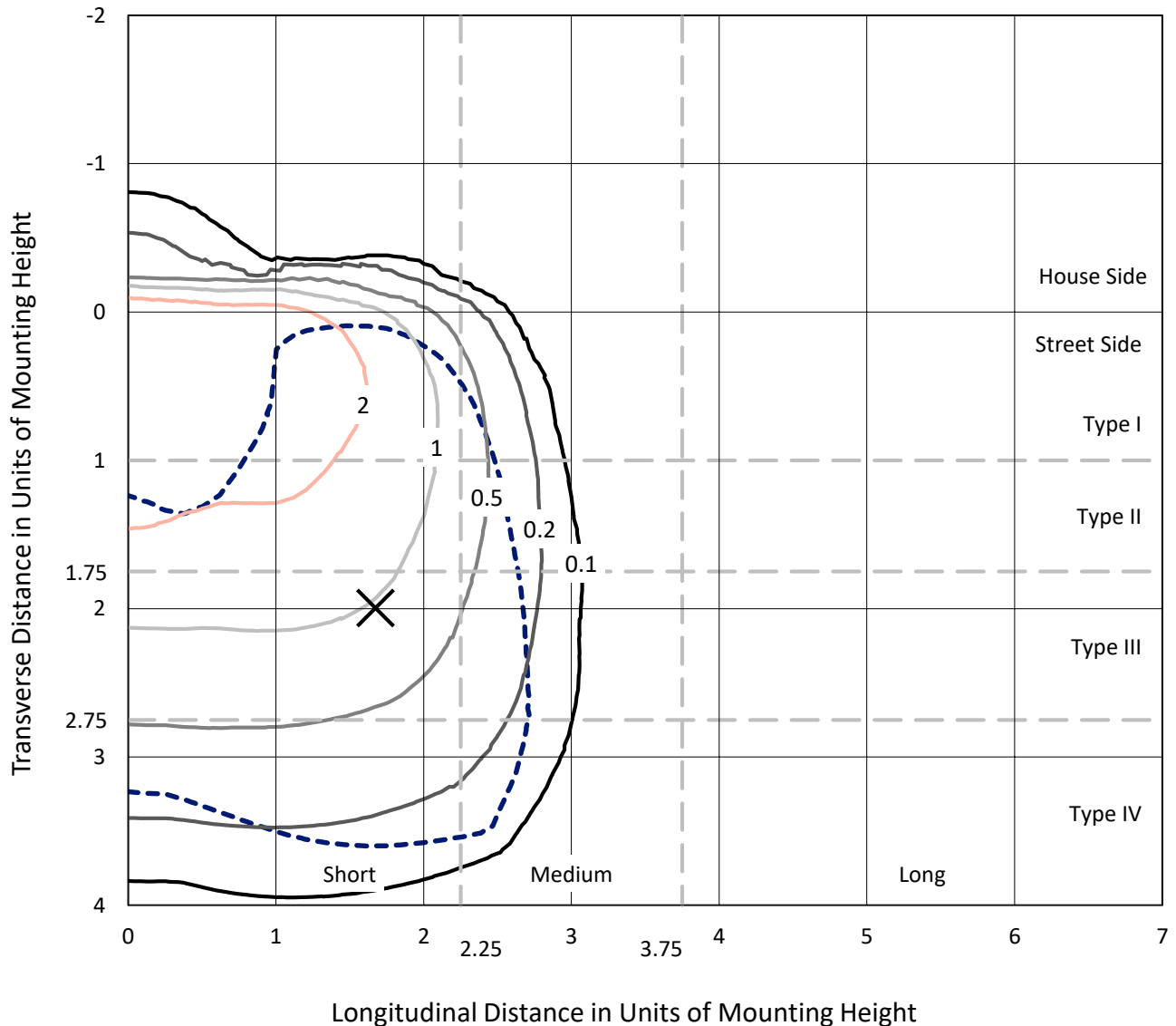


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

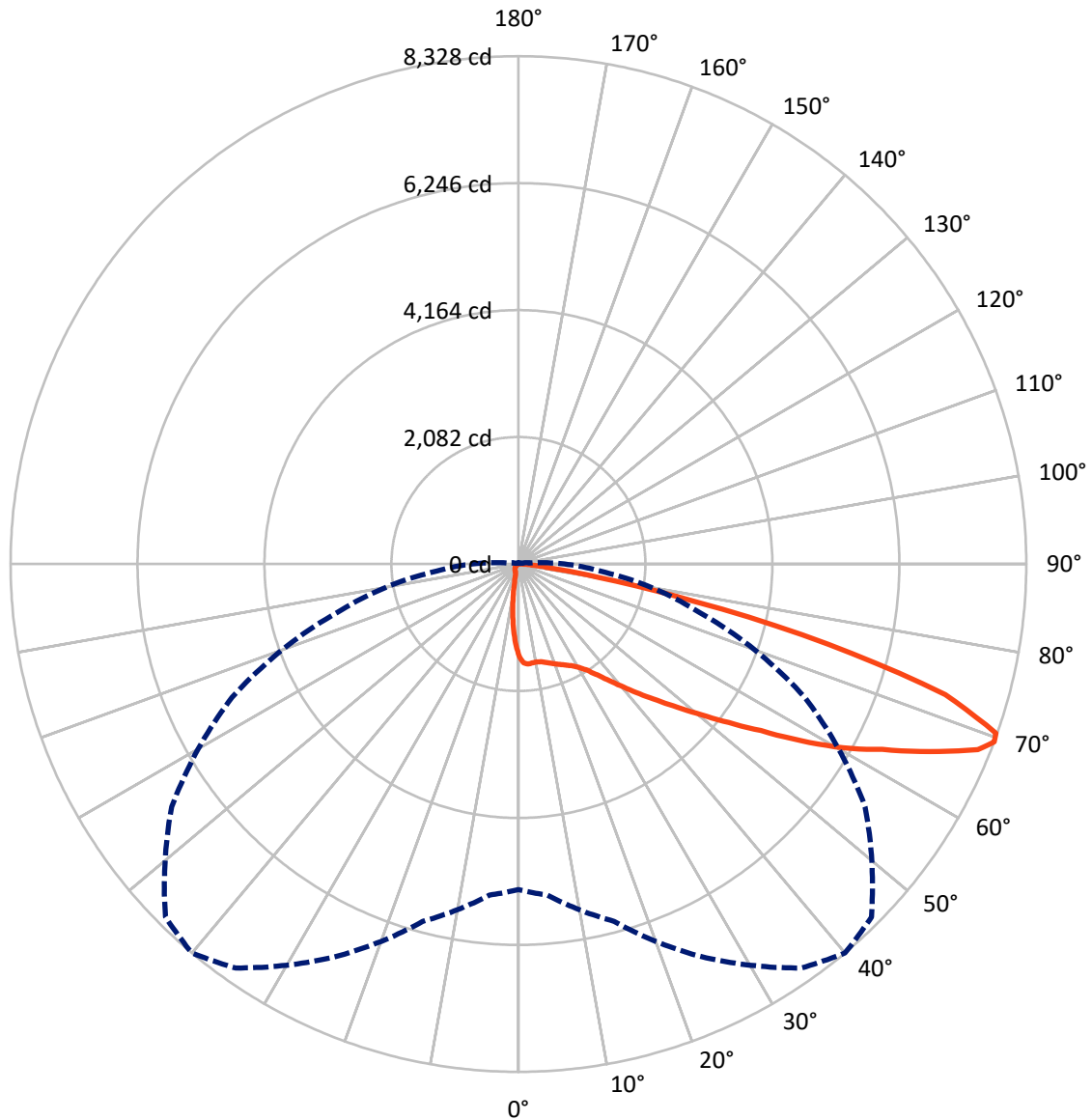


Based on 20 foot mounting height. Maximum calculated value = 4.1 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	592.9	0.0	592.9
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	9541.5	0.0	9541.5
	% Fixture	94.1	0.0	94.1
Total	Lumens	10134.5	0.0	10134.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.8	1.2
10°-20°	301.9	3.0
20°-30°	508.5	5.0
30°-40°	832.4	8.2
40°-50°	1441.4	14.2
50°-60°	2270.3	22.4
60°-70°	2964.9	29.3
70°-80°	1527.1	15.1
80°-90°	165.2	1.6
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°	10134.5	100.0
0°-180°	10134.5	100.0



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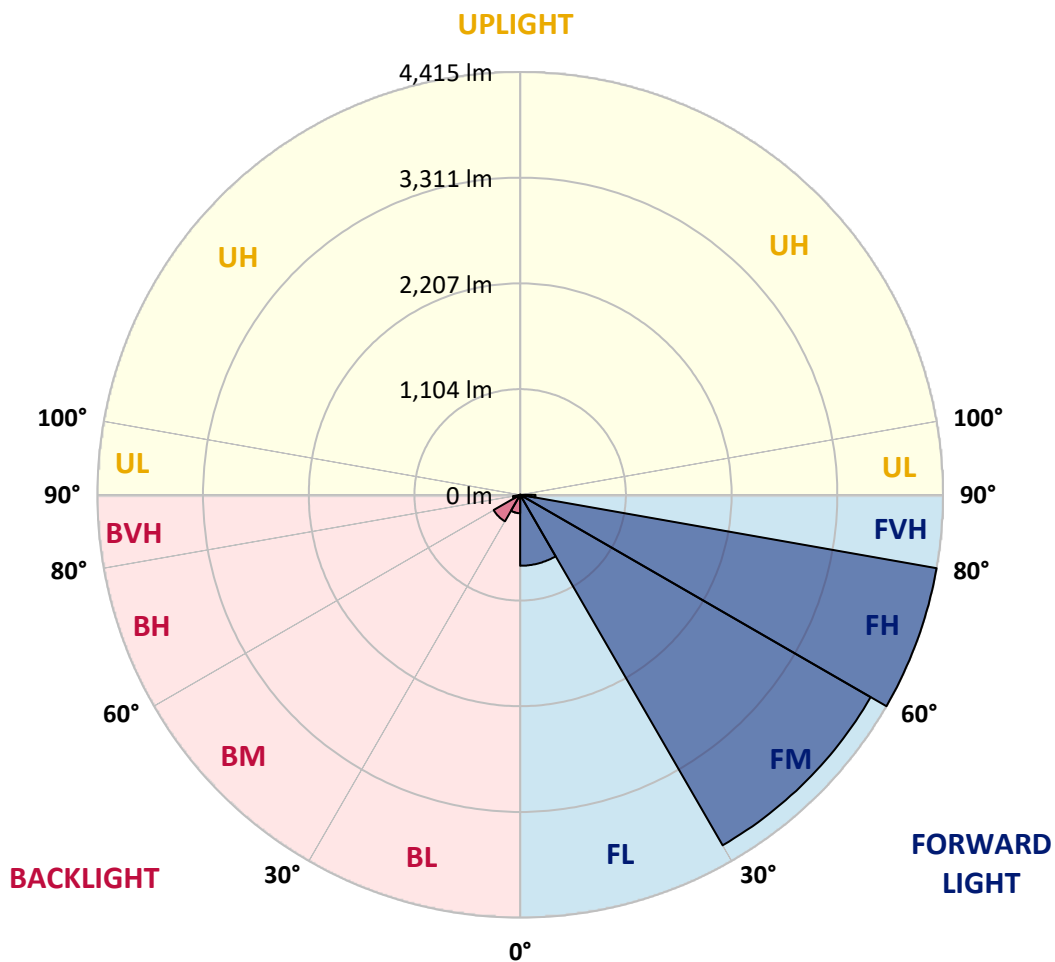
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	741.1	7.3			
FM	(30°-60°)	4225.4	41.7			
FH	(60°-80°)	4415.0	43.6			G2/5000
FVH	(80°-90°)	160.0	1.6			G2/225
BL	(0°-30°)	192.1	1.9	B1/500		
BM	(30°-60°)	318.7	3.1	B1/1000		
BH	(60°-80°)	77.0	0.8	B0/110		G0/110
BVH	(80°-90°)	5.2	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1
2.5°	1662.5	1653.5	1648.1	1640.8	1631.8	1623.9	1620.9	1598.6	1577.5	1548.5	1515.3
5°	1693.3	1690.3	1680.6	1671.0	1660.1	1648.1	1641.4	1614.9	1584.7	1542.5	1484.6
7.5°	1696.3	1692.7	1680.6	1667.4	1652.3	1637.8	1626.3	1599.8	1572.1	1529.2	1458.6
10°	1691.5	1687.3	1678.2	1663.7	1645.0	1631.2	1619.7	1594.4	1570.8	1532.2	1453.8
12.5°	1686.1	1681.8	1677.6	1670.4	1654.1	1644.4	1634.8	1610.7	1589.5	1557.0	1471.3
15°	1691.5	1689.1	1693.9	1690.9	1681.8	1673.4	1663.7	1642.0	1622.7	1595.6	1503.3
17.5°	1714.4	1714.4	1729.5	1731.3	1722.9	1710.8	1696.9	1675.2	1658.9	1636.0	1541.3
20°	1768.1	1766.3	1785.6	1789.2	1768.7	1750.0	1729.5	1703.0	1690.3	1675.8	1578.7
22.5°	1860.4	1852.0	1863.4	1859.8	1819.4	1790.4	1765.1	1732.5	1725.9	1719.2	1620.3
25°	1980.4	1975.6	1983.5	1947.9	1876.7	1837.5	1807.3	1770.5	1770.5	1777.2	1667.4
27.5°	2154.8	2136.7	2110.1	2047.4	1940.6	1890.6	1858.0	1818.8	1829.0	1853.8	1729.5
30°	2333.3	2313.4	2252.5	2156.0	2018.5	1966.0	1928.0	1886.9	1911.1	1956.3	1812.7
32.5°	2509.5	2487.2	2400.9	2279.1	2130.0	2077.6	2040.8	1995.5	2035.9	2112.0	1934.6
35°	2680.2	2660.3	2560.8	2417.2	2278.4	2235.0	2201.2	2162.0	2213.9	2320.1	2106.5
37.5°	2872.0	2850.3	2729.1	2573.4	2458.8	2427.4	2402.7	2363.5	2454.0	2609.6	2346.0
40°	3107.9	3071.1	2907.6	2752.6	2667.5	2652.5	2635.6	2630.1	2770.7	2986.1	2665.1
42.5°	3378.2	3317.8	3094.6	2941.4	2896.8	2907.6	2903.4	2927.5	3167.0	3454.2	3053.6
45°	3648.4	3570.6	3302.8	3142.9	3148.9	3186.9	3210.5	3307.0	3663.5	3991.1	3471.7
47.5°	3877.6	3801.0	3502.4	3360.7	3433.1	3507.9	3571.8	3754.6	4173.8	4519.5	3796.8
50°	4073.7	4001.3	3714.2	3600.2	3763.0	3883.7	3987.4	4258.3	4722.8	4921.9	4024.8
52.5°	4234.2	4185.9	3933.7	3874.6	4140.1	4316.8	4468.8	4793.4	5209.0	5248.8	4202.2
55°	4390.4	4356.0	4169.6	4201.0	4582.8	4823.5	5016.0	5361.0	5627.7	5521.5	4372.3
57.5°	4570.2	4538.8	4438.7	4614.8	5165.0	5467.8	5677.7	5864.1	5996.2	5800.2	4532.8
60°	4753.6	4735.5	4737.9	5074.5	5833.4	6124.1	6239.9	6288.2	6358.2	6062.6	4541.8
62.5°	4928.5	4962.9	5079.9	5586.0	6473.4	6696.6	6755.1	6802.8	6720.7	6104.2	4196.2
65°	5224.7	5280.8	5560.1	6270.7	7177.4	7416.3	7476.6	7313.1	6778.0	5566.1	3413.1
67.5°	5369.5	5472.0	5970.3	6908.9	7860.3	8125.7	8103.4	7346.3	6082.5	4244.4	2190.4
69°	5339.3	5448.5	6065.0	7104.4	8087.1	8327.8	8186.0	6940.3	5181.9	3074.7	1344.6
70°	5219.9	5330.3	6016.1	7097.2	8116.0	8306.7	8032.8	6439.0	4381.4	2248.3	840.9
72.5°	4359.0	4454.3	5341.1	6414.9	7476.6	7321.6	6720.1	4461.0	2134.9	612.3	189.4
75°	2683.2	2736.3	3832.4	4832.6	5647.0	5248.8	4477.3	2219.3	636.4	173.1	105.0
77.5°	1417.6	1441.8	2098.1	2848.5	3579.6	2961.9	2294.7	865.7	293.2	108.6	76.0
80°	837.9	856.0	1129.9	1302.4	1549.1	1294.0	917.5	531.5	209.9	68.2	67.6
82.5°	479.6	491.0	819.2	723.9	610.5	521.2	456.7	503.7	126.1	45.8	70.0
85°	176.1	178.6	460.9	550.8	363.2	216.0	226.8	417.4	33.8	29.0	54.9
87.5°	82.0	80.2	237.1	337.2	212.3	136.9	176.8	91.7	13.3	18.7	15.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1	1514.1
2.5°	1496.0	1473.7	1433.3	1391.7	1349.5	1316.9	1284.9	1259.6	1251.1	1235.4	1236.6
5°	1450.2	1409.2	1324.7	1239.1	1149.8	1076.2	1006.8	950.7	923.6	895.8	895.8
7.5°	1410.4	1350.7	1218.6	1079.2	935.0	813.8	704.6	622.5	577.3	541.1	540.5
10°	1395.3	1314.5	1129.9	930.2	729.3	564.0	434.3	351.1	308.3	280.5	279.3
12.5°	1401.9	1301.8	1061.7	792.7	540.5	362.5	251.6	197.9	179.8	171.3	171.3
15°	1421.2	1298.2	993.5	658.1	381.9	226.8	167.1	152.6	151.4	151.4	151.4
17.5°	1444.8	1299.4	923.6	527.2	260.0	162.3	144.2	142.4	143.6	143.6	143.6
20°	1468.9	1300.0	848.2	406.0	183.4	141.2	135.7	135.1	136.3	136.3	136.9
22.5°	1498.5	1303.0	772.8	303.4	151.4	133.3	129.1	129.1	129.7	129.7	129.1
25°	1532.2	1309.0	694.3	225.0	138.1	127.9	124.3	123.7	124.3	123.7	123.1
27.5°	1574.5	1317.5	606.9	176.1	132.1	122.5	119.4	119.4	118.8	118.2	117.6
30°	1627.5	1327.1	508.5	149.6	126.1	117.6	114.6	114.0	113.4	112.2	112.2
32.5°	1708.4	1348.2	411.4	135.7	119.4	111.0	108.6	108.6	107.4	106.2	105.6
35°	1832.7	1389.9	324.5	127.3	112.2	103.8	100.7	100.7	99.5	98.9	98.3
37.5°	2004.6	1453.2	252.2	119.4	105.0	95.9	92.9	92.3	91.1	89.9	89.3
40°	2233.2	1531.6	198.5	112.2	97.7	88.1	85.7	84.5	82.0	80.2	80.2
42.5°	2520.3	1620.9	161.1	104.4	89.3	80.8	79.0	77.2	73.0	71.2	70.6
45°	2820.8	1701.1	136.3	95.3	80.8	73.6	72.4	69.4	63.9	62.1	62.1
47.5°	3037.3	1719.8	120.0	86.9	73.0	65.8	65.2	59.7	54.9	53.7	53.1
50°	3172.5	1683.0	106.8	78.4	65.8	58.5	56.7	50.1	47.1	45.8	45.2
52.5°	3263.5	1617.3	95.9	71.2	59.1	51.9	47.7	42.8	40.4	39.2	39.2
55°	3336.5	1524.4	85.1	64.5	53.7	46.4	40.4	36.8	34.4	33.2	33.2
57.5°	3357.0	1398.3	74.2	59.1	48.3	41.0	34.4	32.0	29.0	28.4	28.4
60°	3208.0	1170.9	65.8	52.5	43.4	35.6	30.2	27.1	24.1	23.5	22.9
62.5°	2815.3	906.1	57.9	46.4	38.0	30.8	25.9	22.3	19.9	19.9	19.9
65°	2147.5	607.5	50.7	40.4	33.2	25.9	22.3	18.1	16.9	16.9	17.5
67.5°	1285.5	330.6	43.4	34.4	28.4	21.7	18.7	15.7	15.1	15.7	15.7
69°	753.5	194.2	39.2	30.8	24.7	19.3	16.3	13.9	15.1	15.7	15.7
70°	465.1	130.9	36.2	27.7	22.3	17.5	15.1	13.3	14.5	15.1	15.1
72.5°	129.7	67.6	29.0	21.7	18.1	14.5	12.1	12.1	13.9	14.5	14.5
75°	84.5	50.1	22.3	16.3	13.9	11.5	10.3	11.5	13.3	13.9	13.9
77.5°	70.0	41.0	18.1	13.3	11.5	10.9	9.7	10.3	12.1	12.7	12.7
80°	63.9	29.0	14.5	12.1	10.3	9.7	9.0	8.4	10.9	11.5	11.5
82.5°	60.9	22.9	12.7	10.9	9.7	8.4	7.8	8.4	9.7	10.3	10.9
85°	38.0	15.1	11.5	10.3	8.4	7.8	7.8	7.8	9.0	9.7	9.7
87.5°	13.9	12.1	10.3	8.4	7.2	7.2	7.2	7.2	7.8	9.0	9.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)