

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: P298909

Luminaire Tested: **GLNA-AF-10-LED-E1-T2-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P298909  
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-10-LED-E1-T2-7027  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(10) 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: 50060.9 lumens  
Efficiency: N/A  
Efficacy: 89.7 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

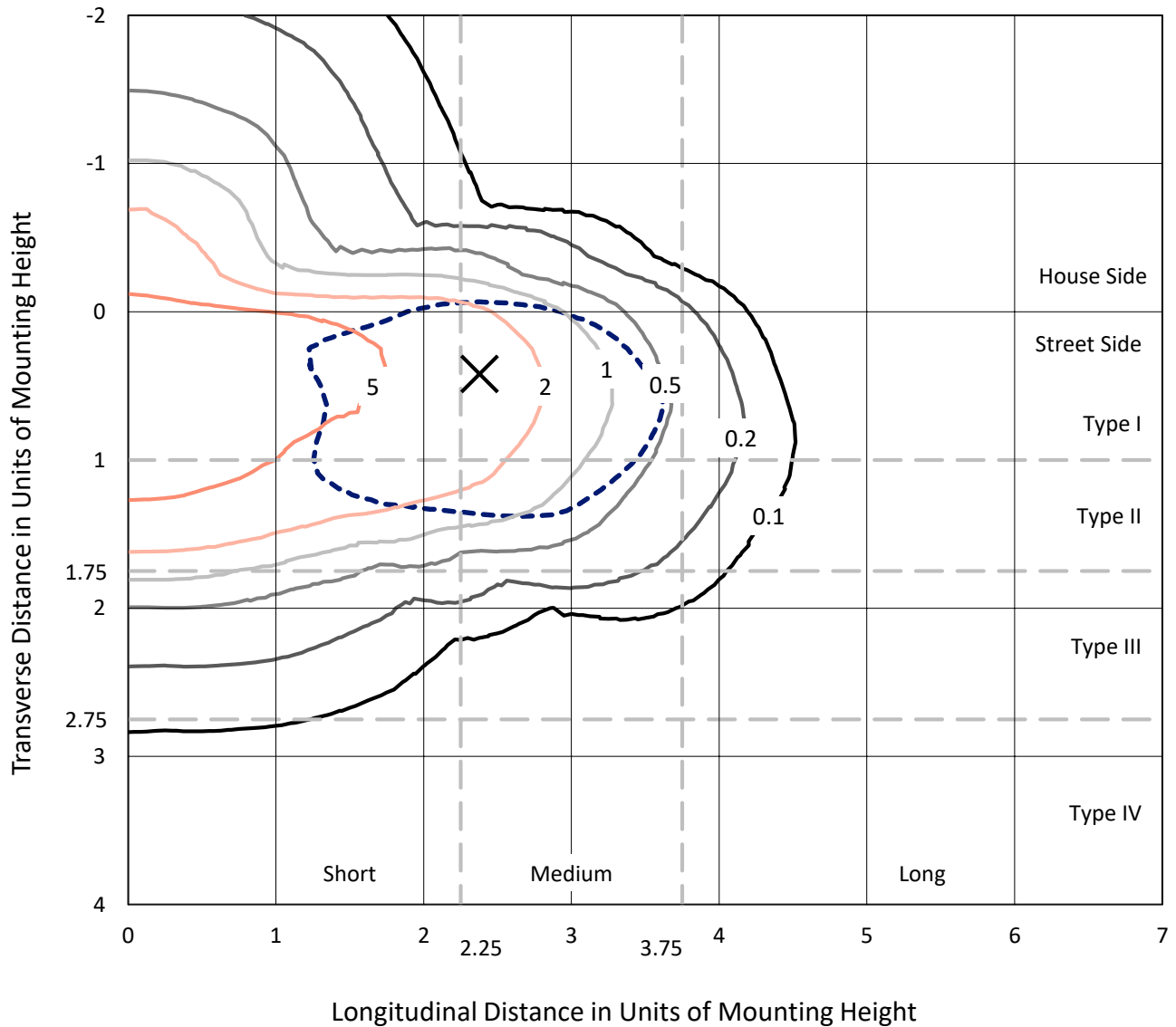
Input Watts (W): 558  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

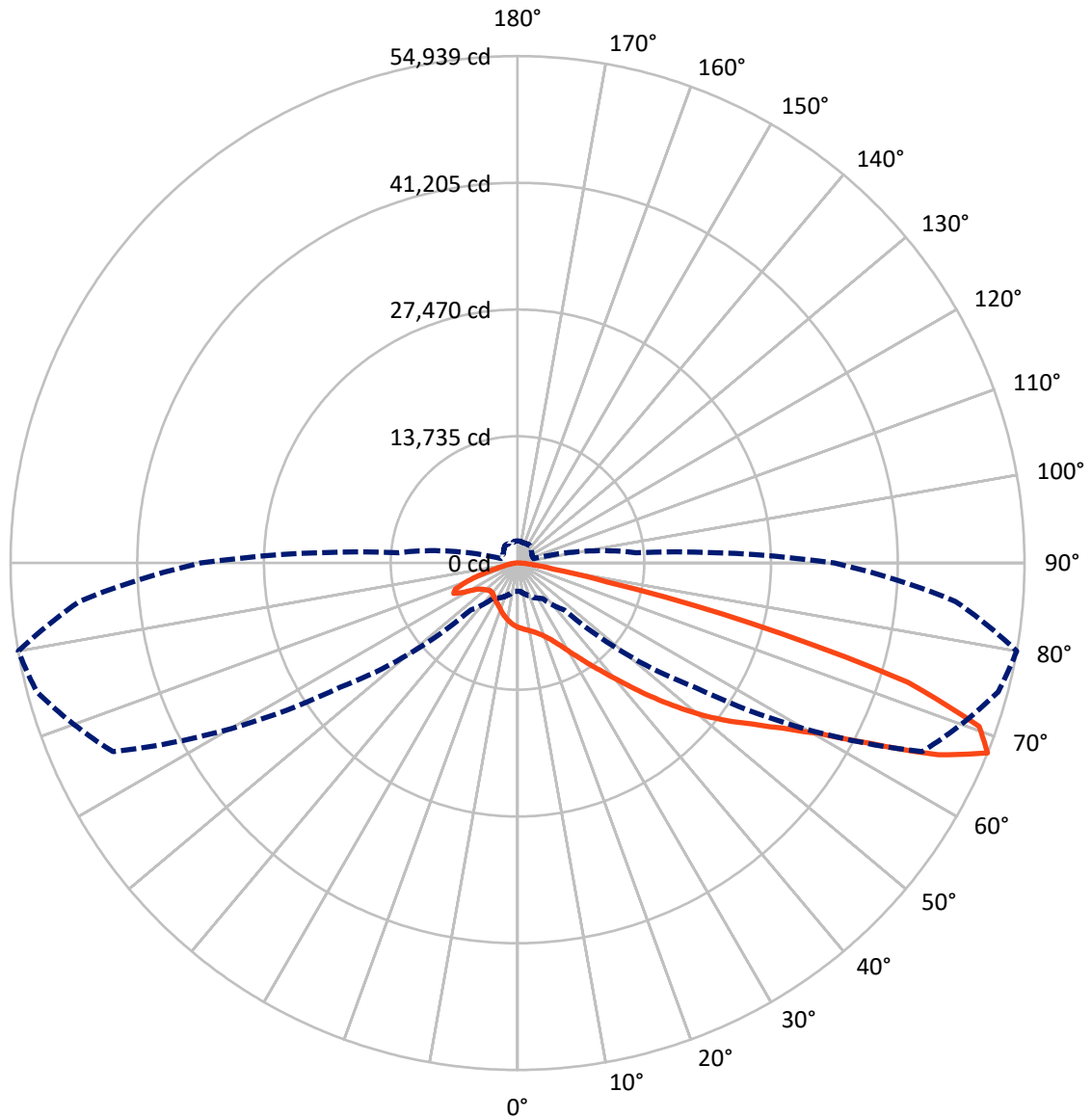
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.4 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
<b>House Side</b>	Lumens	9219.3	0.0	9219.3
	% Fixture	18.4	0.0	18.4
<b>Street Side</b>	Lumens	40841.6	0.0	40841.6
	% Fixture	81.6	0.0	81.6
<b>Total</b>	Lumens	50060.9	0.0	50060.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	641.6	1.3
10°-20°	1848.1	3.7
20°-30°	3059.1	6.1
30°-40°	5003.9	10.0
40°-50°	8079.3	16.1
50°-60°	11664.1	23.3
60°-70°	12872.0	25.7
70°-80°	5933.2	11.9
80°-90°	959.7	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°	50060.9	100.0
0°-180°	50060.9	100.0



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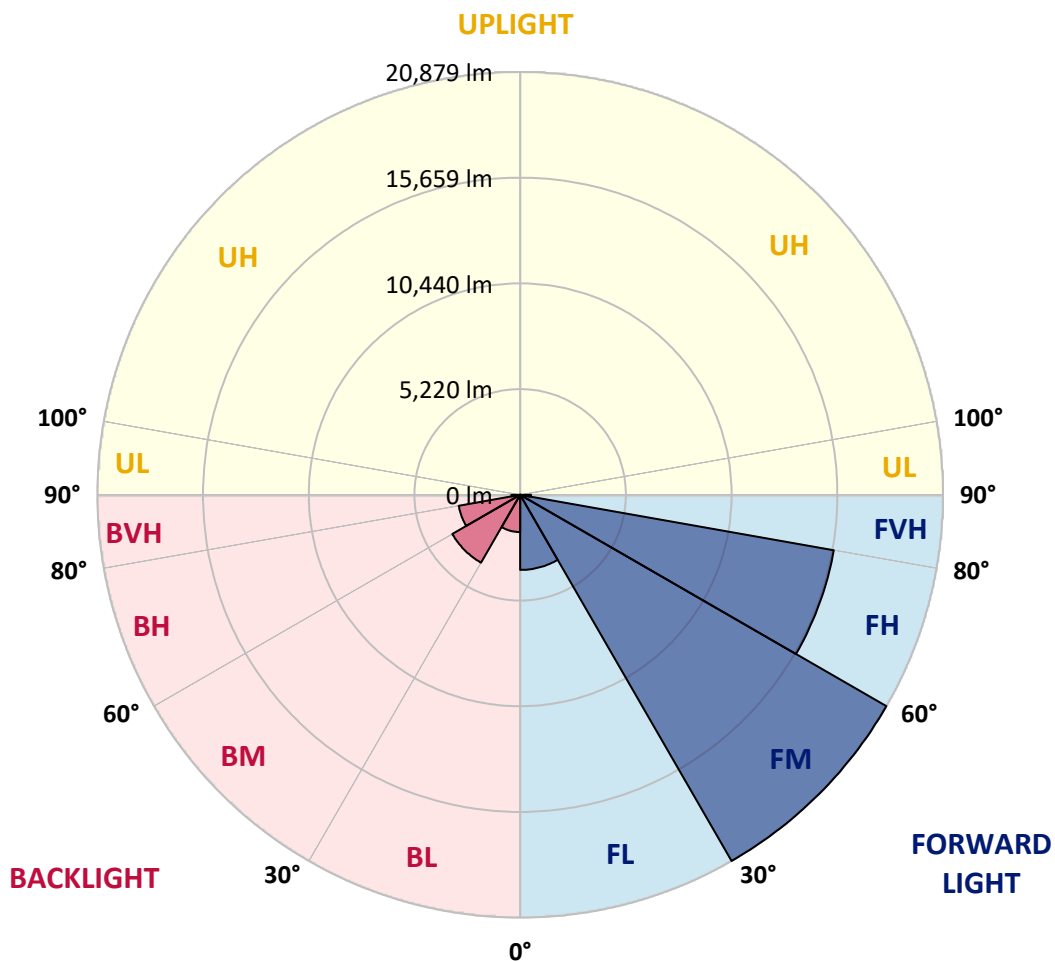
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3709.4	7.4			
FM (30°-60°)	20879.1	41.7			
FH (60°-80°)	15725.4	31.4			G5
FVH (80°-90°)	527.6	1.1			G4/750
BL (0°-30°)	1839.4	3.7	B3/2500		
BM (30°-60°)	3868.1	7.7	B3/5000		
BH (60°-80°)	3079.8	6.2	B4/5000		G4/5000
BVH (80°-90°)	432.0	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°	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9
2.5°	7608.0	7563.7	7571.1	7558.7	7521.8	7457.7	7388.7	7263.0	7132.4	7063.4	7009.1
5°	8243.9	8231.6	8214.3	8174.9	8081.2	7948.1	7783.0	7561.2	7322.1	7196.4	7075.7
7.5°	8719.5	8712.1	8690.0	8665.3	8574.1	8413.9	8165.0	7849.5	7502.0	7329.5	7142.2
10°	8759.0	8771.3	8788.5	8855.1	8867.4	8781.1	8527.3	8145.3	7689.4	7467.5	7228.5
12.5°	8423.8	8450.9	8517.4	8687.5	8867.4	8973.4	8842.8	8455.8	7908.7	7640.1	7336.9
15°	7980.2	7995.0	8076.3	8310.4	8633.3	8961.1	9084.3	8798.4	8192.1	7861.9	7499.6
17.5°	7790.4	7797.8	7854.5	8009.7	8310.4	8778.7	9219.8	9170.5	8539.6	8137.9	7699.2
20°	7694.3	7711.5	7792.9	7945.7	8135.4	8544.5	9239.5	9572.3	8953.7	8482.9	7950.6
22.5°	7967.8	7960.5	7990.0	8066.4	8226.6	8473.1	9224.8	9986.3	9481.1	8926.6	8278.4
25°	8606.2	8633.3	8581.5	8495.3	8547.0	8719.5	9303.6	10434.8	10141.6	9495.9	8707.2
27.5°	9515.6	9488.5	9412.1	9210.0	9104.0	9177.9	9564.9	10917.9	10962.3	10245.1	9274.1
30°	10422.5	10400.3	10326.4	10080.0	9863.1	9801.5	10072.6	11472.4	11940.7	11144.6	9969.0
32.5°	11364.0	11339.3	11270.3	11023.9	10762.6	10619.7	10794.7	12113.2	13094.1	12219.2	10787.3
35°	12524.8	12477.9	12332.5	11990.0	11733.7	11622.8	11704.1	12919.1	14424.9	13490.9	11780.5
37.5°	13616.6	13688.0	13540.2	13067.0	12734.3	12694.8	12786.0	13902.4	15859.3	14912.9	12921.6
40°	14713.3	14725.6	14592.5	14205.6	13863.0	13798.9	14028.1	15095.3	17552.4	16613.4	14309.1
42.5°	15847.0	15871.6	15647.3	15290.0	15038.6	15050.9	15312.2	16492.7	19494.5	18617.1	15906.1
45°	17190.1	17227.1	16980.7	16512.4	16283.2	16744.1	16635.6	18060.1	21623.8	20894.3	17739.7
47.5°	18594.9	18651.6	18464.3	18025.6	17739.7	18373.1	17959.1	19797.6	23915.9	23336.7	19753.3
50°	19361.4	19442.7	19625.1	19593.1	19531.5	19425.5	19435.3	21660.8	26279.4	25880.1	21823.5
52.5°	18949.8	18947.4	19612.8	20421.1	21283.7	21347.8	21234.4	23625.0	28487.6	28366.8	23772.9
55°	17066.9	17195.1	18203.1	19768.0	22124.1	23595.5	23930.6	25875.2	30656.4	30796.8	25751.9
57.5°	13932.0	14038.0	15398.4	17579.5	20990.5	24931.3	27765.5	29145.6	33081.5	33737.0	28386.5
60°	9449.0	9577.2	11018.9	13638.7	17939.4	24187.0	31415.4	34981.6	35984.7	37475.7	32083.3
62.5°	5552.6	5668.4	6844.0	8603.7	12630.7	20729.2	33017.4	43284.7	40595.8	43117.1	37722.2
65°	3822.5	3901.4	4473.1	5355.4	7258.1	13961.6	31031.0	49017.2	47691.2	50106.5	44260.6
67.5°	3075.7	3065.9	3519.4	4120.7	4672.8	7198.9	23464.9	48369.0	53931.5	54939.4	47654.3
70°	2533.5	2523.7	2831.8	3329.6	3733.8	4054.2	12781.1	40817.7	52659.7	53068.9	44529.2
72.5°	2119.5	2129.4	2326.5	2696.2	3063.4	3053.6	5616.7	28714.3	41426.4	44255.7	35496.7
75°	1789.3	1794.2	1924.8	2186.0	2486.7	2459.6	3046.2	15556.2	24081.0	26050.1	19676.9
77.5°	1523.1	1528.0	1611.8	1757.2	1971.6	1961.8	2223.0	6720.8	10045.5	9922.2	6730.6
80°	1358.0	1358.0	1397.4	1424.5	1542.8	1498.4	1648.8	3228.5	4246.4	3921.1	2686.3
82.5°	1064.7	1069.6	1311.1	1301.3	1215.0	1158.3	1158.3	1902.6	2250.1	2080.1	1572.4
85°	598.9	596.4	845.3	1020.3	1069.6	815.8	808.4	1064.7	1224.9	1079.5	761.5
87.5°	256.3	261.2	391.9	453.5	606.3	507.7	500.3	549.6	623.5	539.7	352.4
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°	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9	6954.9
2.5°	6957.4	6893.3	6752.8	6577.8	6420.1	6316.6	6223.0	6087.4	6094.8	6001.1	5932.1
5°	6952.5	6819.4	6494.1	6107.1	5735.0	5466.3	5264.2	5081.9	5037.5	4951.3	4899.5
7.5°	6957.4	6740.5	6193.4	5574.8	5113.9	4773.8	4601.3	4505.2	4483.0	4453.4	4455.9
10°	6974.6	6669.0	5863.1	5076.9	4593.9	4369.6	4327.7	4357.3	4391.8	4401.7	4404.1
12.5°	7014.1	6605.0	5500.8	4633.3	4268.6	4199.6	4271.0	4372.1	4438.6	4470.7	4468.2
15°	7102.8	6555.7	5153.3	4285.8	4088.7	4125.6	4258.7	4401.7	4497.8	4542.1	4544.6
17.5°	7198.9	6484.2	4796.0	4019.7	3955.6	4049.2	4214.4	4381.9	4500.2	4549.5	4559.4
20°	7324.6	6395.5	4421.4	3820.0	3829.9	3935.9	4091.1	4258.7	4389.3	4431.2	4451.0
22.5°	7489.7	6299.4	4093.6	3657.4	3686.9	3768.3	3889.0	4034.4	4147.8	4167.5	4184.8
25°	7711.5	6195.8	3832.4	3509.5	3521.8	3568.6	3650.0	3736.2	3815.1	3792.9	3810.2
27.5°	8009.7	6107.1	3637.7	3374.0	3351.8	3361.6	3403.5	3430.6	3472.5	3410.9	3418.3
30°	8359.7	6011.0	3487.3	3255.7	3194.0	3176.8	3186.6	3201.4	3233.5	3149.7	3137.4
32.5°	8766.4	5895.2	3346.8	3152.1	3065.9	3031.4	3036.3	3075.7	3199.0	3147.2	3120.1
35°	9239.5	5764.6	3199.0	3038.8	2979.6	2930.3	2925.4	3048.6	3415.8	3383.8	3359.2
37.5°	9794.1	5633.9	3051.1	2910.6	2915.5	2861.3	2844.1	2984.6	3457.7	3332.1	3314.8
40°	10498.9	5564.9	2925.4	2775.1	2836.7	2829.3	2794.8	2866.3	3181.7	2952.5	2922.9
42.5°	11371.4	5574.8	2831.8	2629.7	2743.0	2821.9	2767.7	2770.1	2883.5	2711.0	2683.9
45°	12448.4	5690.6	2765.2	2513.8	2637.1	2814.5	2757.8	2718.4	2728.2	2637.1	2622.3
47.5°	13705.3	5929.7	2718.4	2417.7	2536.0	2787.4	2755.4	2703.6	2681.4	2632.1	2619.8
50°	15102.7	6277.2	2683.9	2326.5	2444.8	2743.0	2757.8	2688.8	2664.2	2644.4	2637.1
52.5°	16475.4	6674.0	2632.1	2247.7	2373.3	2688.8	2765.2	2674.0	2646.9	2632.1	2624.7
55°	18005.9	7169.3	2553.3	2181.1	2314.2	2619.8	2765.2	2651.8	2622.3	2624.7	2622.3
57.5°	20073.6	7970.3	2459.6	2124.4	2242.7	2536.0	2718.4	2627.2	2590.2	2592.7	2595.2
60°	23304.7	9382.5	2346.2	2067.7	2154.0	2437.4	2654.3	2573.0	2536.0	2545.9	2548.3
62.5°	28056.3	11455.2	2198.4	1984.0	2060.4	2331.5	2565.6	2504.0	2467.0	2491.6	2491.6
65°	32995.2	13283.9	2016.0	1878.0	1961.8	2215.6	2454.7	2417.7	2380.7	2437.4	2435.0
67.5°	34323.6	12874.7	1833.6	1762.1	1863.2	2087.5	2321.6	2301.9	2282.2	2380.7	2375.8
70°	30491.2	10336.3	1666.0	1643.8	1754.7	1949.4	2178.7	2178.7	2166.3	2240.3	2223.0
72.5°	23230.7	7329.5	1505.8	1518.2	1631.5	1799.1	2023.4	2040.6	2020.9	2057.9	2043.1
75°	12436.1	4194.6	1345.6	1380.1	1478.7	1646.3	1850.9	1868.1	1855.8	1853.3	1860.7
77.5°	4133.0	2050.5	1178.0	1232.3	1318.5	1488.6	1671.0	1698.1	1668.5	1663.6	1661.1
80°	1841.0	1289.0	993.2	1064.7	1141.1	1308.7	1481.2	1503.4	1471.3	1515.7	1459.0
82.5°	1183.0	847.8	796.0	874.9	948.8	1128.8	1291.4	1296.3	1266.8	1471.3	1254.4
85°	574.2	524.9	598.9	670.4	734.4	887.2	1069.6	1072.1	998.1	909.4	877.4
87.5°	285.9	305.6	399.3	463.3	495.4	608.7	778.8	764.0	732.0	665.4	613.7
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)