

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: P299863

Luminaire Tested: **GLNA-AF-09-LED-E1-5WQ-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299863  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)  
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-E1-5WQ-7027  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 48529.6 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G5

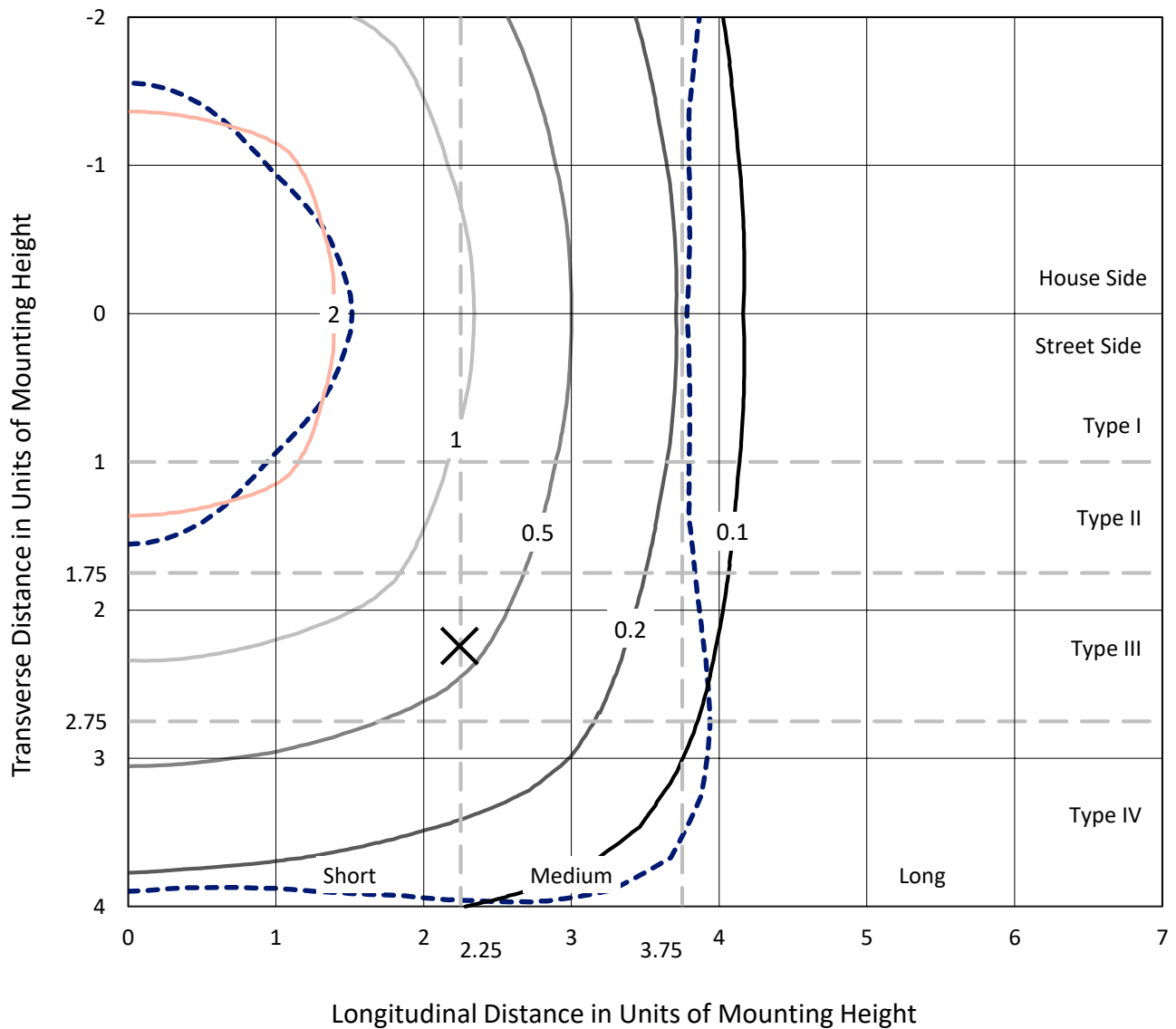
Input Watts (W): 501  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

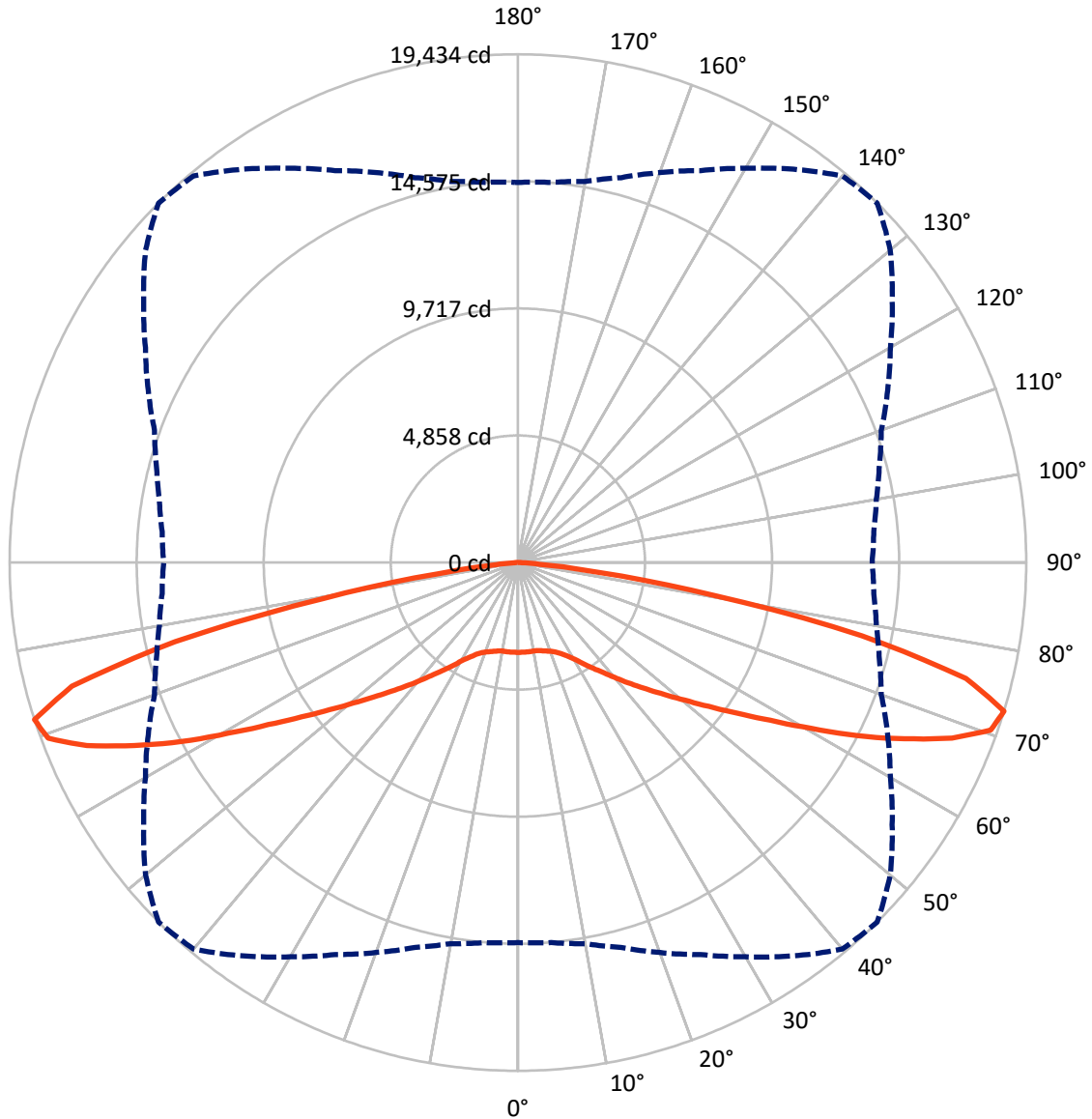
× Max cd  
- - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.8 fc  
Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	24264.8	0.0	24264.8
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	24264.8	0.0	24264.8
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	48529.6	0.0	48529.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	328.2	0.7
10°-20°	996.7	2.1
20°-30°	1821.3	3.8
30°-40°	3140.2	6.5
40°-50°	5368.2	11.1
50°-60°	8701.2	17.9
60°-70°	14434.9	29.7
70°-80°	12713.8	26.2
80°-90°	1025.1	2.1
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°	48529.6	100.0
0°-180°	48529.6	100.0



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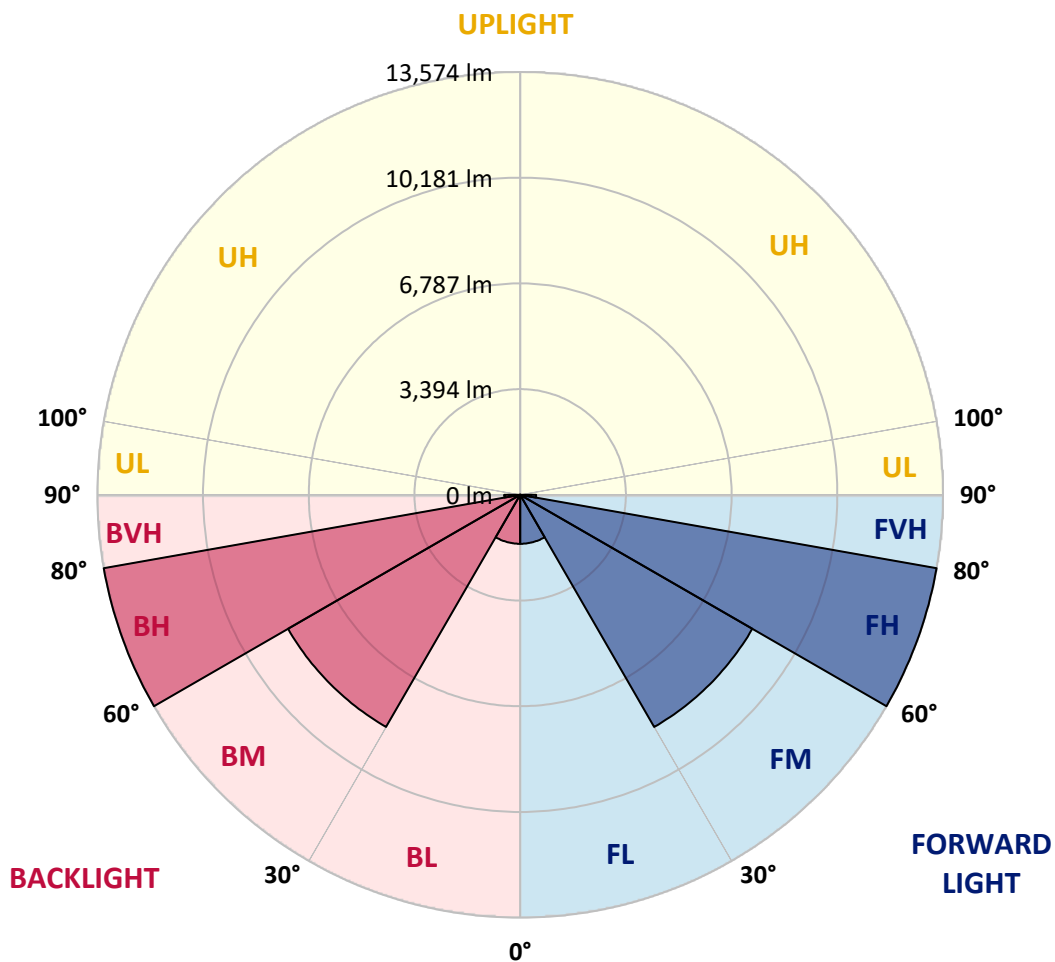
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1573.1	3.2			
FM	(30°-60°)	8604.8	17.7			
FH	(60°-80°)	13574.4	28.0			G5
FVH	(80°-90°)	512.5	1.1			G4/750
BL	(0°-30°)	1573.1	3.2	B3/2500		
BM	(30°-60°)	8604.8	17.7	B5		
BH	(60°-80°)	13574.4	28.0	B5		G5
BVH	(80°-90°)	512.5	1.1			G4/750
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6
2.5°	3436.6	3438.9	3441.1	3438.9	3438.9	3436.6	3434.4	3436.6	3434.4	3430.0	3432.2
5°	3447.8	3452.2	3452.2	3447.8	3450.0	3447.8	3443.3	3445.6	3441.1	3434.4	3434.4
7.5°	3461.1	3463.4	3463.4	3458.9	3461.1	3456.7	3452.2	3450.0	3445.6	3436.6	3430.0
10°	3481.2	3483.4	3481.2	3476.7	3476.7	3470.0	3458.9	3454.5	3445.6	3432.2	3425.5
12.5°	3503.4	3505.6	3503.4	3499.0	3496.7	3485.6	3476.7	3470.0	3463.4	3452.2	3441.1
15°	3534.6	3539.0	3534.6	3525.7	3519.0	3510.1	3505.6	3507.9	3510.1	3501.2	3490.1
17.5°	3592.5	3594.7	3588.0	3568.0	3559.1	3550.2	3550.2	3554.6	3561.3	3556.8	3545.7
20°	3699.3	3692.6	3677.0	3652.6	3641.4	3625.8	3623.6	3625.8	3625.8	3623.6	3614.7
22.5°	3832.8	3828.4	3808.4	3777.2	3761.6	3752.7	3739.4	3728.2	3726.0	3719.3	3710.4
25°	3993.1	3990.9	3966.4	3939.7	3928.6	3917.4	3906.3	3890.7	3877.4	3861.8	3852.9
27.5°	4197.9	4189.0	4153.4	4140.0	4124.4	4117.7	4102.2	4084.4	4073.2	4053.2	4042.1
30°	4422.7	4422.7	4393.7	4389.3	4389.3	4373.7	4355.9	4324.7	4304.7	4284.7	4278.0
32.5°	4647.5	4649.7	4620.8	4629.7	4636.4	4647.5	4651.9	4640.8	4627.5	4625.2	4611.9
35°	4972.5	4963.6	4934.6	4941.3	4939.1	4936.8	4936.8	4961.3	4965.8	4970.2	4943.5
37.5°	5375.3	5375.3	5346.4	5346.4	5333.0	5319.7	5301.9	5317.5	5341.9	5348.6	5330.8
40°	5836.1	5851.6	5816.0	5813.8	5818.3	5776.0	5755.9	5780.4	5796.0	5822.7	5802.7
42.5°	6379.2	6368.0	6332.4	6328.0	6303.5	6290.1	6272.3	6292.4	6316.8	6334.6	6341.3
45°	6900.0	6891.1	6851.0	6851.0	6826.6	6815.4	6824.3	6857.7	6868.8	6893.3	6917.8
47.5°	7414.2	7403.0	7376.3	7387.5	7389.7	7409.7	7438.6	7469.8	7501.0	7534.4	7545.5
50°	7939.5	7941.7	7912.7	7939.5	7972.8	8028.5	8106.4	8157.6	8222.1	8264.4	8277.8
52.5°	8418.0	8426.9	8458.1	8520.4	8587.2	8696.2	8829.8	8954.4	9061.3	9132.5	9128.0
55°	8992.3	9005.6	9081.3	9188.1	9297.2	9461.9	9660.0	9880.4	10058.4	10160.8	10096.3
57.5°	9726.8	9755.7	9840.3	9985.0	10147.5	10361.1	10632.7	10964.3	11240.3	11378.3	11273.7
60°	10735.1	10752.9	10855.3	11015.5	11211.4	11476.3	11839.1	12284.2	12673.7	12856.3	12736.1
62.5°	12063.9	12097.3	12179.6	12342.1	12542.4	12842.9	13285.8	13842.3	14327.5	14581.3	14309.7
65°	13650.9	13757.7	13826.7	13991.4	14178.4	14496.7	14959.7	15556.2	16077.0	16243.9	15930.1
67.5°	15222.3	15315.8	15436.0	15625.2	15814.4	16172.7	16602.3	17181.0	17753.0	17904.4	17416.9
70°	15910.1	15963.5	16150.5	16408.7	16771.5	17194.4	17690.7	18340.7	19048.5	19173.1	18554.3
72.5°	14532.3	14585.7	14794.9	15233.4	15865.6	16537.8	17403.6	18358.5	19293.3	19433.5	18581.0
75°	10991.0	10904.2	11213.6	11794.6	12647.0	13584.1	14794.9	16163.8	17514.9	17690.7	16673.5
77.5°	5680.3	5669.1	5902.8	6624.0	7641.2	8707.4	10040.6	11587.6	12909.7	13443.9	12615.9
80°	1600.4	1618.2	1729.5	2087.8	2682.1	3452.2	4493.9	5942.9	7024.6	7576.6	7113.7
82.5°	627.7	676.6	718.9	785.7	863.6	977.1	1304.3	1940.9	2604.2	3111.7	2548.5
85°	224.8	240.4	340.5	402.9	409.5	431.8	491.9	574.3	692.2	825.8	678.9
87.5°	84.6	93.5	109.1	180.3	178.1	162.5	198.1	207.0	155.8	142.5	175.8
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6	3436.6
2.5°	3427.7	3430.0	3430.0	3432.2	3434.4	3434.4	3438.9	3438.9
5°	3430.0	3430.0	3425.5	3427.7	3425.5	3425.5	3427.7	3427.7
7.5°	3425.5	3423.3	3418.8	3416.6	3412.2	3412.2	3412.2	3412.2
10°	3418.8	3416.6	3412.2	3409.9	3407.7	3407.7	3407.7	3407.7
12.5°	3436.6	3430.0	3425.5	3423.3	3423.3	3423.3	3423.3	3423.3
15°	3483.4	3467.8	3456.7	3456.7	3458.9	3463.4	3463.4	3467.8
17.5°	3541.3	3523.5	3512.3	3503.4	3507.9	3514.6	3519.0	3523.5
20°	3610.3	3601.4	3585.8	3576.9	3576.9	3585.8	3590.2	3592.5
22.5°	3706.0	3699.3	3692.6	3681.5	3681.5	3685.9	3694.8	3694.8
25°	3848.4	3844.0	3839.5	3830.6	3828.4	3828.4	3832.8	3837.3
27.5°	4026.5	4028.7	4024.3	4022.0	4015.4	4013.1	4019.8	4017.6
30°	4264.6	4275.8	4286.9	4278.0	4266.9	4260.2	4253.5	4244.6
32.5°	4587.4	4574.0	4565.1	4549.6	4529.5	4511.7	4498.4	4482.8
35°	4892.3	4870.1	4861.2	4874.5	4872.3	4861.2	4845.6	4832.2
37.5°	5266.3	5261.8	5266.3	5290.7	5286.3	5297.4	5266.3	5264.0
40°	5738.1	5742.6	5773.7	5802.7	5818.3	5833.8	5816.0	5798.2
42.5°	6285.7	6283.5	6294.6	6334.6	6361.4	6379.2	6341.3	6336.9
45°	6864.4	6848.8	6857.7	6891.1	6917.8	6937.8	6895.6	6895.6
47.5°	7501.0	7474.3	7445.3	7483.2	7498.7	7512.1	7478.7	7467.6
50°	8211.0	8155.4	8093.0	8108.6	8108.6	8104.2	8061.9	8059.7
52.5°	9025.7	8923.3	8809.7	8767.5	8743.0	8716.3	8642.8	8607.2
55°	9962.7	9809.1	9631.1	9522.0	9464.1	9390.7	9268.3	9234.9
57.5°	11057.8	10817.4	10510.3	10376.7	10247.6	10127.4	9991.7	9953.8
60°	12355.5	12001.6	11594.2	11347.2	11206.9	11091.2	10951.0	10944.3
62.5°	13802.2	13243.6	12782.8	12560.2	12457.8	12355.5	12221.9	12239.7
65°	15273.5	14690.3	14258.5	14078.2	13982.5	13897.9	13764.4	13784.4
67.5°	16724.7	16188.3	15714.2	15529.5	15422.6	15315.8	15195.6	15215.6
70°	17766.4	17100.9	16566.7	16157.1	15901.2	15611.8	15424.8	15378.1
72.5°	17468.1	16442.0	15594.0	14781.6	14305.3	13918.0	13655.3	13541.8
75°	15117.7	13715.4	12624.8	11627.6	11066.7	10610.4	10278.8	10071.8
77.5°	11227.0	9651.1	8362.4	7213.8	6305.7	5695.8	5266.3	4988.0
80°	6145.5	4674.2	3416.6	2401.6	1765.1	1466.8	1295.4	1213.1
82.5°	1914.2	1235.3	910.4	785.7	730.1	698.9	647.7	565.4
85°	609.9	534.2	496.4	474.1	451.8	394.0	271.5	247.1
87.5°	235.9	242.6	240.4	227.0	231.5	166.9	133.5	118.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)