

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: P301935

Luminaire Tested: **GLNA-AF-03-LED-E1-SL4-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301935
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-03-LED-E1-SL4-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 4000K 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: 8827.8 lumens
Efficiency: N/A
Efficacy: 92.0 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): 96
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

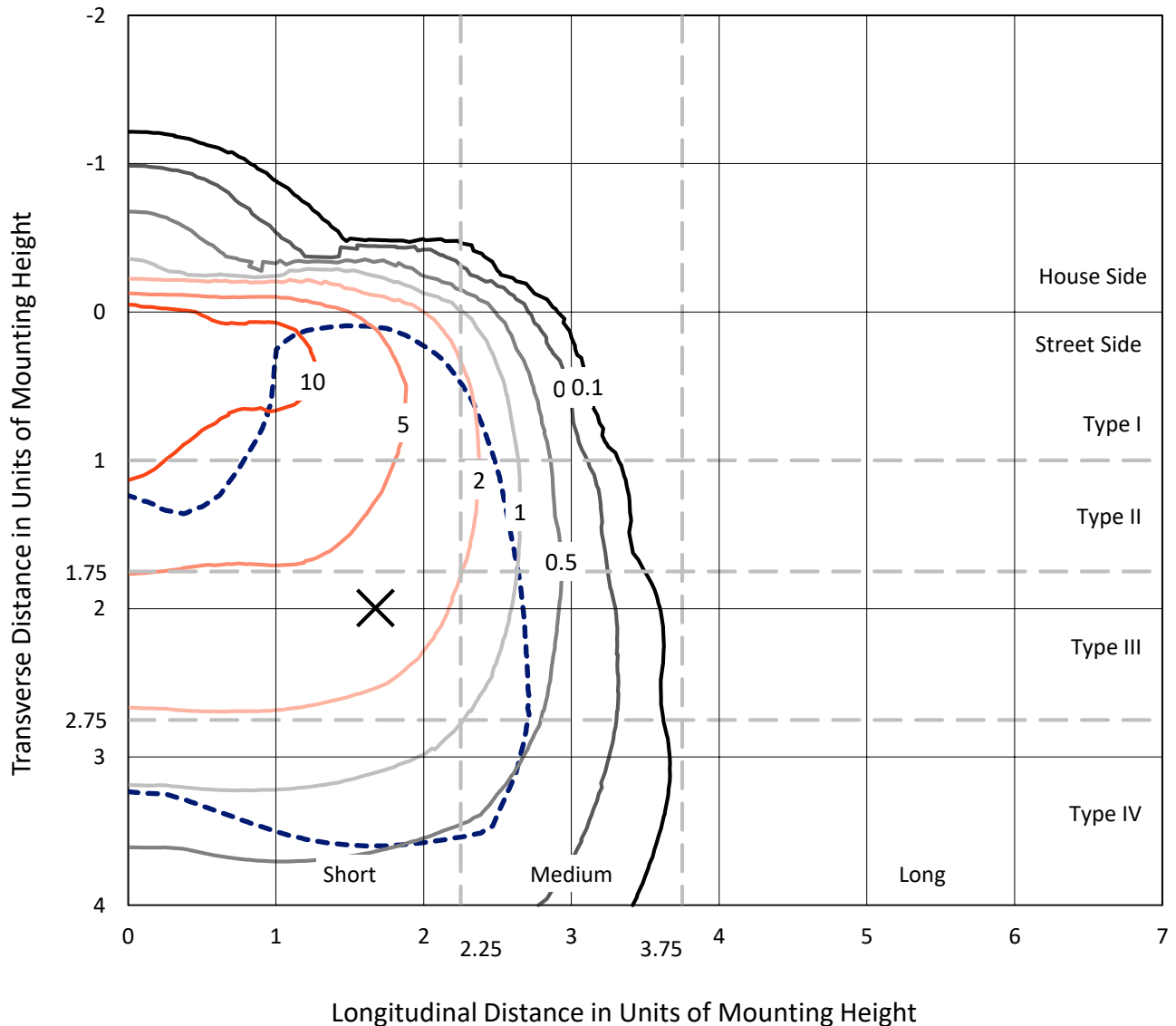


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Iso-Footcandle Lines of Horizontal Illumination

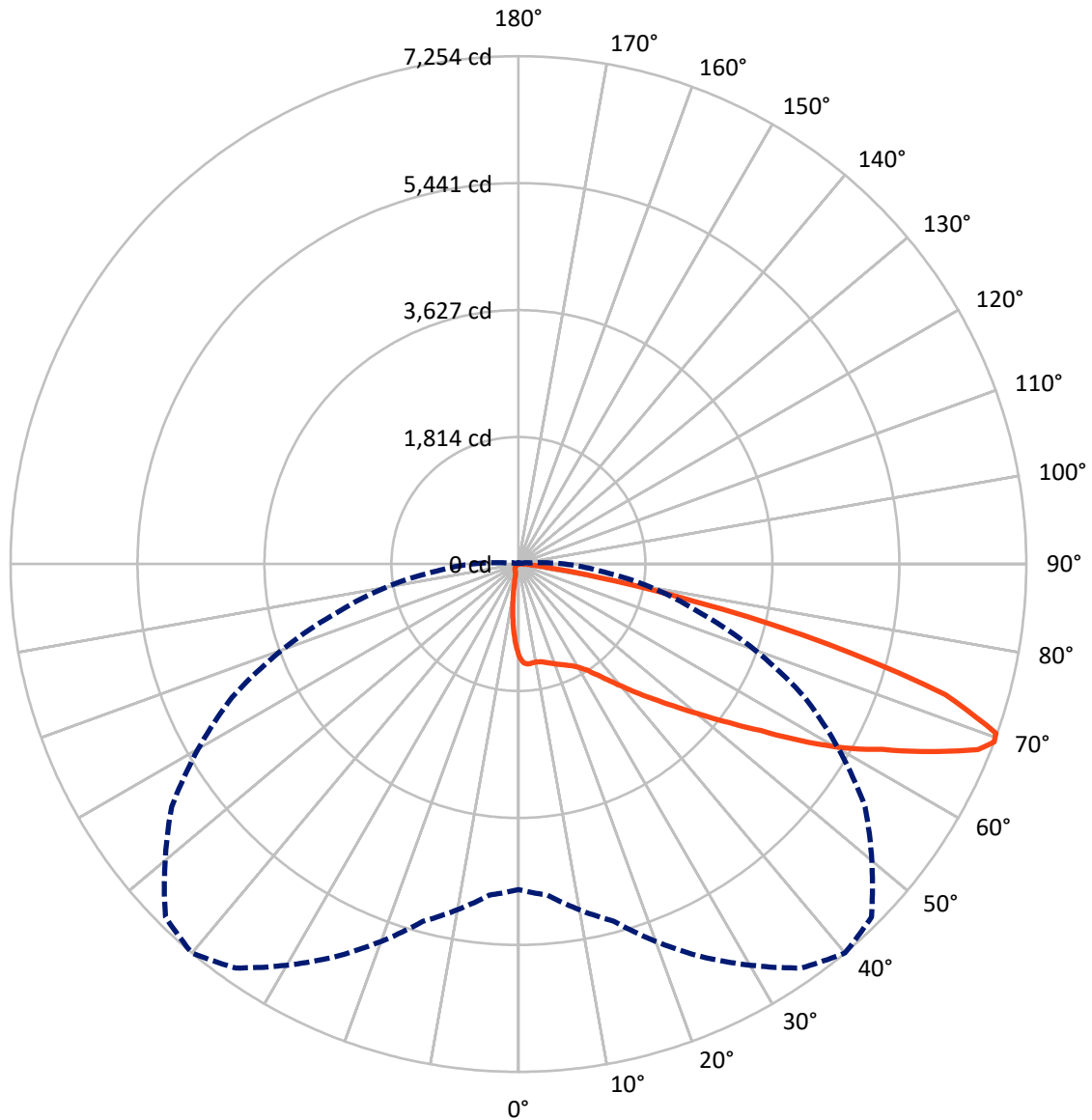
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.4 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	516.5	0.0	516.5
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	8311.4	0.0	8311.4
	% Fixture	94.1	0.0	94.1
Total	Lumens	8827.8	0.0	8827.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.9	1.2
10°-20°	263.0	3.0
20°-30°	443.0	5.0
30°-40°	725.1	8.2
40°-50°	1255.5	14.2
50°-60°	1977.6	22.4
60°-70°	2582.7	29.3
70°-80°	1330.2	15.1
80°-90°	143.9	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°	8827.8	100.0
0°-180°	8827.8	100.0



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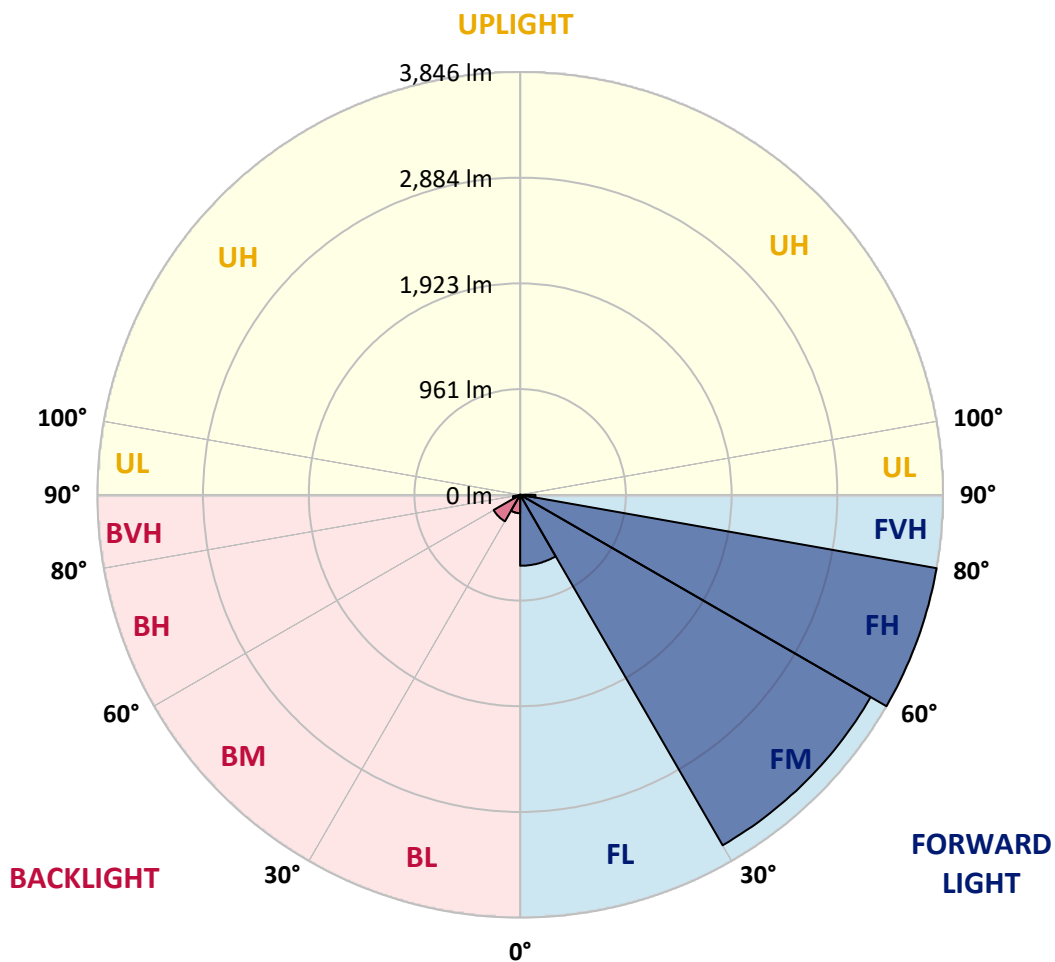
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	645.6	7.3			
FM	(30°-60°)	3680.7	41.7			
FH	(60°-80°)	3845.8	43.6			G2/5000
FVH	(80°-90°)	139.4	1.6			G2/225
BL	(0°-30°)	167.3	1.9	B1/500		
BM	(30°-60°)	277.6	3.1	B1/1000		
BH	(60°-80°)	67.1	0.8	B0/110		G0/110
BVH	(80°-90°)	4.5	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°	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9
2.5°	1448.2	1440.3	1435.6	1429.3	1421.4	1414.6	1411.9	1392.5	1374.1	1348.9	1320.0
5°	1475.0	1472.4	1464.0	1455.5	1446.1	1435.6	1429.8	1406.7	1380.4	1343.6	1293.2
7.5°	1477.6	1474.5	1464.0	1452.4	1439.3	1426.6	1416.7	1393.5	1369.4	1332.1	1270.6
10°	1473.4	1469.7	1461.9	1449.2	1433.0	1420.9	1410.9	1388.8	1368.3	1334.7	1266.4
12.5°	1468.7	1465.0	1461.3	1455.0	1440.8	1432.4	1424.0	1403.0	1384.6	1356.2	1281.6
15°	1473.4	1471.3	1475.5	1472.9	1465.0	1457.6	1449.2	1430.3	1413.5	1389.9	1309.5
17.5°	1493.4	1493.4	1506.5	1508.1	1500.7	1490.2	1478.1	1459.2	1445.0	1425.1	1342.6
20°	1540.1	1538.6	1555.4	1558.5	1540.7	1524.4	1506.5	1483.4	1472.4	1459.8	1375.2
22.5°	1620.5	1613.2	1623.2	1620.0	1584.8	1559.6	1537.5	1509.1	1503.4	1497.6	1411.4
25°	1725.1	1720.9	1727.7	1696.7	1634.7	1600.6	1574.3	1542.3	1542.3	1548.0	1452.4
27.5°	1877.0	1861.2	1838.1	1783.4	1690.4	1646.8	1618.4	1584.3	1593.2	1614.8	1506.5
30°	2032.5	2015.2	1962.1	1878.0	1758.2	1712.5	1679.4	1643.7	1664.7	1704.1	1579.0
32.5°	2185.9	2166.5	2091.4	1985.2	1855.4	1809.7	1777.7	1738.2	1773.5	1839.7	1685.2
35°	2334.7	2317.3	2230.6	2105.6	1984.7	1946.9	1917.4	1883.3	1928.5	2021.0	1834.9
37.5°	2501.8	2482.8	2377.2	2241.6	2141.8	2114.5	2092.9	2058.8	2137.6	2273.2	2043.5
40°	2707.2	2675.2	2532.8	2397.7	2323.6	2310.5	2295.8	2291.0	2413.5	2601.1	2321.5
42.5°	2942.6	2890.1	2695.7	2562.2	2523.3	2532.8	2529.1	2550.1	2758.7	3008.8	2659.9
45°	3178.0	3110.2	2876.9	2737.7	2742.9	2776.1	2796.5	2880.6	3191.2	3476.5	3024.1
47.5°	3377.7	3311.0	3050.9	2927.4	2990.4	3055.6	3111.3	3270.5	3635.7	3936.8	3307.3
50°	3548.5	3485.4	3235.3	3136.0	3277.9	3383.0	3473.3	3709.3	4113.9	4287.3	3505.9
52.5°	3688.3	3646.2	3426.6	3375.1	3606.3	3760.3	3892.7	4175.4	4537.4	4572.1	3660.4
55°	3824.4	3794.4	3632.0	3659.4	3992.0	4201.6	4369.3	4669.8	4902.1	4809.6	3808.6
57.5°	3980.9	3953.6	3866.4	4019.8	4499.1	4762.8	4945.7	5108.1	5223.2	5052.4	3948.4
60°	4140.7	4124.9	4127.0	4420.2	5081.3	5334.6	5435.4	5477.5	5538.4	5281.0	3956.3
62.5°	4293.1	4323.0	4425.0	4865.8	5638.8	5833.2	5884.2	5925.7	5854.2	5317.2	3655.2
65°	4551.1	4600.0	4843.2	5462.2	6252.0	6460.1	6512.7	6370.3	5904.2	4848.5	2973.1
67.5°	4677.2	4766.5	5200.6	6018.2	6846.9	7078.1	7058.6	6399.2	5298.3	3697.2	1908.0
69°	4650.9	4746.0	5283.1	6188.4	7044.4	7254.1	7130.6	6045.5	4513.8	2678.3	1171.3
70°	4546.9	4643.0	5240.5	6182.1	7069.7	7235.7	6997.1	5608.9	3816.5	1958.4	732.5
72.5°	3797.0	3880.1	4652.5	5587.8	6512.7	6377.6	5853.7	3885.8	1859.6	533.4	165.0
75°	2337.3	2383.5	3338.3	4209.5	4918.9	4572.1	3900.0	1933.2	554.4	150.8	91.4
77.5°	1234.9	1255.9	1827.6	2481.3	3118.1	2580.1	1998.9	754.0	255.4	94.6	66.2
80°	729.9	745.6	984.2	1134.5	1349.4	1127.1	799.2	462.9	182.9	59.4	58.9
82.5°	417.7	427.7	713.6	630.6	531.8	454.0	397.8	438.8	109.8	39.9	61.0
85°	153.4	155.5	401.5	479.8	316.3	188.1	197.6	363.6	29.4	25.2	47.8
87.5°	71.5	69.9	206.5	293.7	185.0	119.3	154.0	79.9	11.6	16.3	13.1
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°	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9	1318.9
2.5°	1303.2	1283.7	1248.5	1212.3	1175.5	1147.1	1119.2	1097.2	1089.8	1076.2	1077.2
5°	1263.2	1227.5	1153.9	1079.3	1001.5	937.4	877.0	828.1	804.5	780.3	780.3
7.5°	1228.5	1176.5	1061.4	940.1	814.5	708.9	613.7	542.3	502.9	471.3	470.8
10°	1215.4	1145.0	984.2	810.3	635.3	491.3	378.3	305.8	268.5	244.3	243.3
12.5°	1221.2	1134.0	924.8	690.5	470.8	315.8	219.1	172.4	156.6	149.2	149.2
15°	1238.0	1130.8	865.4	573.3	332.6	197.6	145.6	132.9	131.9	131.9	131.9
17.5°	1258.5	1131.9	804.5	459.3	226.5	141.4	125.6	124.0	125.1	125.1	125.1
20°	1279.5	1132.4	738.8	353.6	159.7	123.0	118.2	117.7	118.8	118.8	119.3
22.5°	1305.3	1135.0	673.1	264.3	131.9	116.1	112.5	112.5	113.0	113.0	112.5
25°	1334.7	1140.3	604.8	196.0	120.3	111.4	108.2	107.7	108.2	107.7	107.2
27.5°	1371.5	1147.6	528.6	153.4	115.1	106.7	104.0	104.0	103.5	103.0	102.5
30°	1417.7	1156.0	443.0	130.3	109.8	102.5	99.8	99.3	98.8	97.7	97.7
32.5°	1488.1	1174.4	358.4	118.2	104.0	96.7	94.6	94.6	93.5	92.5	92.0
35°	1596.4	1210.7	282.7	110.9	97.7	90.4	87.8	87.8	86.7	86.2	85.7
37.5°	1746.1	1265.9	219.6	104.0	91.4	83.5	80.9	80.4	79.3	78.3	77.8
40°	1945.3	1334.2	172.9	97.7	85.1	76.7	74.6	73.6	71.5	69.9	69.9
42.5°	2195.4	1411.9	140.3	90.9	77.8	70.4	68.8	67.3	63.6	62.0	61.5
45°	2457.1	1481.8	118.8	83.0	70.4	64.1	63.1	60.4	55.7	54.1	54.1
47.5°	2645.7	1498.1	104.6	75.7	63.6	57.3	56.8	52.0	47.8	46.8	46.2
50°	2763.4	1466.1	93.0	68.3	57.3	51.0	49.4	43.6	41.0	39.9	39.4
52.5°	2842.8	1408.8	83.5	62.0	51.5	45.2	41.5	37.3	35.2	34.2	34.2
55°	2906.4	1327.9	74.1	56.2	46.8	40.5	35.2	32.1	30.0	28.9	28.9
57.5°	2924.2	1218.0	64.6	51.5	42.0	35.7	30.0	27.8	25.2	24.7	24.7
60°	2794.4	1019.9	57.3	45.7	37.8	31.0	26.3	23.6	21.0	20.5	20.0
62.5°	2452.4	789.3	50.4	40.5	33.1	26.8	22.6	19.4	17.3	17.3	17.3
65°	1870.7	529.1	44.1	35.2	28.9	22.6	19.4	15.8	14.7	14.7	15.2
67.5°	1119.8	288.0	37.8	30.0	24.7	18.9	16.3	13.7	13.1	13.7	13.7
69°	656.3	169.2	34.2	26.8	21.5	16.8	14.2	12.1	13.1	13.7	13.7
70°	405.1	114.0	31.5	24.2	19.4	15.2	13.1	11.6	12.6	13.1	13.1
72.5°	113.0	58.9	25.2	18.9	15.8	12.6	10.5	10.5	12.1	12.6	12.6
75°	73.6	43.6	19.4	14.2	12.1	10.0	8.9	10.0	11.6	12.1	12.1
77.5°	61.0	35.7	15.8	11.6	10.0	9.5	8.4	8.9	10.5	11.0	11.0
80°	55.7	25.2	12.6	10.5	8.9	8.4	7.9	7.4	9.5	10.0	10.0
82.5°	53.1	20.0	11.0	9.5	8.4	7.4	6.8	7.4	8.4	8.9	9.5
85°	33.1	13.1	10.0	8.9	7.4	6.8	6.8	6.8	7.9	8.4	8.4
87.5°	12.1	10.5	8.9	7.4	6.3	6.3	6.3	6.3	6.8	7.9	7.9
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)