

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: P301251

Luminaire Tested: **GLNA-AF-09-LED-E1-T3R-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301251
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-T3R-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35716.7 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G5

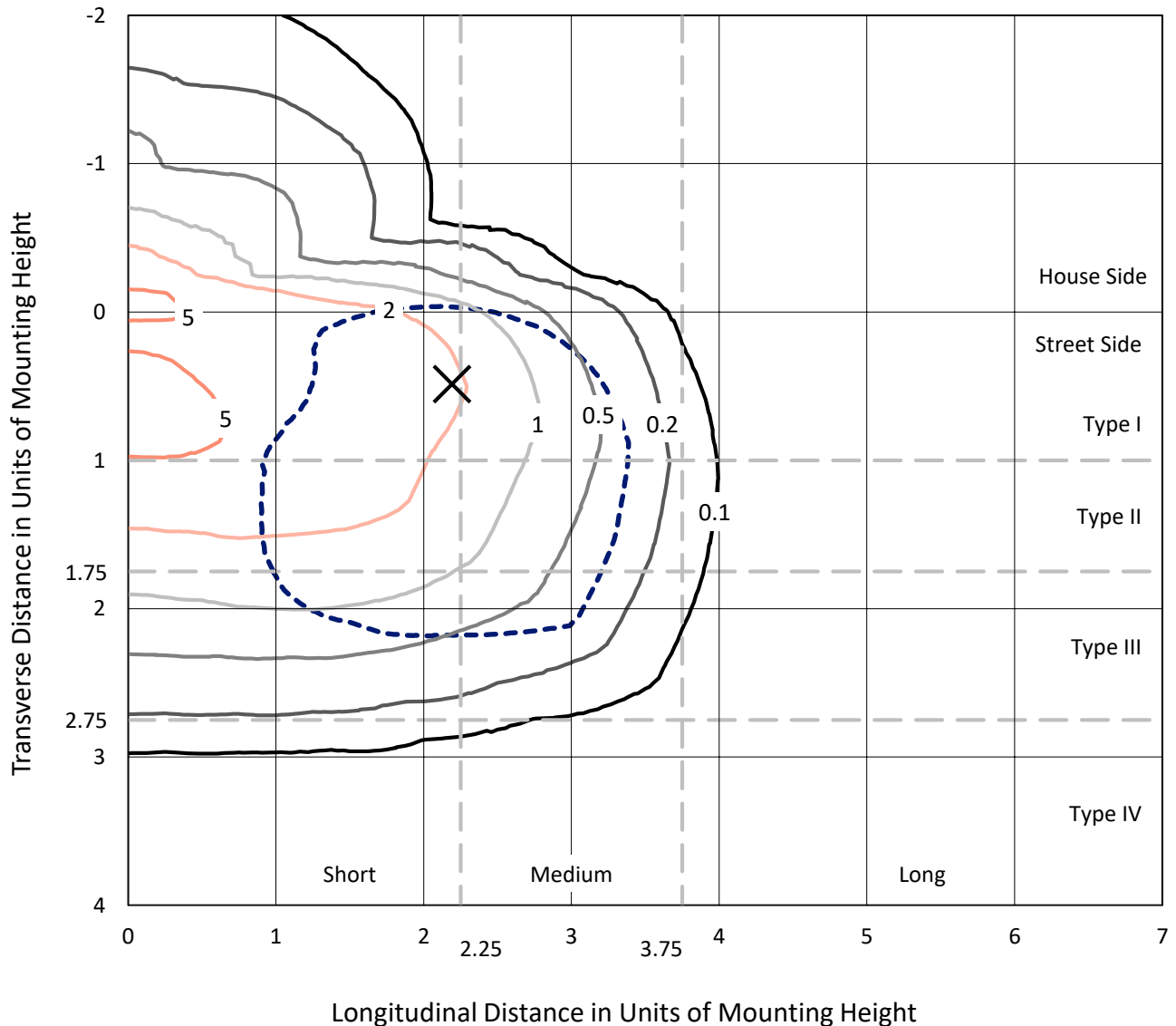
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

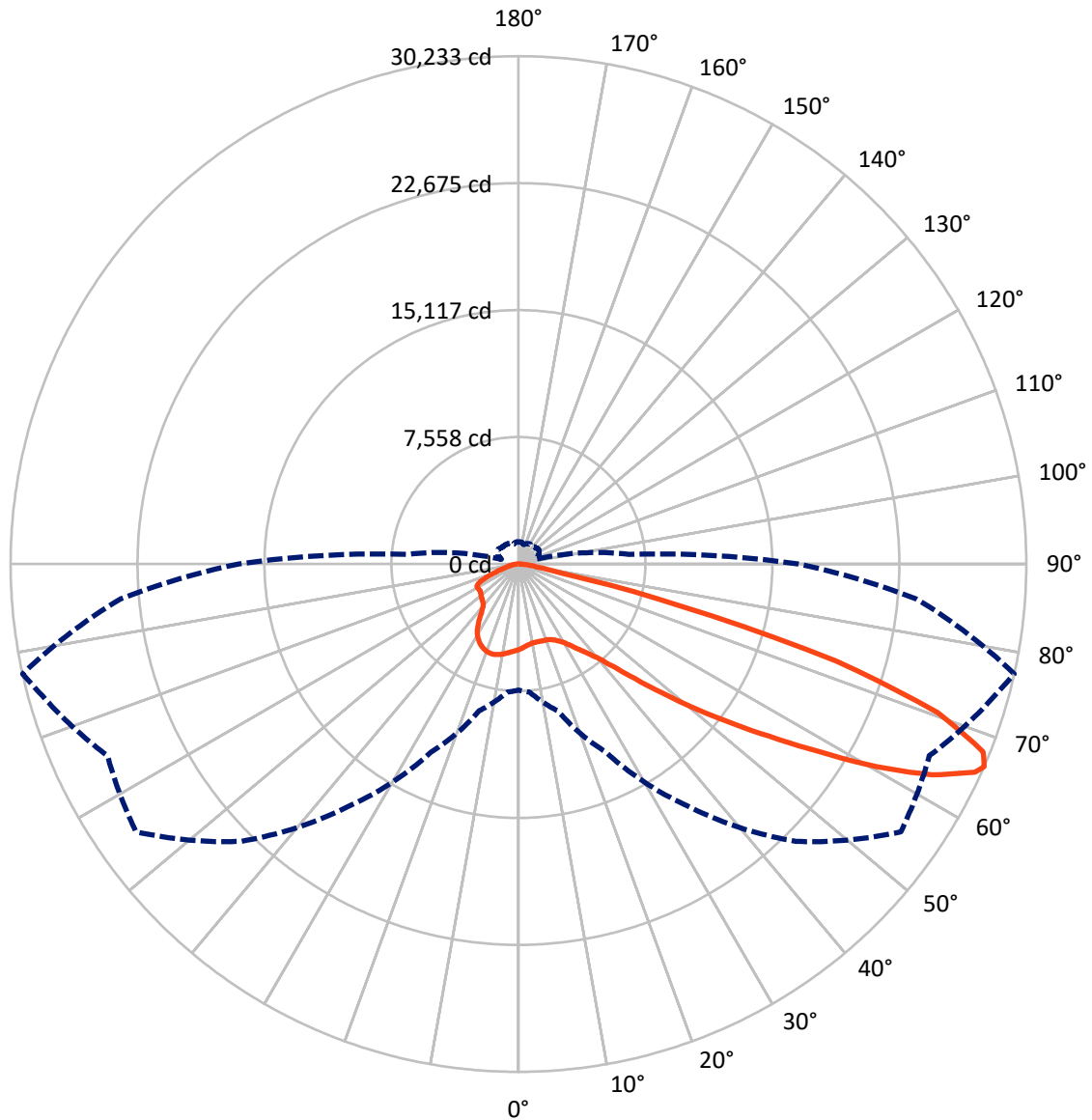
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6102.0	0.0	6102.0
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	29614.7	0.0	29614.7
	% Fixture	82.9	0.0	82.9
Total	Lumens	35716.7	0.0	35716.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	454.7	1.3
10°-20°	1282.9	3.6
20°-30°	2189.4	6.1
30°-40°	3504.9	9.8
40°-50°	5414.7	15.2
50°-60°	7679.9	21.5
60°-70°	10273.6	28.8
70°-80°	4461.7	12.5
80°-90°	454.9	1.3
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°	35716.7	100.0
0°-180°	35716.7	100.0



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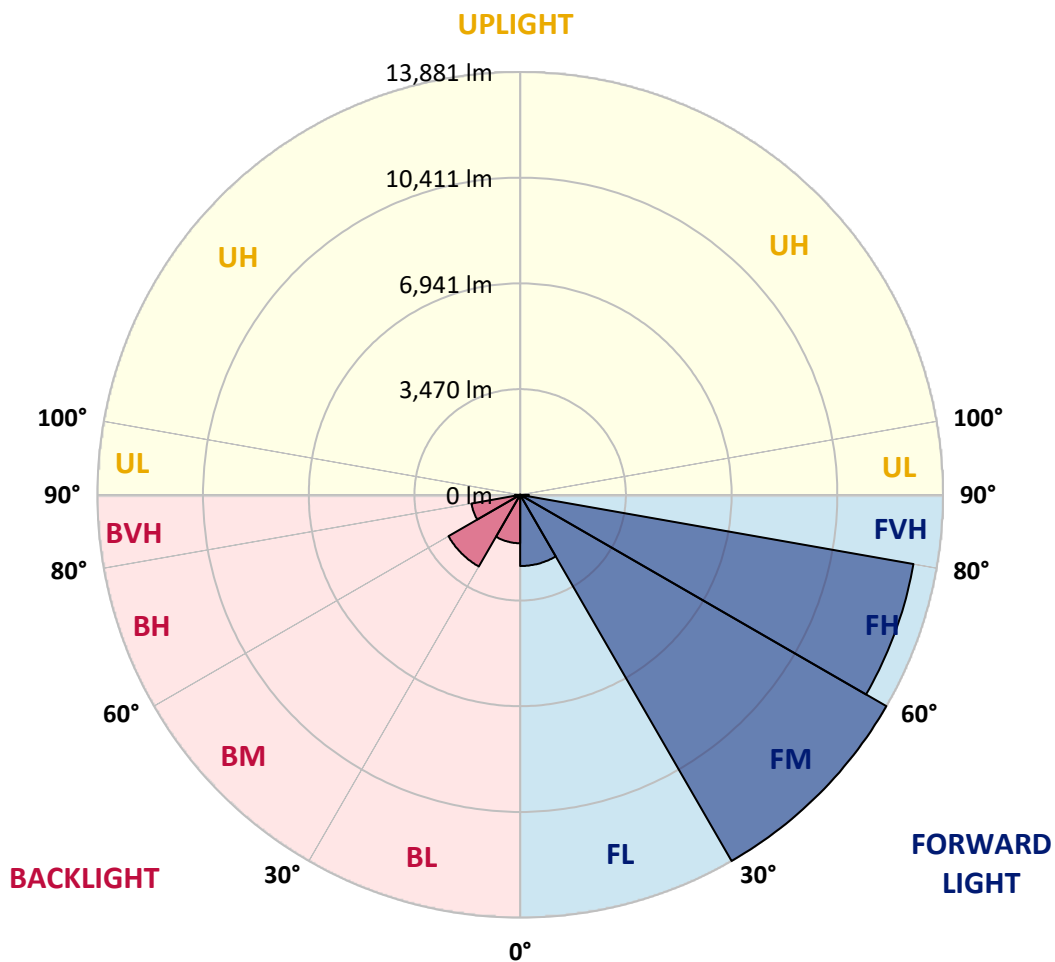
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2337.8	6.5			
FM	(30°-60°)	13881.4	38.9			
FH	(60°-80°)	13110.2	36.7			G5
FVH	(80°-90°)	285.3	0.8			G3/500
BL	(0°-30°)	1589.2	4.4	B3/2500		
BM	(30°-60°)	2718.1	7.6	B3/5000		
BH	(60°-80°)	1625.1	4.5	B3/2500		G3/2500
BVH	(80°-90°)	169.6	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7
2.5°	4502.6	4532.8	4558.3	4581.8	4628.9	4706.5	4795.9	4868.5	4973.2	4993.7	5049.4
5°	4089.3	4089.3	4109.2	4145.0	4208.8	4325.3	4447.0	4608.9	4836.8	4890.5	5039.2
7.5°	3888.5	3890.0	3901.7	3931.9	3987.6	4093.9	4227.2	4418.3	4727.0	4816.4	5069.3
10°	3962.6	3945.7	3920.1	3905.3	3913.5	3975.8	4102.6	4315.1	4659.5	4774.0	5137.3
12.5°	4377.5	4345.8	4257.9	4141.4	4030.0	3984.5	4058.6	4266.1	4630.9	4764.3	5226.7
15°	5056.0	5042.7	4878.7	4637.5	4367.8	4141.4	4090.8	4247.7	4634.0	4776.0	5333.0
17.5°	5906.8	5887.9	5672.3	5321.2	4880.8	4440.3	4203.7	4263.0	4645.7	4795.9	5435.7
20°	6765.7	6708.0	6475.5	6057.0	5491.4	4846.5	4391.3	4301.8	4661.0	4817.9	5544.0
22.5°	7407.0	7359.5	7150.5	6743.8	6092.3	5317.6	4642.7	4369.3	4710.1	4882.3	5676.8
25°	7970.6	7973.6	7766.2	7373.3	6699.8	5817.4	4966.6	4549.7	4834.8	5013.6	5859.3
27.5°	8667.5	8627.2	8433.0	8043.1	7300.7	6321.7	5358.0	4798.0	5020.8	5201.1	6098.9
30°	9500.9	9472.3	9248.0	8806.0	7967.0	6863.3	5805.1	5086.2	5260.4	5447.4	6412.6
32.5°	10481.5	10468.2	10235.2	9666.5	8736.5	7501.5	6330.4	5467.9	5618.1	5812.3	6863.3
35°	11632.7	11634.2	11359.3	10675.6	9578.6	8244.0	6925.7	5958.9	6053.4	6255.8	7400.3
37.5°	12341.4	12427.2	12324.5	11627.6	10532.1	9074.3	7698.7	6610.4	6549.6	6754.0	7975.7
40°	12493.2	12597.9	12923.4	12569.3	11599.0	9988.9	8384.0	7236.3	7160.7	7410.1	8716.6
42.5°	12280.6	12425.7	13114.5	13363.8	12731.3	11116.1	9305.2	8166.3	8070.2	8405.9	9637.9
45°	12153.9	12262.2	13058.8	13777.7	13713.3	12390.5	10478.4	9333.8	9298.6	9739.0	10701.2
47.5°	11934.7	12032.8	12798.7	13873.8	14290.7	13558.0	11887.7	10762.0	10831.0	11408.4	11900.9
50°	12052.7	12093.1	12508.5	13629.0	14457.8	14413.9	13462.0	12415.5	12652.1	13372.5	13259.6
52.5°	12035.8	12140.6	12474.8	13227.4	14479.8	14942.2	15012.7	14260.1	14758.3	15585.0	14766.5
55°	9730.9	9923.0	12078.3	13126.2	14557.0	15459.8	16393.4	16204.3	17132.2	18095.9	16467.5
57.5°	9291.9	9413.6	10608.2	13338.8	14968.8	16449.1	17928.8	18344.2	19896.6	21015.6	18539.9
60°	9205.6	9355.8	10592.9	13598.9	15804.2	18060.7	20205.7	20934.9	23260.3	24485.6	20943.0
62.5°	8937.3	9099.3	10493.2	13564.7	16990.7	20290.0	23120.3	23689.0	26449.7	27641.3	22953.2
65°	8087.1	8238.8	9681.8	13020.0	17790.9	22669.6	26569.3	26213.7	28967.8	29863.5	23955.2
66°	7504.6	7653.3	9042.1	12378.7	17604.9	23344.6	27791.5	26994.9	29531.4	30233.4	23759.5
67.5°	6439.7	6556.2	7799.9	10942.4	16617.7	23533.6	28819.1	27582.0	29590.1	29838.5	22641.0
70°	4068.8	4102.6	5069.3	7553.6	12579.5	20409.6	27254.5	26124.2	27150.3	26478.3	18980.4
72.5°	1765.4	1753.6	2433.7	3842.5	7121.9	13695.0	22046.7	21555.7	21297.6	19765.2	13286.7
75°	982.1	995.9	1264.1	1783.8	2894.1	6726.9	14422.1	13801.2	11652.6	9943.4	6024.8
77.5°	787.9	806.8	1048.0	1265.7	1299.4	2345.9	6748.9	5491.4	3306.0	2652.9	1673.9
80°	622.9	656.6	914.6	985.7	875.8	966.8	2180.3	1743.4	1308.1	1199.8	867.6
82.5°	492.6	516.6	784.8	746.0	612.7	651.5	1044.4	1017.8	850.8	774.6	501.3
85°	354.6	398.0	644.8	562.1	401.6	438.9	693.4	664.8	487.5	398.0	221.2
87.5°	145.1	189.1	455.8	373.0	224.3	204.4	345.9	325.5	231.0	168.6	109.9
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7	5089.7
2.5°	5084.6	5125.0	5177.6	5209.8	5226.7	5238.4	5256.8	5255.3	5260.4	5261.9	5268.6
5°	5118.4	5185.8	5261.9	5282.4	5282.4	5263.5	5245.1	5214.4	5202.7	5199.6	5202.7
7.5°	5206.2	5280.3	5346.3	5322.7	5272.2	5197.6	5101.5	5017.2	4971.7	4956.4	4953.3
10°	5317.6	5407.1	5434.1	5344.7	5196.0	5017.2	4826.6	4688.1	4608.9	4587.0	4580.3
12.5°	5452.5	5536.8	5500.1	5311.0	5035.6	4747.4	4483.7	4263.0	4097.4	4045.3	4041.8
15°	5601.2	5667.1	5536.8	5206.2	4795.9	4370.8	3901.7	3520.6	3314.6	3248.7	3243.6
17.5°	5739.7	5773.4	5514.9	5023.8	4443.4	3755.1	3132.2	2838.4	2767.9	2784.8	2787.8
20°	5857.7	5857.7	5440.8	4762.2	3888.5	2943.2	2549.7	2545.1	2595.7	2646.3	2656.5
22.5°	5987.5	5909.9	5311.0	4392.8	3101.6	2408.2	2351.0	2398.0	2455.2	2510.9	2519.6
25°	6148.0	5952.3	5130.1	3832.8	2438.3	2186.9	2208.9	2247.7	2276.4	2312.1	2317.2
27.5°	6326.8	6005.9	4892.5	3061.2	2116.4	2049.0	2065.8	2079.1	2075.6	2089.3	2092.4
30°	6540.9	6068.8	4566.5	2392.9	1983.1	1930.4	1900.3	1888.5	1888.5	1910.5	1918.7
32.5°	6828.1	6161.2	4099.0	2050.5	1918.7	1846.1	1748.5	1704.6	1721.4	1795.5	1812.4
35°	7143.8	6260.9	3466.4	1934.0	1905.4	1807.3	1655.5	1574.3	1576.3	1645.3	1667.3
37.5°	7487.7	6387.6	2772.5	1912.0	1935.5	1809.3	1606.5	1495.1	1449.6	1449.6	1458.3
40°	7928.2	6517.4	2244.7	1927.4	1999.9	1829.3	1581.4	1432.8	1304.5	1308.1	1314.7
42.5°	8502.0	6628.8	1961.1	1959.0	2077.6	1856.3	1579.4	1350.0	1238.6	1314.7	1383.7
45°	9140.2	6684.5	1835.9	1988.2	2139.9	1873.2	1552.8	1336.7	1247.3	1473.1	1604.9
47.5°	9873.9	6652.3	1766.9	1997.9	2155.3	1873.2	1522.2	1368.9	1306.0	1706.1	1859.9
50°	10679.2	6559.8	1699.5	1978.0	2150.2	1869.6	1550.8	1400.6	1328.0	1746.5	1852.8
52.5°	11626.0	6482.1	1628.5	1934.0	2114.4	1851.2	1584.5	1387.3	1259.0	1588.1	1662.2
55°	12705.7	6504.1	1549.3	1871.7	2058.7	1816.0	1572.8	1333.1	1186.5	1399.0	1444.5
57.5°	14086.4	6765.7	1454.7	1792.5	1983.1	1756.7	1530.9	1308.1	1164.5	1269.2	1296.3
60°	15626.9	7221.0	1336.7	1712.8	1888.5	1662.2	1498.7	1319.8	1174.7	1259.0	1272.3
62.5°	16757.7	7486.2	1235.5	1596.3	1760.3	1557.4	1458.3	1334.6	1201.8	1294.3	1291.2
65°	17064.8	7050.8	1108.8	1426.1	1586.6	1448.1	1407.2	1351.5	1213.5	1322.9	1308.1
66°	16634.5	6581.8	1053.1	1346.9	1498.7	1393.9	1382.2	1350.0	1208.4	1326.5	1300.9
67.5°	15590.1	5619.6	957.0	1230.4	1358.7	1313.2	1341.8	1334.6	1194.6	1322.9	1287.6
70°	12714.4	3834.3	818.6	1024.5	1130.8	1155.8	1264.1	1281.0	1150.7	1264.1	1186.5
72.5°	8883.7	2335.6	724.0	795.1	914.6	985.7	1157.9	1206.4	1091.9	1103.7	1029.6
75°	4293.1	1240.6	656.6	616.2	710.2	823.7	1029.6	1105.2	998.9	923.3	896.2
77.5°	1338.2	757.8	557.0	496.1	557.0	664.8	860.5	968.8	889.6	773.1	762.9
80°	718.9	557.0	428.7	398.0	440.5	521.7	676.5	808.4	764.4	693.4	619.3
82.5°	474.2	361.3	317.3	308.6	335.7	398.0	502.8	669.9	669.9	594.3	432.3
85°	244.8	221.2	217.7	217.7	234.5	265.2	342.3	516.6	550.3	313.7	260.1
87.5°	121.6	126.7	118.0	123.1	131.8	129.8	163.5	260.1	310.7	190.6	158.4
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)