

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: P299143

Luminaire Tested: **GLNA-AF-09-LED-E1-SL2-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299143
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24286)
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-SL2-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Narrow OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 45136.6 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G5

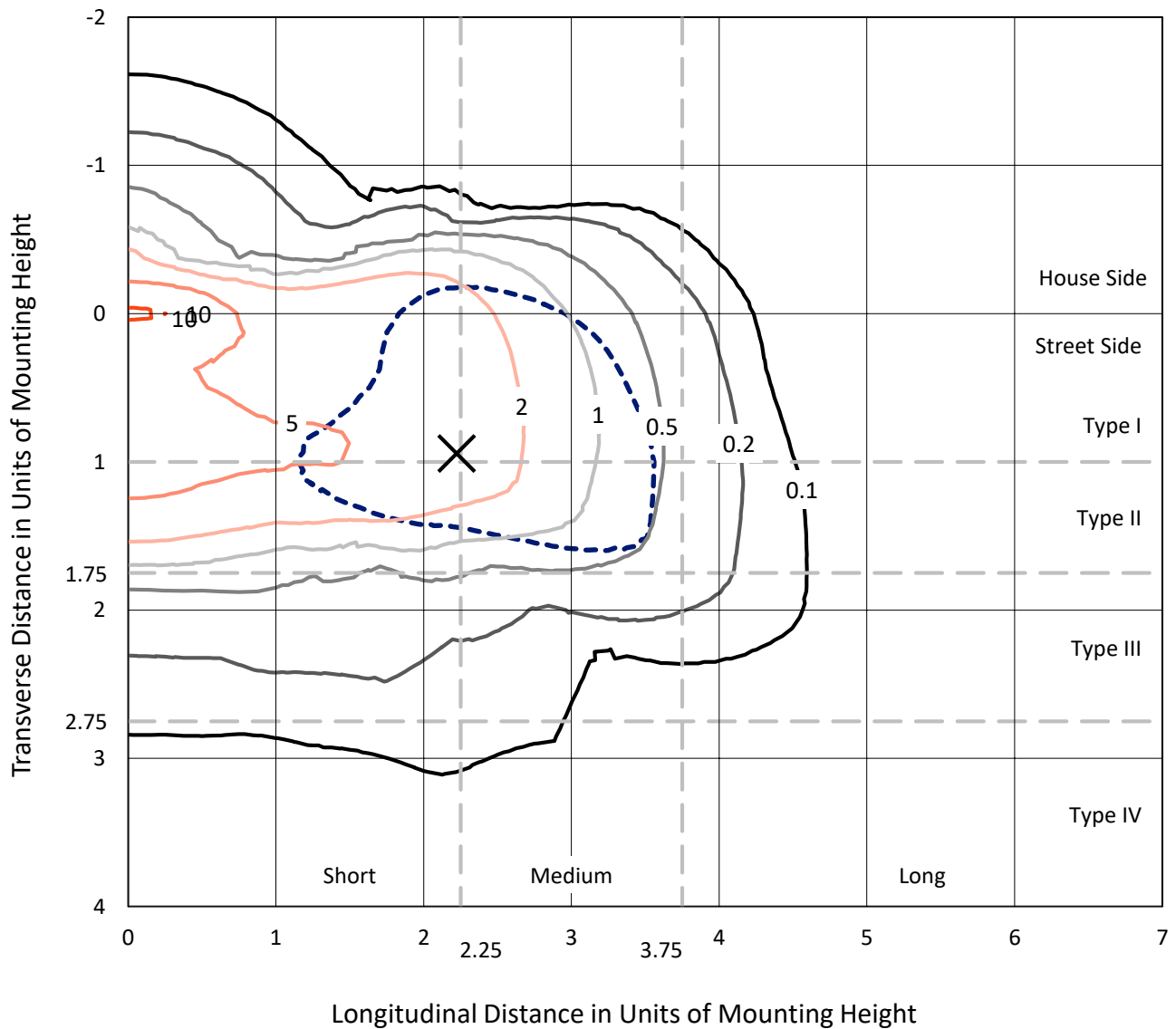
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

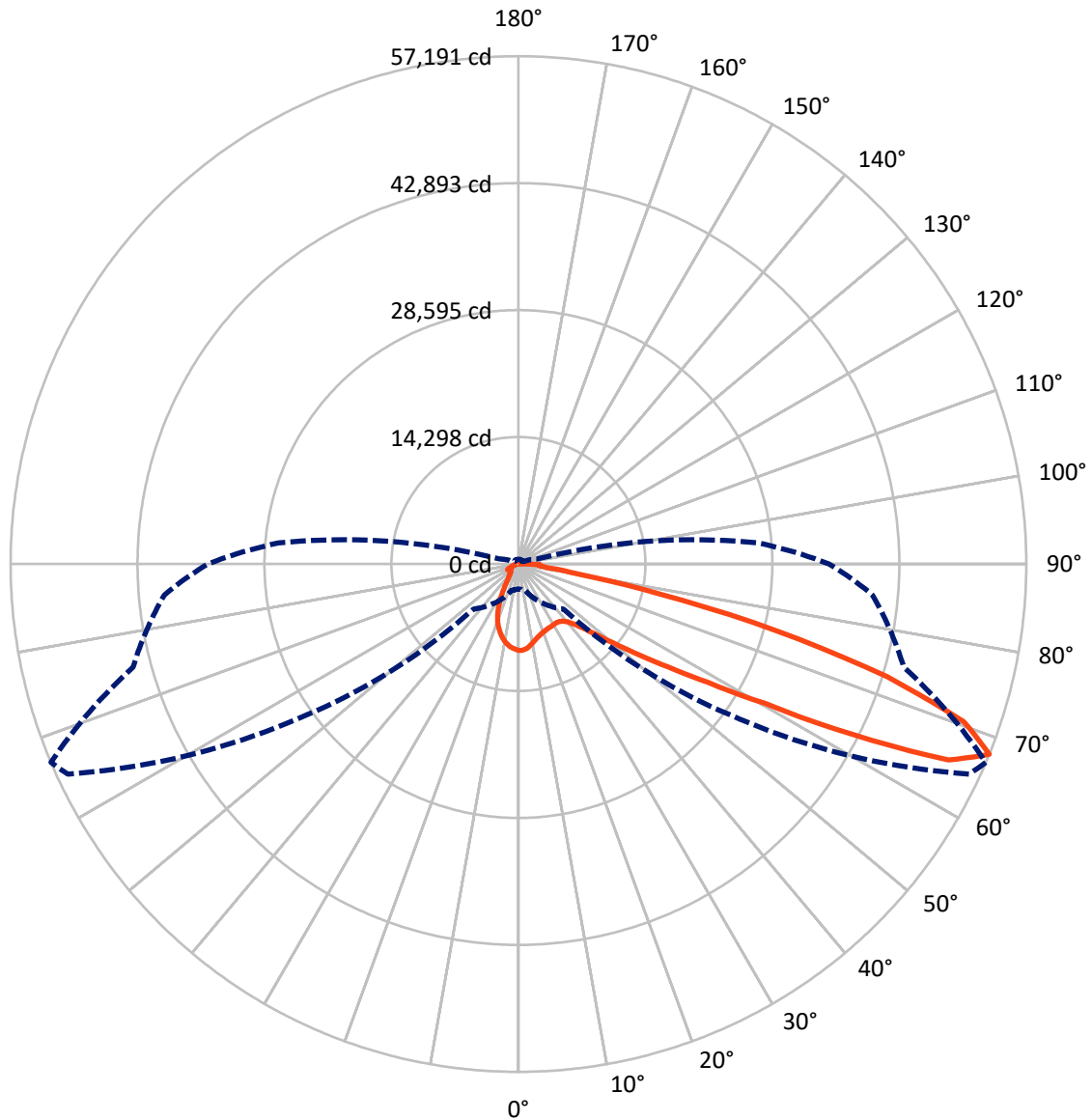
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.8 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7478.6	0.0	7478.6
	% Fixture	16.6	0.0	16.6
Street Side	Lumens	37658.0	0.0	37658.0
	% Fixture	83.4	0.0	83.4
Total	Lumens	45136.6	0.0	45136.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	830.6	1.8
10°-20°	1921.9	4.3
20°-30°	2605.2	5.8
30°-40°	3703.5	8.2
40°-50°	6196.2	13.7
50°-60°	9802.3	21.7
60°-70°	12487.1	27.7
70°-80°	6540.7	14.5
80°-90°	1049.0	2.3
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°	45136.6	100.0
0°-180°	45136.6	100.0



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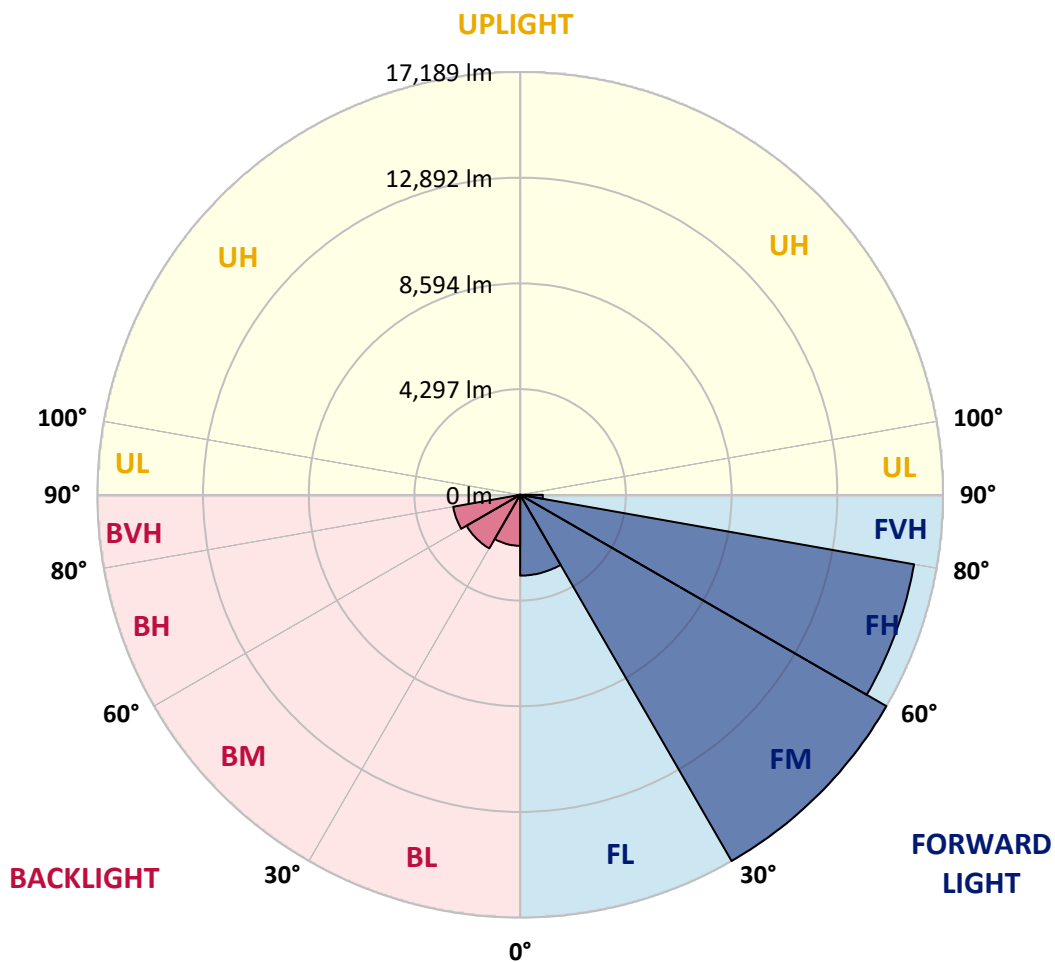
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3284.8	7.3			
FM	(30°-60°)	17188.9	38.1			
FH	(60°-80°)	16261.8	36.0			G5
FVH	(80°-90°)	922.4	2.0			G5
BL	(0°-30°)	2072.9	4.6	B3/2500		
BM	(30°-60°)	2513.0	5.6	B3/5000		
BH	(60°-80°)	2766.1	6.1	B4/5000		G4/5000
BVH	(80°-90°)	126.6	0.3			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 II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9
2.5°	9335.2	9350.8	9399.7	9430.9	9571.1	9631.2	9673.5	9715.8	9722.5	9742.5	9722.5
5°	8355.8	8389.2	8480.5	8582.9	8854.4	9068.1	9292.9	9526.6	9568.9	9720.3	9762.6
7.5°	7596.8	7587.9	7663.6	7786.0	8064.2	8360.3	8754.3	9219.5	9310.7	9651.3	9816.0
10°	7042.6	7035.9	7116.0	7242.9	7507.8	7788.2	8233.4	8870.0	8999.1	9542.2	9867.2
12.5°	6633.0	6635.2	6715.4	6855.6	7124.9	7407.6	7859.5	8531.7	8696.4	9415.3	9920.6
15°	6361.5	6379.3	6443.8	6593.0	6855.6	7138.3	7581.2	8277.9	8462.7	9315.2	9980.7
17.5°	6270.2	6299.1	6321.4	6430.5	6655.3	6938.0	7372.0	8091.0	8286.8	9246.2	10034.1
20°	6354.8	6388.2	6345.9	6383.7	6526.2	6775.5	7207.3	7944.0	8144.4	9168.3	10040.8
22.5°	6717.6	6748.8	6624.1	6515.1	6506.1	6657.5	7071.5	7828.3	8035.3	9110.4	10043.0
25°	7356.4	7376.5	7167.2	6913.5	6666.4	6615.2	6975.8	7748.2	7968.5	9059.2	10000.7
27.5°	8139.9	8155.5	7915.1	7541.2	7044.8	6715.4	6942.4	7701.4	7930.7	9014.7	9929.5
30°	9092.6	9166.0	8843.3	8371.4	7648.0	7011.4	7009.2	7676.9	7888.4	8939.0	9789.3
32.5°	10067.5	10098.7	9876.1	9397.5	8460.4	7532.3	7196.2	7694.7	7877.3	8847.7	9611.2
35°	11055.8	11095.8	10951.2	10566.1	9571.1	8295.7	7561.2	7799.4	7946.3	8816.6	9486.6
37.5°	12335.6	12389.1	12188.7	11743.6	10922.2	9330.7	8168.9	8062.0	8157.7	8905.6	9448.7
40°	14358.9	14334.4	13749.1	13085.7	12400.2	10655.1	9036.9	8507.2	8562.8	9192.7	9564.5
42.5°	16713.9	16653.8	15645.5	14603.8	14025.1	12257.7	10185.5	9279.6	9268.4	9758.1	9971.8
45°	18592.5	18543.5	17635.4	16351.1	15888.1	14082.9	11670.1	10430.3	10348.0	10655.1	10724.1
47.5°	19609.7	19611.9	19088.9	18040.5	18029.4	16402.3	13577.7	12095.2	11952.8	12097.5	12024.0
50°	19253.6	19300.3	19244.7	18910.8	19983.6	19442.8	16068.4	14416.8	14129.7	14272.1	13989.4
52.5°	17530.8	17590.9	17920.3	18432.2	20805.0	23117.6	19727.7	17301.5	16967.6	16916.4	16602.6
55°	14476.9	14550.4	15222.6	16613.7	20121.6	25586.1	25501.5	20978.6	20446.6	19963.6	19830.1
57.5°	9978.5	10100.9	11182.7	13248.2	17911.4	26331.8	32377.2	26220.5	25138.7	23451.5	23482.7
60°	5624.7	5767.2	7042.6	8919.0	13450.8	25521.5	37607.9	34160.1	31876.3	27535.9	27767.4
62.5°	3576.9	3730.5	4698.8	6196.8	8070.9	21158.9	39751.4	45198.0	42297.8	32570.8	32797.8
65°	2895.8	2962.6	3418.9	5115.0	5860.7	12747.4	38124.3	54290.6	53208.8	38961.2	37901.7
67.5°	2826.8	2849.1	3085.0	4293.7	5620.3	7165.0	30409.5	55991.2	57190.9	44928.7	40027.4
70°	2793.4	2871.3	3476.8	4097.8	5382.1	6043.2	18274.2	51330.2	53224.4	46489.0	37198.3
72.5°	1355.5	1351.1	1749.5	3706.0	6063.2	6268.0	9388.6	41532.1	43432.9	40276.7	30567.5
75°	1092.9	999.4	954.9	1357.8	5829.5	6472.8	5983.1	28577.6	29953.2	27004.0	18790.6
77.5°	1037.2	926.0	848.0	850.3	2464.0	6864.5	5068.3	15816.9	16217.5	12197.6	5148.4
80°	859.2	756.8	701.1	790.2	1193.1	6537.3	5480.0	7158.3	6568.5	2996.0	1713.9
82.5°	596.5	543.1	527.5	663.3	954.9	4658.7	6372.6	3846.3	3225.3	1500.2	1057.3
85°	380.6	325.0	360.6	483.0	743.4	2150.2	6564.0	2998.2	2383.9	952.7	596.5
87.5°	175.8	142.5	178.1	267.1	485.2	741.2	6245.7	3367.7	2455.1	503.0	376.2
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°	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9	9735.9
2.5°	9740.3	9698.0	9664.6	9602.3	9533.3	9466.5	9406.4	9330.7	9308.5	9288.5	9319.6
5°	9771.5	9729.2	9606.8	9415.3	9203.9	9005.8	8807.7	8638.5	8533.9	8476.0	8509.4
7.5°	9818.2	9758.1	9504.4	9152.7	8772.1	8424.8	8066.5	7779.3	7567.9	7467.7	7496.6
10°	9860.5	9744.8	9330.7	8803.2	8246.8	7730.4	7165.0	6697.6	6350.3	6167.8	6212.3
12.5°	9878.3	9693.6	9088.1	8367.0	7603.5	6846.7	6014.2	5315.3	4816.7	4634.2	4596.4
15°	9896.1	9635.7	8821.0	7870.6	6826.7	5756.0	4589.7	3752.8	3338.8	3247.5	3227.5
17.5°	9900.6	9535.5	8518.3	7331.9	5916.3	4458.4	3138.4	2606.5	2608.7	2755.6	2773.4
20°	9853.8	9386.4	8151.0	6662.0	4825.6	3082.8	2154.6	2063.4	2399.5	2766.7	2811.2
22.5°	9747.0	9188.3	7734.8	5880.7	3576.9	2030.0	1667.2	1767.3	2201.4	2651.0	2702.2
25°	9611.2	8947.9	7242.9	4974.8	2368.3	1451.3	1397.8	1520.3	1814.1	2114.6	2143.5
27.5°	9426.5	8663.0	6690.9	3937.5	1538.1	1195.3	1230.9	1313.2	1433.4	1567.0	1580.4
30°	9188.3	8322.4	6101.0	2871.3	1161.9	1075.1	1126.3	1170.8	1222.0	1297.7	1304.3
32.5°	8914.5	7995.2	5495.6	1983.2	1030.6	1012.8	1052.8	1075.1	1115.1	1161.9	1166.3
35°	8685.3	7683.6	4867.9	1402.3	974.9	966.0	992.7	1001.6	1039.5	1090.7	1095.1
37.5°	8553.9	7429.9	4220.2	1130.7	937.1	923.7	939.3	939.3	992.7	1068.4	1079.5
40°	8562.8	7289.6	3572.5	1021.7	905.9	888.1	890.3	890.3	959.3	1041.7	1048.4
42.5°	8805.4	7325.3	2998.2	979.4	881.4	861.4	850.3	857.0	914.8	968.2	972.7
45°	9375.3	7576.8	2459.6	952.7	857.0	850.3	825.8	823.6	845.8	870.3	870.3
47.5°	10310.1	8073.1	2094.5	934.9	836.9	834.7	805.8	776.8	774.6	783.5	783.5
50°	11830.4	8927.9	1849.7	914.8	823.6	805.8	772.4	727.9	712.3	718.9	718.9
52.5°	14109.6	10452.6	1756.2	888.1	794.6	765.7	727.9	683.3	670.0	672.2	672.2
55°	17098.9	12794.2	1742.8	857.0	763.5	716.7	685.6	652.2	636.6	641.0	641.0
57.5°	20751.6	16032.8	1981.0	808.0	721.2	667.8	649.9	627.7	616.6	623.2	621.0
60°	25192.1	20270.8	2938.1	756.8	678.9	623.2	623.2	605.4	596.5	603.2	601.0
62.5°	30307.1	25138.7	4131.2	718.9	634.4	587.6	596.5	587.6	578.7	583.2	580.9
65°	34843.4	28310.5	3868.5	690.0	589.8	554.2	569.8	565.4	558.7	563.1	560.9
67.5°	34974.7	27135.3	2172.4	658.9	547.6	520.8	543.1	540.9	536.4	540.9	538.7
70°	31213.0	22912.9	1224.2	601.0	503.0	480.8	511.9	509.7	505.3	514.2	511.9
72.5°	25007.4	16627.1	894.8	529.8	458.5	438.5	474.1	471.9	471.9	485.2	478.6
75°	14390.1	8556.2	714.5	454.1	411.8	396.2	427.4	429.6	434.0	451.8	438.5
77.5°	4102.2	2666.6	583.2	385.1	353.9	347.2	378.4	382.8	385.1	405.1	387.3
80°	1524.7	1228.7	480.8	322.7	289.4	291.6	320.5	327.2	329.4	349.5	327.2
82.5°	972.7	810.2	389.5	249.3	227.0	224.8	260.4	269.3	269.3	271.6	258.2
85°	567.6	485.2	293.8	180.3	160.3	153.6	193.6	209.2	202.6	198.1	189.2
87.5°	380.6	333.9	180.3	100.2	86.8	82.4	113.5	124.6	120.2	113.5	106.8
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)