

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: P298903

Luminaire Tested: **GLNA-AF-09-LED-E1-T2-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298903
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24139)
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-T2-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 45215.6 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G5

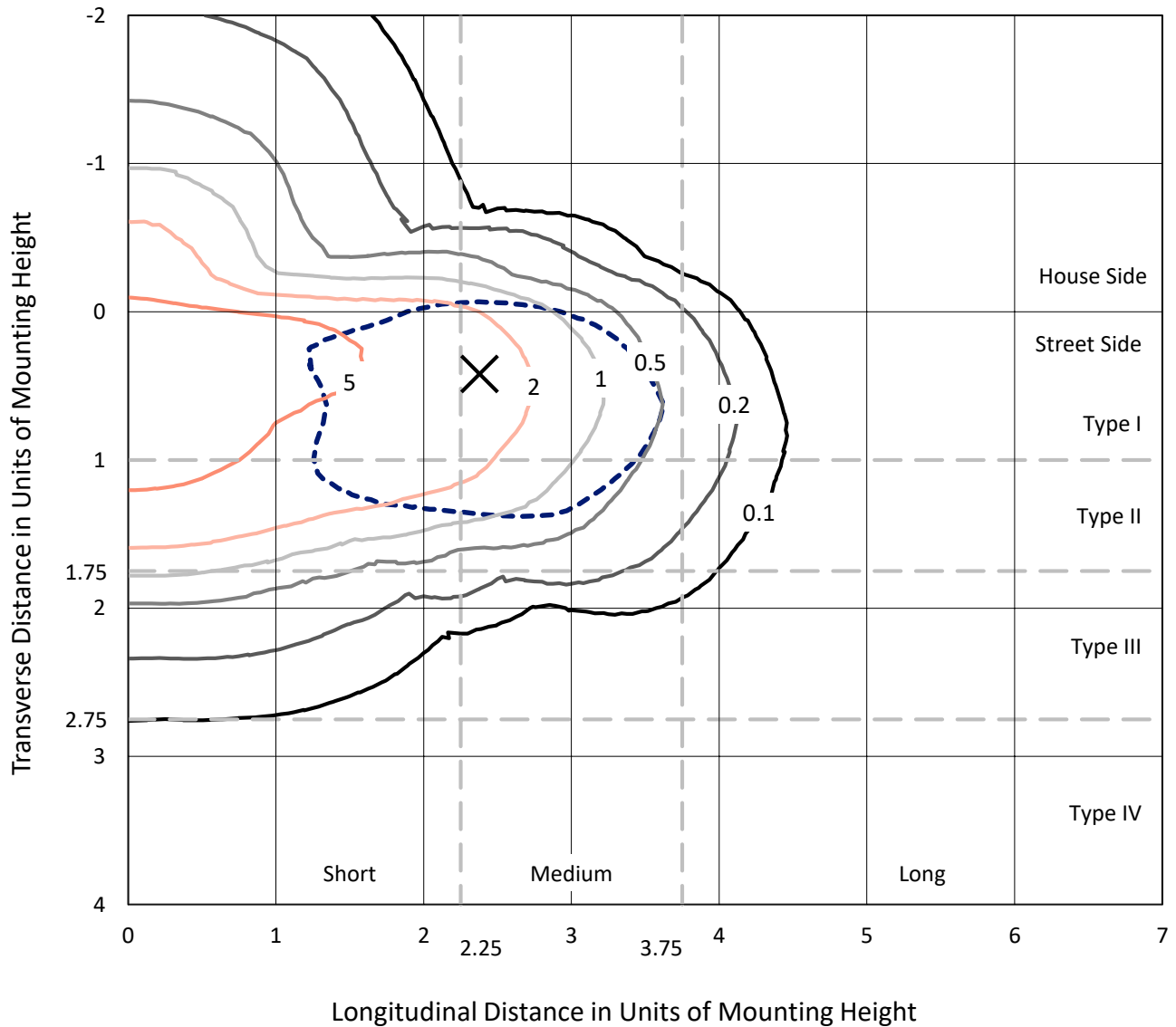
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

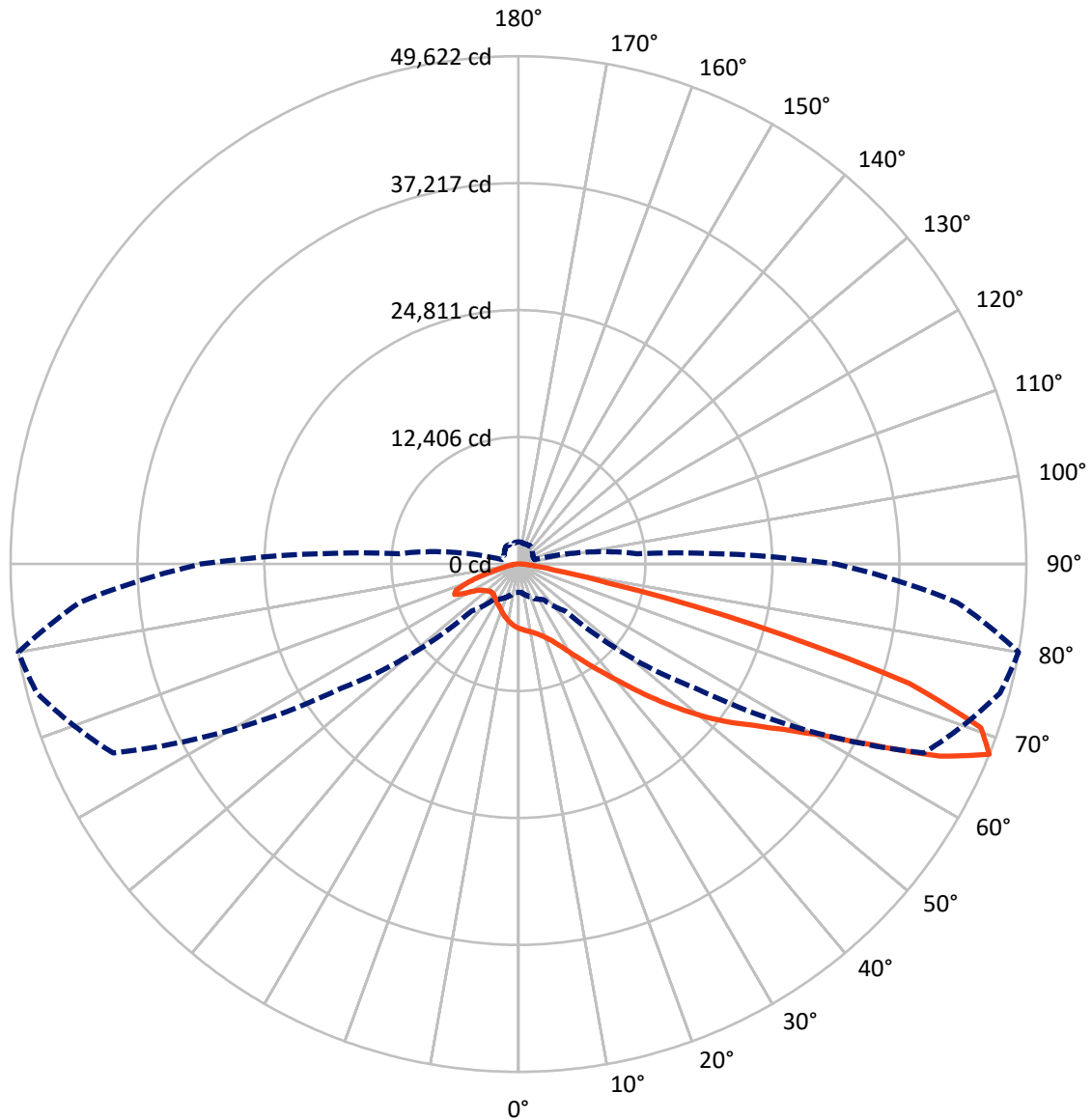
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8327.0	0.0	8327.0
	% Fixture	18.4	0.0	18.4
Street Side	Lumens	36888.6	0.0	36888.6
	% Fixture	81.6	0.0	81.6
Total	Lumens	45215.6	0.0	45215.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	579.5	1.3
10°-20°	1669.3	3.7
20°-30°	2763.0	6.1
30°-40°	4519.6	10.0
40°-50°	7297.3	16.1
50°-60°	10535.1	23.3
60°-70°	11626.2	25.7
70°-80°	5358.9	11.9
80°-90°	866.8	1.9
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°	45215.6	100.0
0°-180°	45215.6	100.0



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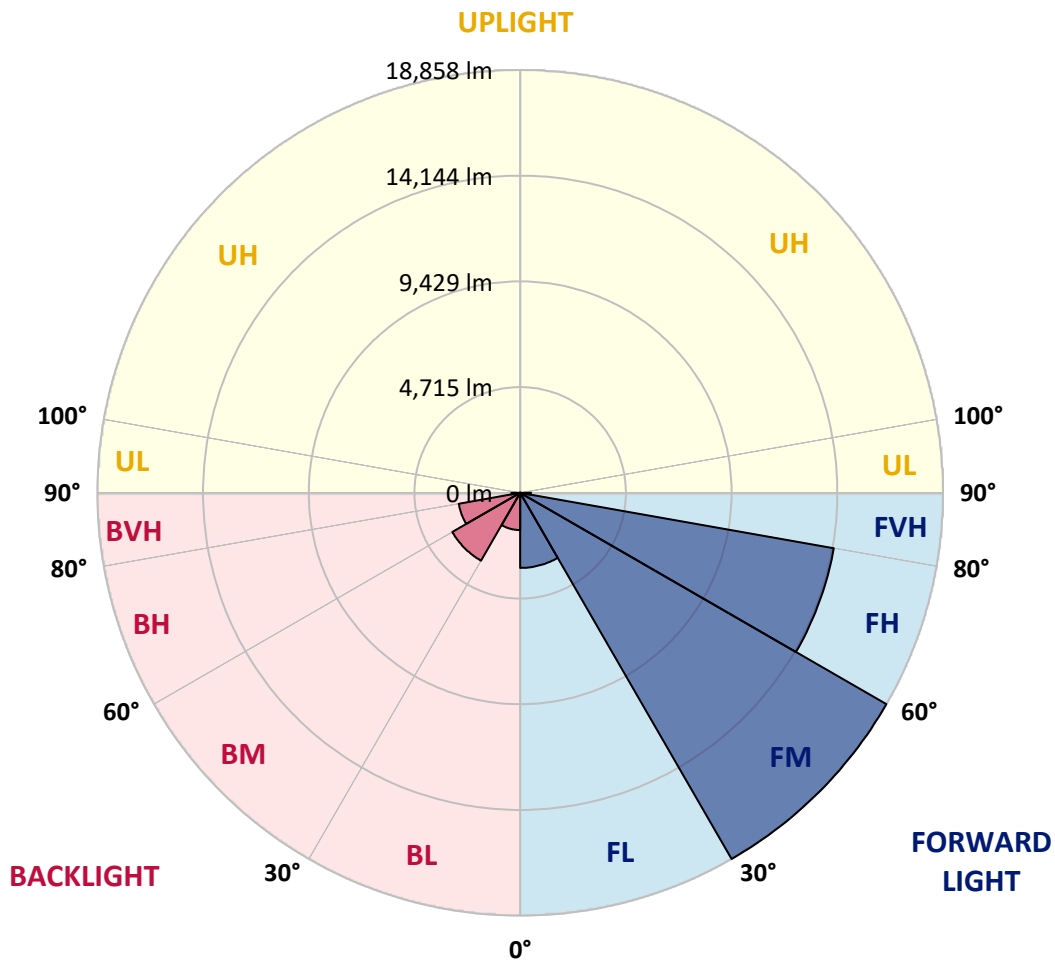
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3350.4	7.4			
FM	(30°-60°)	18858.3	41.7			
FH	(60°-80°)	14203.4	31.4			G5
FVH	(80°-90°)	476.5	1.1			G3/500
BL	(0°-30°)	1661.4	3.7	B3/2500		
BM	(30°-60°)	3493.7	7.7	B3/5000		
BH	(60°-80°)	2781.7	6.2	B4/5000		G4/5000
BVH	(80°-90°)	390.2	0.9			G3/500
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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	80°	85°
0°	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8
2.5°	6871.7	6831.6	6838.3	6827.1	6793.7	6735.9	6673.5	6560.0	6442.0	6379.7	6330.7
5°	7446.0	7434.8	7419.3	7383.6	7299.0	7178.8	7029.7	6829.4	6613.4	6499.9	6390.8
7.5°	7875.6	7868.9	7848.9	7826.6	7744.2	7599.6	7374.7	7089.8	6775.9	6620.1	6450.9
10°	7911.2	7922.3	7937.9	7998.0	8009.1	7931.2	7702.0	7356.9	6945.1	6744.8	6528.9
12.5°	7608.5	7632.9	7693.1	7846.6	8009.1	8104.9	7986.9	7637.4	7143.2	6900.6	6626.8
15°	7207.8	7221.1	7294.6	7506.1	7797.7	8093.7	8205.0	7946.8	7399.2	7100.9	6773.7
17.5°	7036.4	7043.1	7094.3	7234.5	7506.1	7929.0	8327.5	8282.9	7713.1	7350.2	6954.0
20°	6949.6	6965.1	7038.6	7176.6	7348.0	7717.5	8345.3	8645.8	8087.1	7661.9	7181.1
22.5°	7196.7	7190.0	7216.7	7285.7	7430.4	7653.0	8331.9	9019.7	8563.4	8062.6	7477.1
25°	7773.2	7797.7	7750.9	7673.0	7719.8	7875.6	8403.1	9424.9	9160.0	8576.8	7864.5
27.5°	8594.6	8570.1	8501.1	8318.6	8222.8	8289.6	8639.1	9861.2	9901.2	9253.5	8376.4
30°	9413.7	9393.7	9326.9	9104.3	8908.4	8852.8	9097.7	10362.0	10785.0	10066.0	9004.2
32.5°	10264.1	10241.8	10179.5	9956.9	9720.9	9591.8	9749.9	10940.8	11826.7	11036.5	9743.2
35°	11312.5	11270.2	11138.9	10829.5	10598.0	10497.8	10571.3	11668.7	13028.8	12185.1	10640.3
37.5°	12298.6	12363.2	12229.6	11802.2	11501.7	11466.1	11548.5	12556.9	14324.3	13469.5	11670.9
40°	13289.2	13300.3	13180.1	12830.7	12521.2	12463.4	12670.4	13634.2	15853.6	15005.5	12924.1
42.5°	14313.2	14335.4	14132.9	13810.1	13583.0	13594.2	13830.1	14896.4	17607.6	16815.2	14366.6
45°	15526.3	15559.7	15337.1	14914.2	14707.2	15123.4	15025.5	16312.1	19530.9	18872.0	16022.7
47.5°	16795.2	16846.4	16677.2	16281.0	16022.7	16594.8	16220.9	17881.4	21601.1	21078.0	17841.4
50°	17487.4	17560.9	17725.6	17696.7	17641.0	17545.3	17554.2	19564.3	23735.8	23375.2	19711.2
52.5°	17115.7	17113.5	17714.5	18444.6	19223.7	19281.6	19179.2	21338.4	25730.3	25621.2	21472.0
55°	15415.0	15530.8	16441.2	17854.7	19982.8	21311.7	21614.4	23370.8	27689.2	27816.1	23259.5
57.5°	12583.6	12679.3	13908.0	15878.0	18958.8	22518.2	25078.1	26324.7	29879.6	30471.7	25639.1
60°	8534.5	8650.2	9952.4	12318.7	16203.0	21845.9	28374.8	31595.8	32501.8	33848.5	28978.0
62.5°	5015.2	5119.8	6181.6	7771.0	11408.2	18722.9	29821.7	39095.2	36666.6	38943.8	34071.1
65°	3452.5	3523.8	4040.2	4837.1	6555.6	12610.3	28027.5	44272.9	43075.3	45256.8	39976.7
67.5°	2778.0	2769.1	3178.7	3721.9	4220.5	6502.1	21193.7	43687.4	48711.5	49622.0	43041.9
70°	2288.3	2279.4	2557.7	3007.3	3372.4	3661.8	11544.0	36867.0	47562.9	47932.4	40219.3
72.5°	1914.4	1923.3	2101.3	2435.2	2766.9	2758.0	5073.1	25935.1	37416.8	39972.3	32061.1
75°	1616.1	1620.5	1738.5	1974.5	2246.0	2221.5	2751.3	14050.5	21750.2	23528.8	17772.4
77.5°	1375.7	1380.1	1455.8	1587.1	1780.8	1771.9	2007.9	6070.3	9073.2	8961.9	6079.2
80°	1226.5	1226.5	1262.1	1286.6	1393.5	1353.4	1489.2	2916.1	3835.4	3541.6	2426.3
82.5°	961.6	966.1	1184.2	1175.3	1097.4	1046.2	1046.2	1718.5	2032.3	1878.7	1420.2
85°	540.9	538.7	763.5	921.6	966.1	736.8	730.1	961.6	1106.3	975.0	687.8
87.5°	231.5	236.0	353.9	409.6	547.6	458.6	451.9	496.4	563.2	487.5	318.3
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°	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8	6281.8
2.5°	6284.0	6226.1	6099.2	5941.2	5798.7	5705.2	5620.6	5498.2	5504.9	5420.3	5358.0
5°	6279.5	6159.3	5865.5	5516.0	5179.9	4937.3	4754.7	4590.0	4549.9	4472.0	4425.3
7.5°	6284.0	6088.1	5593.9	5035.2	4618.9	4311.8	4155.9	4069.1	4049.1	4022.4	4024.6
10°	6299.6	6023.6	5295.7	4585.6	4149.3	3946.7	3908.9	3935.6	3966.7	3975.6	3977.9
12.5°	6335.2	5965.7	4968.4	4184.9	3855.4	3793.1	3857.7	3948.9	4009.0	4038.0	4035.7
15°	6415.3	5921.2	4654.6	3871.0	3692.9	3726.3	3846.5	3975.6	4062.4	4102.5	4104.7
17.5°	6502.1	5856.6	4331.8	3630.6	3572.7	3657.3	3806.5	3957.8	4064.7	4109.2	4118.1
20°	6615.7	5776.5	3993.4	3450.3	3459.2	3554.9	3695.2	3846.5	3964.5	4002.3	4020.2
22.5°	6764.8	5689.7	3697.4	3303.4	3330.1	3403.6	3512.6	3644.0	3746.4	3764.2	3779.7
25°	6965.1	5596.2	3461.4	3169.8	3181.0	3223.2	3296.7	3374.6	3445.8	3425.8	3441.4
27.5°	7234.5	5516.0	3285.6	3047.4	3027.4	3036.3	3074.1	3098.6	3136.4	3080.8	3087.5
30°	7550.6	5429.2	3149.8	2940.5	2884.9	2869.3	2878.2	2891.6	2920.5	2844.8	2833.7
32.5°	7917.9	5324.6	3022.9	2847.1	2769.1	2738.0	2742.4	2778.0	2889.3	2842.6	2818.1
35°	8345.3	5206.6	2889.3	2744.7	2691.2	2646.7	2642.3	2753.6	3085.2	3056.3	3034.0
37.5°	8846.1	5088.6	2755.8	2628.9	2633.4	2584.4	2568.8	2695.7	3123.1	3009.5	2994.0
40°	9482.8	5026.3	2642.3	2506.5	2562.1	2555.4	2524.3	2588.8	2873.8	2666.7	2640.0
42.5°	10270.8	5035.2	2557.7	2375.1	2477.5	2548.8	2499.8	2502.0	2604.4	2448.6	2424.1
45°	11243.5	5139.8	2497.6	2270.5	2381.8	2542.1	2490.9	2455.3	2464.2	2381.8	2368.5
47.5°	12378.8	5355.8	2455.3	2183.7	2290.6	2517.6	2488.7	2441.9	2421.9	2377.4	2366.2
50°	13640.9	5669.6	2424.1	2101.3	2208.2	2477.5	2490.9	2428.6	2406.3	2388.5	2381.8
52.5°	14880.8	6028.0	2377.4	2030.1	2143.6	2428.6	2497.6	2415.2	2390.7	2377.4	2370.7
55°	16263.1	6475.4	2306.1	1970.0	2090.2	2366.2	2497.6	2395.2	2368.5	2370.7	2368.5
57.5°	18130.8	7198.9	2221.5	1918.8	2025.7	2290.6	2455.3	2372.9	2339.5	2341.8	2344.0
60°	21049.0	8474.4	2119.2	1867.6	1945.5	2201.5	2397.4	2323.9	2290.6	2299.5	2301.7
62.5°	25340.8	10346.4	1985.6	1791.9	1860.9	2105.8	2317.3	2261.6	2228.2	2250.5	2250.5
65°	29801.7	11998.1	1820.9	1696.2	1771.9	2001.2	2217.1	2183.7	2150.3	2201.5	2199.3
67.5°	31001.5	11628.6	1656.1	1591.6	1682.9	1885.4	2096.9	2079.1	2061.3	2150.3	2145.9
70°	27540.1	9335.8	1504.8	1484.7	1584.9	1760.8	1967.8	1967.8	1956.7	2023.4	2007.9
72.5°	20982.3	6620.1	1360.1	1371.2	1473.6	1625.0	1827.5	1843.1	1825.3	1858.7	1845.4
75°	11232.4	3788.6	1215.4	1246.6	1335.6	1487.0	1671.7	1687.3	1676.2	1674.0	1680.6
77.5°	3733.0	1852.0	1064.0	1113.0	1190.9	1344.5	1509.2	1533.7	1507.0	1502.5	1500.3
80°	1662.8	1164.2	897.1	961.6	1030.6	1182.0	1337.8	1357.9	1328.9	1369.0	1317.8
82.5°	1068.5	765.7	719.0	790.2	857.0	1019.5	1166.4	1170.9	1144.2	1328.9	1133.0
85°	518.7	474.1	540.9	605.5	663.3	801.4	966.1	968.3	901.5	821.4	792.5
87.5°	258.2	276.0	360.6	418.5	447.4	549.8	703.4	690.1	661.1	601.0	554.3
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)