

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: P299867

Luminaire Tested: **GLNA-AF-09-LED-E1-SL3-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299867  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)  
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-SL3-7050  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V  
Square Medium OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 53034.8 lumens  
Efficiency: N/A  
Efficacy: 105.9 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B4 - U0 - G5

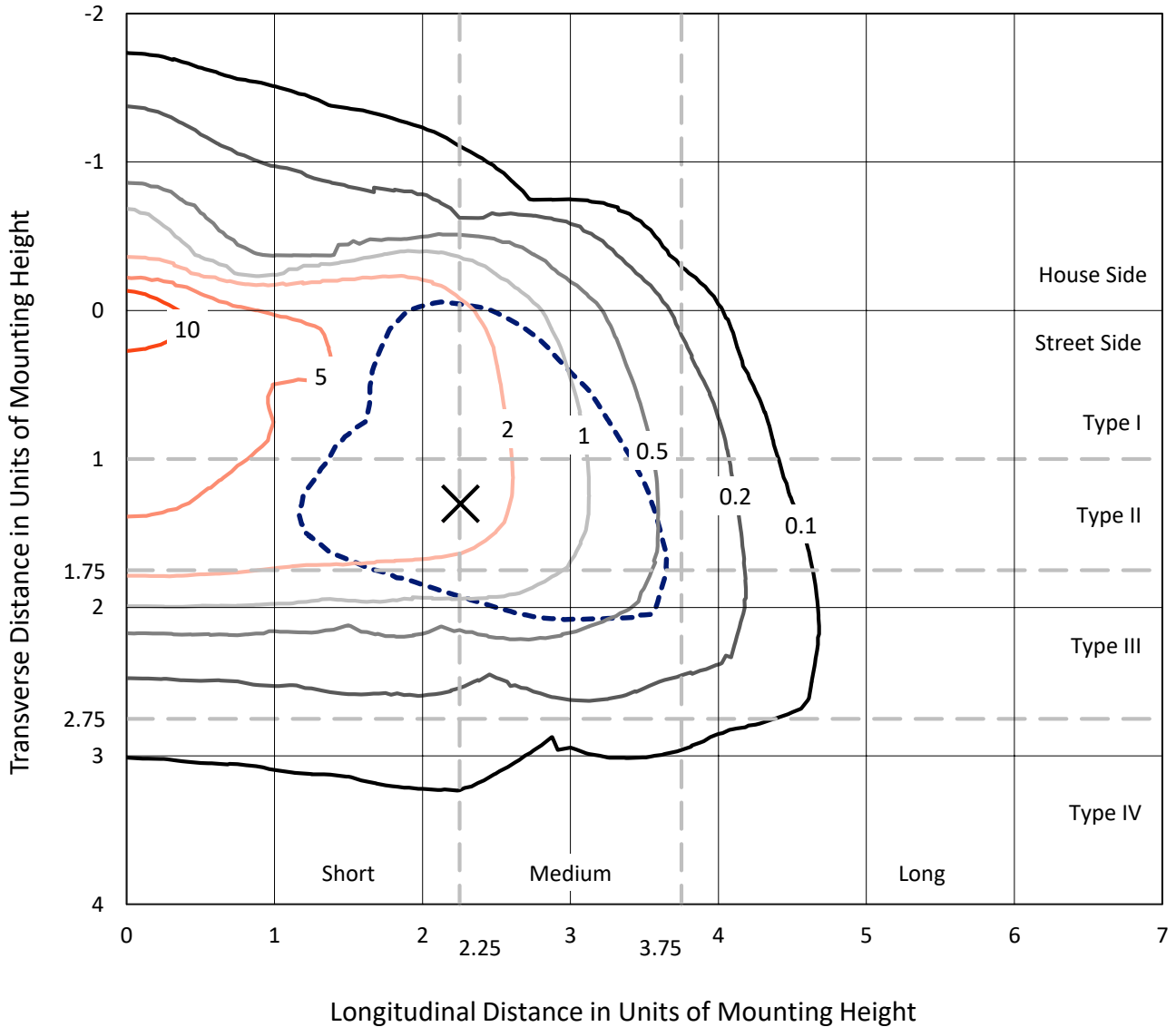
Input Watts (W): 501  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P299867  
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### Iso-Footcandle Lines of Horizontal Illumination

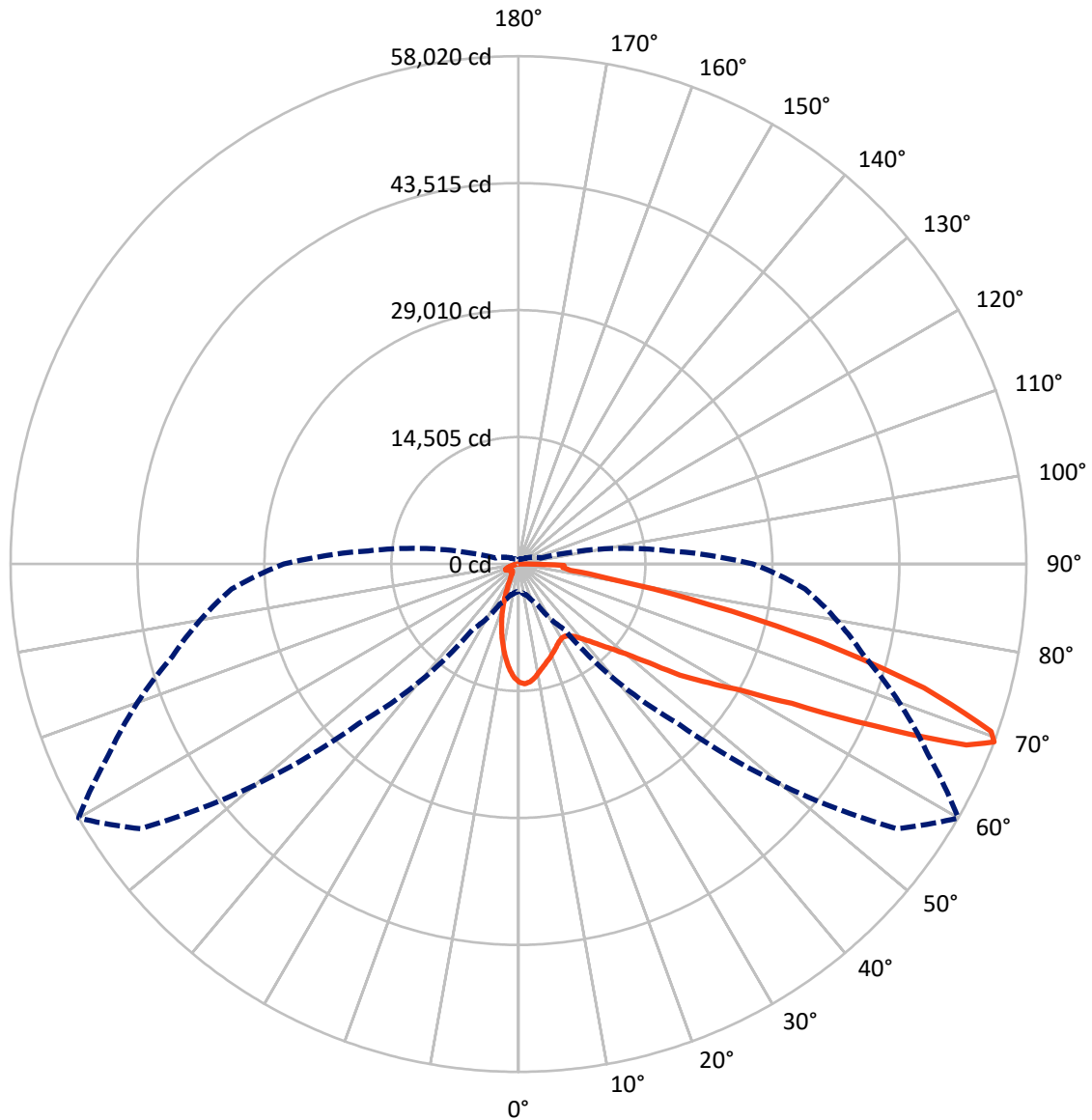
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 15 fc  
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P299867  
CATALOG NUMBER: GLNA-AF-09-LED-E1-SL3-7050

### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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CATALOG NUMBER: GLNA-AF-09-LED-E1-SL3-7050

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7545.2	0.0	7545.2
	% Fixture	14.2	0.0	14.2
<b>Street Side</b>	Lumens	45489.6	0.0	45489.6
	% Fixture	85.8	0.0	85.8
<b>Total</b>	Lumens	53034.8	0.0	53034.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1142.7	2.2
10°-20°	2434.5	4.6
20°-30°	3102.0	5.8
30°-40°	4264.5	8.0
40°-50°	6919.5	13.0
50°-60°	11097.2	20.9
60°-70°	14769.5	27.8
70°-80°	7974.4	15.0
80°-90°	1330.6	2.5
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°	53034.8	100.0
0°-180°	53034.8	100.0



REPORT NUMBER: P299867

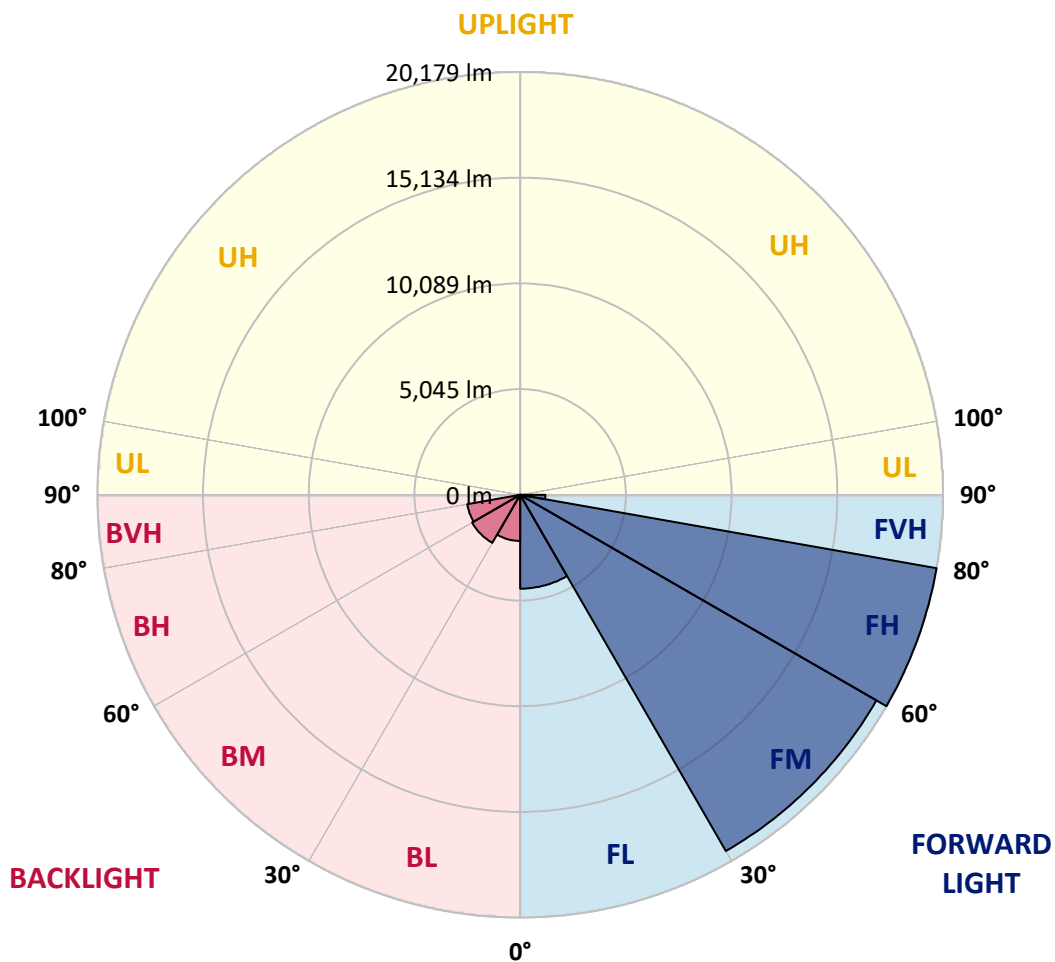
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4478.0	8.4			
FM	(30°-60°)	19630.4	37.0			
FH	(60°-80°)	20178.7	38.0			G5
FVH	(80°-90°)	1202.4	2.3			G5
BL	(0°-30°)	2201.2	4.2	B3/2500		
BM	(30°-60°)	2650.8	5.0	B3/5000		
BH	(60°-80°)	2565.1	4.8	B4/5000		G4/5000
BVH	(80°-90°)	128.1	0.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G5**

Type III Medium





REPORT NUMBER: P299867

CATALOG NUMBER: GLNA-AF-09-LED-E1-SL3-7050

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1
2.5°	13790.8	13821.5	13808.7	13801.0	13824.1	13788.2	13713.9	13690.9	13655.0	13570.4	13427.0
5°	13273.3	13365.5	13360.4	13429.5	13544.8	13575.6	13542.3	13547.4	13480.8	13375.7	13137.5
7.5°	12379.2	12417.6	12438.1	12589.2	12799.3	12968.4	13111.9	13158.0	13127.2	13037.6	12730.1
10°	11456.9	11487.6	11536.3	11713.1	11979.5	12212.6	12484.2	12640.5	12707.1	12691.7	12348.4
12.5°	10665.2	10696.0	10760.0	10959.9	11277.5	11564.5	11959.0	12153.7	12312.5	12407.3	12038.4
15°	9955.6	10022.2	10083.7	10314.3	10670.4	11047.0	11492.7	11738.7	11984.6	12197.3	11764.3
17.5°	9402.2	9468.8	9504.7	9714.8	10093.9	10555.1	11077.7	11367.2	11674.6	12023.0	11492.7
20°	9082.0	9112.7	9097.3	9215.2	9555.9	10045.3	10665.2	11000.8	11372.3	11859.1	11221.2
22.5°	8992.3	8994.9	8938.5	8925.7	9146.0	9558.5	10224.6	10631.9	11087.9	11751.5	10988.0
25°	9210.1	9202.4	9048.7	8923.1	8946.2	9187.0	9799.3	10273.3	10849.7	11728.4	10808.7
27.5°	9694.3	9717.3	9489.3	9253.6	9020.5	9012.8	9476.5	9976.1	10655.0	11833.5	10731.8
30°	10373.2	10411.6	10168.2	9868.5	9430.4	9069.2	9351.0	9799.3	10534.6	12051.2	10719.0
32.5°	11116.1	11157.1	10972.7	10657.5	10083.7	9417.6	9438.1	9814.7	10529.5	12356.1	10806.1
35°	11907.8	11953.9	11859.1	11592.6	10954.7	10060.6	9771.1	10063.2	10696.0	12822.4	11039.3
37.5°	12791.6	12863.4	12889.0	12635.3	11953.9	10908.6	10316.8	10534.6	11072.6	13470.5	11467.1
40°	14064.9	14164.8	14157.1	13793.3	13099.0	12053.8	11159.7	11216.0	11659.3	14336.5	12151.1
42.5°	16503.8	16524.3	15886.4	15094.8	14359.5	13257.9	12153.7	12107.6	12468.8	15433.0	13158.0
45°	19606.3	19521.8	18102.5	16573.0	15676.3	14641.3	13447.5	13222.0	13496.1	16770.3	14418.4
47.5°	22181.0	21986.3	20193.0	18082.0	17070.0	16145.2	14966.7	14572.1	14723.3	18286.9	16047.8
50°	23075.1	22929.1	21443.2	19337.3	18389.4	17979.5	16836.9	16278.4	16319.4	20095.6	17956.4
52.5°	22883.0	22862.5	21871.0	20164.8	19624.2	19906.0	19485.9	18730.1	18330.5	22104.2	20016.2
55°	22429.5	22473.1	22114.4	21128.1	21035.8	21766.0	22947.0	22388.5	21146.0	24130.6	22145.2
57.5°	20854.0	20966.7	21755.7	22339.9	23308.3	24394.5	25734.4	25575.6	24176.8	26321.1	24676.3
60°	16801.0	17062.3	19178.5	22104.2	25647.3	29044.4	29643.9	29275.0	27302.3	29039.3	28019.6
62.5°	11772.0	12043.5	14559.3	19137.5	25263.0	34296.3	36632.8	35041.8	31790.7	33043.5	32346.7
65°	6302.3	6433.0	8354.4	13278.4	21327.9	35380.0	46847.1	44426.1	38897.5	37980.3	36048.6
67.5°	3476.5	3548.2	4283.5	6704.5	13660.1	31155.4	53354.4	55183.6	47779.6	41267.3	35374.9
69°	3143.5	3210.1	3691.7	5077.7	9140.9	25760.0	52719.0	58019.6	51673.7	40941.9	32884.7
70°	3074.3	3135.8	3568.7	4680.6	7398.8	21233.1	50590.1	57294.6	52601.2	39776.2	30712.2
72.5°	2766.9	2833.5	3253.6	4204.1	6322.8	10585.8	40073.4	48443.2	47756.6	34488.4	23295.5
75°	2579.8	2641.3	3353.5	4117.0	6053.8	6699.4	26418.4	35702.8	35105.9	24125.5	12561.0
77.5°	1104.2	1099.1	1555.1	3484.2	6143.5	6486.8	14195.5	22304.0	20349.3	10311.7	3607.2
80°	737.8	725.0	737.8	1024.8	5633.6	6522.6	7437.2	11321.1	8551.7	2628.5	1778.0
82.5°	635.4	625.1	648.2	625.1	1980.4	7444.9	6322.8	6020.5	4065.8	1493.6	881.3
85°	427.8	409.9	558.5	561.1	935.1	6614.9	7122.1	5085.4	3289.5	886.4	435.5
87.5°	205.0	199.8	325.4	397.1	548.2	2687.4	7990.6	5210.9	3317.7	453.5	207.5
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°	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1	13514.1
2.5°	13383.4	13278.4	13175.9	13052.9	12924.8	12781.4	12709.6	12637.9	12620.0	12599.5	12527.7
5°	13014.5	12865.9	12609.7	12327.9	12030.7	11741.2	11520.9	11382.6	11277.5	11223.7	11128.9
7.5°	12538.0	12320.2	11871.9	11385.1	10885.6	10429.5	10035.0	9786.5	9550.8	9440.6	9315.1
10°	12084.5	11759.2	11062.3	10345.0	9627.7	8938.5	8290.3	7831.8	7424.4	7196.4	7035.0
12.5°	11695.1	11249.3	10283.5	9312.5	8328.8	7347.6	6376.6	5613.1	4975.2	4639.6	4468.0
15°	11316.0	10778.0	9543.1	8310.8	7047.8	5713.1	4437.2	3571.3	3043.5	2833.5	2761.7
17.5°	10972.7	10283.5	8800.2	7301.4	5725.9	4111.9	2982.1	2505.5	2303.2	2234.0	2210.9
20°	10601.2	9783.9	8029.0	6245.9	4347.6	2874.5	2328.8	2118.7	2036.7	2016.2	2006.0
22.5°	10242.5	9292.1	7291.2	5116.1	3123.0	2218.6	2000.9	1913.7	1900.9	1918.9	1918.9
25°	9937.7	8851.4	6494.4	3935.1	2292.9	1867.6	1790.8	1770.3	1819.0	1885.6	1898.4
27.5°	9709.6	8490.2	5646.5	2905.2	1826.6	1624.3	1621.7	1655.0	1775.4	1903.5	1929.1
30°	9553.4	8146.9	4739.5	2095.6	1532.0	1429.5	1470.5	1542.3	1719.0	1900.9	1949.6
32.5°	9473.9	7893.2	3794.2	1621.7	1311.7	1255.3	1324.5	1411.6	1585.8	1754.9	1819.0
35°	9535.4	7706.2	2902.6	1352.7	1158.0	1114.4	1186.2	1270.7	1373.2	1444.9	1493.6
37.5°	9766.0	7631.9	2190.4	1211.8	1052.9	1012.0	1068.3	1117.0	1158.0	1178.5	1201.5
40°	10263.0	7711.4	1754.9	1140.1	994.0	942.8	965.8	983.8	1009.4	1029.9	1040.1
42.5°	10995.7	7949.6	1573.0	1111.9	963.3	889.0	883.9	891.5	924.8	963.3	971.0
45°	12020.5	8369.8	1560.2	1129.8	947.9	845.4	822.4	832.6	883.9	942.8	953.0
47.5°	13329.6	9010.2	1662.7	1183.6	960.7	822.4	783.9	796.8	860.8	940.2	953.0
50°	14915.4	9904.3	1834.3	1263.0	1017.1	827.5	771.1	778.8	845.4	932.5	945.3
52.5°	16788.2	11172.5	2021.3	1339.9	1076.0	860.8	781.4	763.4	824.9	901.8	917.2
55°	18871.0	12799.3	2213.5	1409.1	1106.7	901.8	801.9	743.0	786.5	850.6	863.4
57.5°	21427.8	15074.3	2546.5	1475.7	1127.2	930.0	822.4	722.5	737.8	783.9	794.2
60°	24889.0	18292.0	3133.2	1585.8	1173.4	940.2	819.8	704.5	689.2	714.8	719.9
62.5°	29036.7	21786.5	3622.5	1724.2	1250.2	947.9	804.4	691.7	648.2	648.2	653.3
65°	31498.7	22721.6	3351.0	1839.5	1314.3	940.2	786.5	678.9	617.4	589.2	591.8
67.5°	29410.7	19982.9	2871.9	1862.5	1311.7	904.4	758.3	655.8	586.7	543.1	540.6
69°	26795.0	17241.7	2656.7	1801.0	1250.2	858.2	722.5	630.2	563.6	517.5	514.9
70°	24686.6	15568.7	2515.8	1734.4	1183.6	824.9	694.3	607.2	545.7	502.1	497.0
72.5°	17948.7	10201.5	2149.4	1491.0	976.1	691.7	599.5	532.9	486.8	461.1	456.0
75°	8969.2	4865.1	1744.7	1209.2	748.1	553.4	491.9	445.8	422.7	417.6	415.0
77.5°	2946.2	2228.9	1247.7	901.8	555.9	433.0	397.1	363.8	358.7	374.0	368.9
80°	1619.1	1296.3	791.6	596.9	379.2	317.7	312.6	294.6	302.3	327.9	322.8
82.5°	824.9	673.8	489.3	358.7	256.2	228.0	248.5	238.3	248.5	271.6	269.0
85°	407.3	368.9	310.0	217.8	169.1	146.0	176.8	184.5	189.6	207.5	207.5
87.5°	235.7	217.8	164.0	102.5	84.5	76.9	102.5	99.9	117.8	128.1	125.5
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)