

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: LUMARK

Report Number: P270501

Luminaire Tested: **NAV-AF-04-D-UNV-RW-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270501  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-RW-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21660.3 lumens  
Efficiency: N/A  
Efficacy: 96.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B4 - U0 - G4

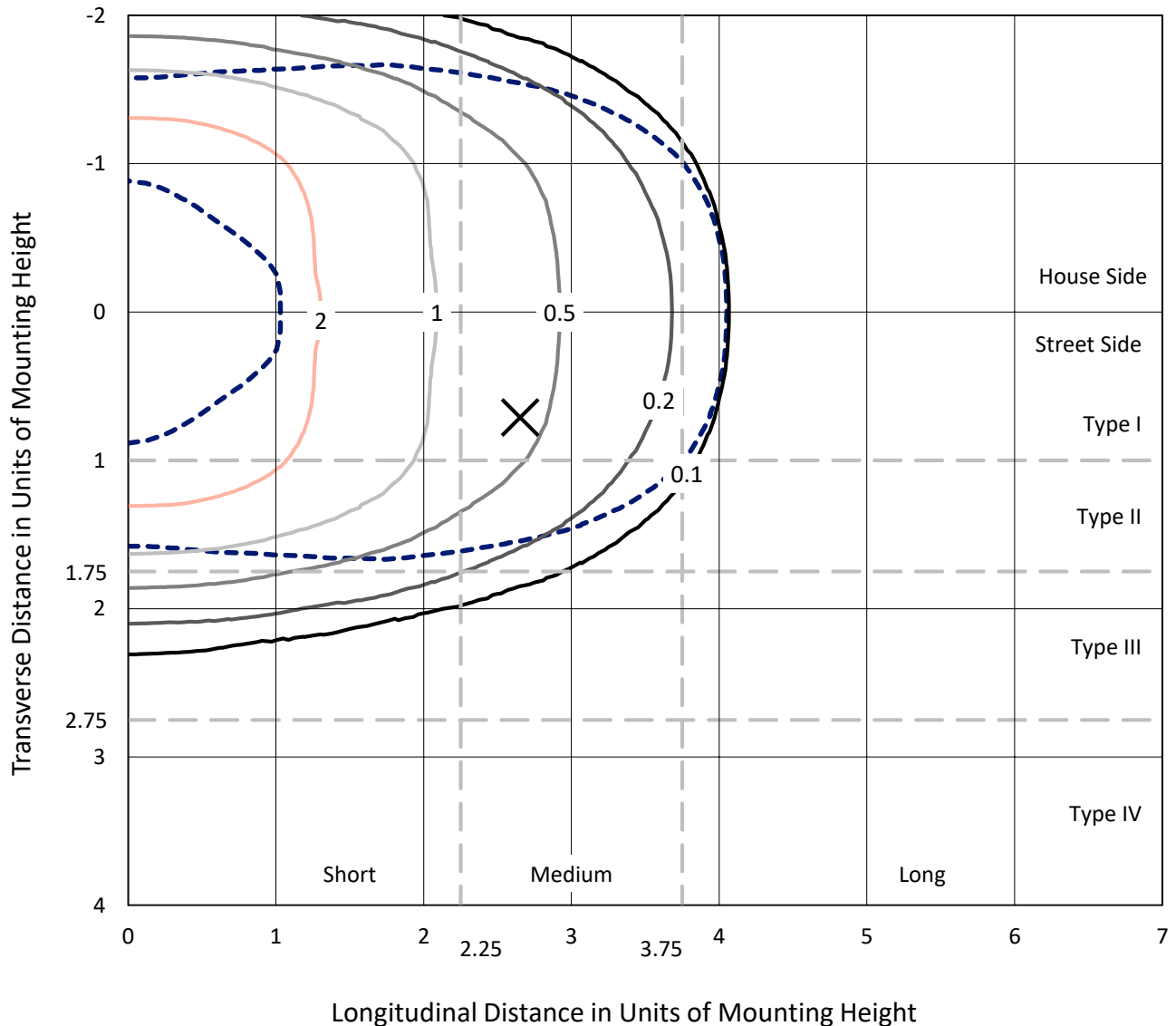
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

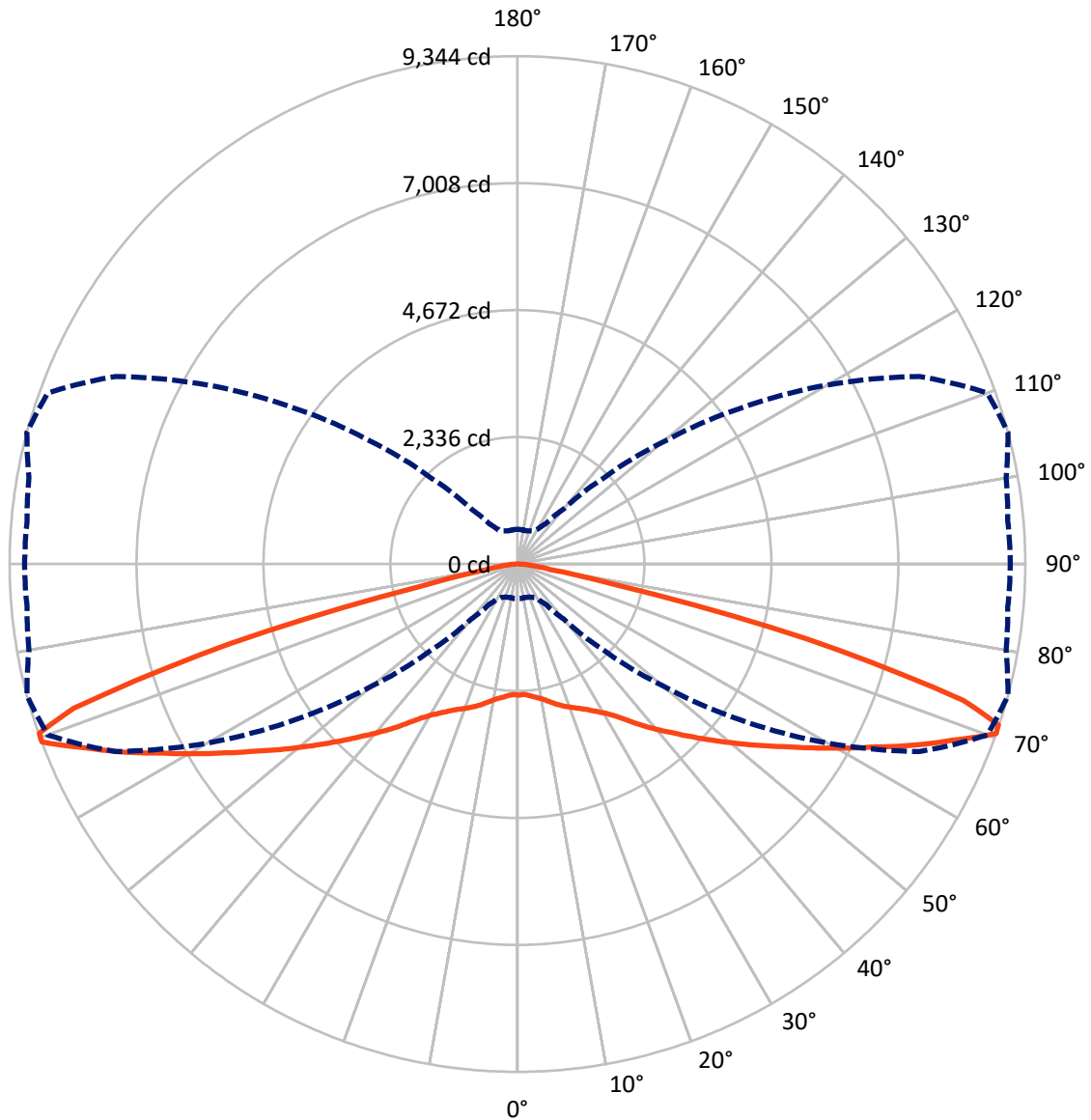
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10830.2	0.0	10830.2
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10830.2	0.0	10830.2
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	21660.3	0.0	21660.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	231.4	1.1
10°-20°	717.5	3.3
20°-30°	1347.7	6.2
30°-40°	2373.9	11.0
40°-50°	3934.4	18.2
50°-60°	5473.3	25.3
60°-70°	5166.9	23.9
70°-80°	2206.8	10.2
80°-90°	208.5	1.0
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°	21660.3	100.0
0°-180°	21660.3	100.0

**Coefficient of Utilization**



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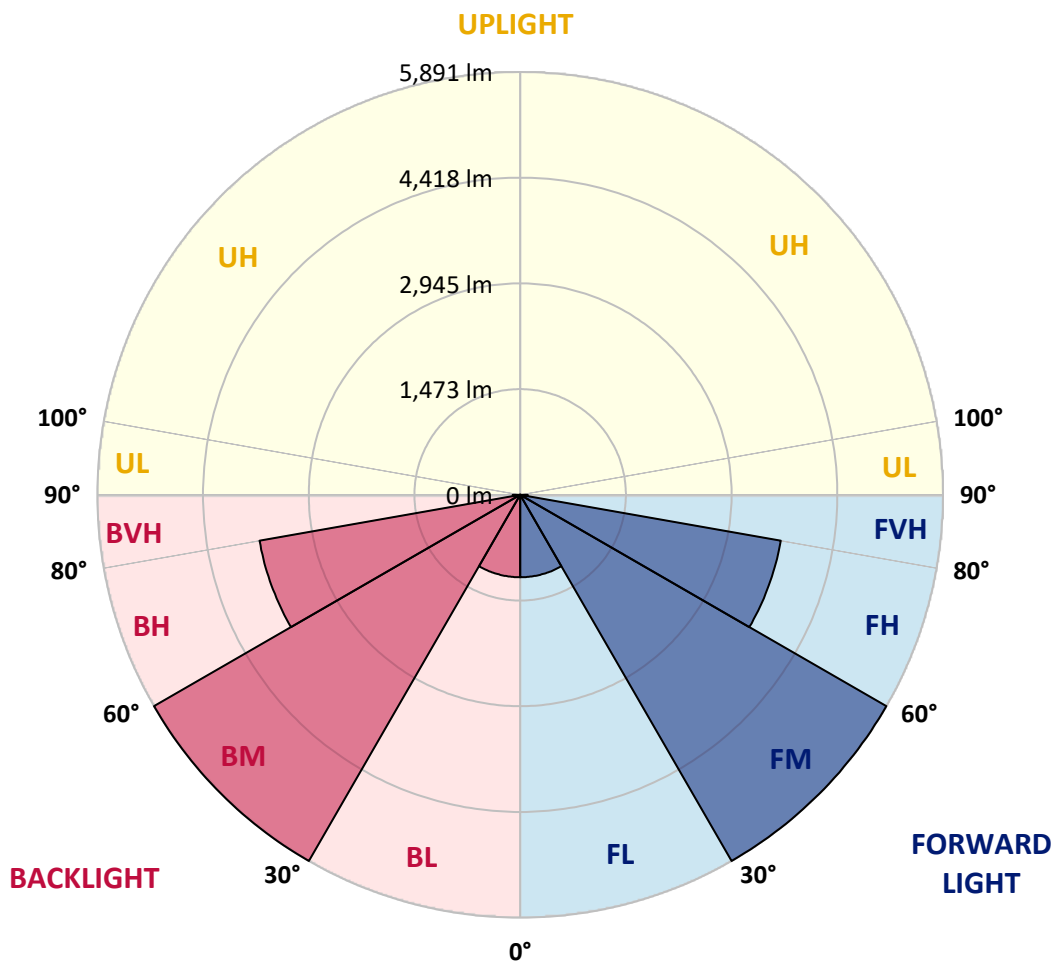
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1148.3	5.3			
FM	(30°-60°)	5890.8	27.2			
FH	(60°-80°)	3686.8	17.0			G2/5000
FVH	(80°-90°)	104.3	0.5			G2/225
BL	(0°-30°)	1148.3	5.3	B3/2500		
BM	(30°-60°)	5890.8	27.2	B4/8500		
BH	(60°-80°)	3686.8	17.0	B4/5000		G4/5000
BVH	(80°-90°)	104.3	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0
2.5°	2427.0	2425.7	2427.0	2423.0	2424.3	2423.0	2423.0	2417.5	2417.5	2414.9	2410.7
5°	2399.9	2402.5	2402.5	2402.5	2406.6	2406.6	2412.0	2413.4	2417.5	2421.7	2424.3
7.5°	2355.0	2356.4	2360.4	2363.3	2371.3	2382.2	2393.1	2405.3	2416.1	2429.7	2444.6
10°	2317.1	2319.9	2326.6	2333.3	2348.3	2361.9	2380.9	2399.9	2418.9	2442.0	2464.9
12.5°	2296.6	2300.7	2311.7	2322.5	2345.6	2363.3	2389.0	2418.9	2444.6	2466.3	2492.2
15°	2299.4	2300.7	2315.7	2330.7	2363.3	2387.7	2424.3	2459.6	2490.8	2515.3	2545.1
17.5°	2338.7	2341.5	2356.4	2378.2	2409.3	2440.5	2480.0	2516.6	2558.7	2587.2	2622.5
20°	2416.1	2420.3	2436.6	2459.6	2493.5	2526.2	2566.8	2604.8	2648.3	2682.2	2717.6
22.5°	2516.6	2523.3	2541.0	2569.5	2603.5	2642.9	2684.9	2724.3	2765.1	2798.9	2828.9
25°	2651.0	2659.2	2678.1	2706.7	2740.5	2782.7	2826.1	2866.9	2908.9	2934.8	2959.0
27.5°	2831.5	2845.1	2865.5	2888.5	2918.5	2963.1	3003.9	3037.9	3078.6	3107.1	3123.3
30°	3074.4	3093.6	3109.8	3134.2	3155.9	3203.4	3236.1	3263.2	3294.4	3310.7	3314.7
32.5°	3371.8	3389.5	3405.7	3423.4	3453.3	3496.7	3527.9	3542.7	3559.1	3556.4	3541.5
35°	3707.0	3720.6	3730.1	3761.4	3810.3	3838.6	3861.8	3867.3	3869.9	3841.4	3812.9
37.5°	4060.0	4076.2	4084.5	4133.2	4179.5	4212.1	4222.8	4235.1	4227.0	4179.5	4127.8
40°	4441.4	4459.0	4483.5	4525.5	4579.9	4611.1	4624.7	4623.2	4616.5	4560.9	4476.7
42.5°	4816.1	4837.7	4858.2	4931.4	4976.3	5029.2	5035.9	5034.6	5019.5	4955.8	4858.2
45°	5133.6	5159.4	5201.5	5283.0	5354.9	5418.8	5444.4	5454.0	5439.1	5371.1	5259.8
47.5°	5395.6	5413.2	5466.2	5565.3	5657.6	5751.3	5802.8	5839.5	5838.2	5789.2	5671.2
50°	5574.8	5595.2	5660.3	5771.6	5887.0	5996.9	6098.8	6181.5	6220.9	6185.5	6075.6
52.5°	5626.4	5652.1	5737.7	5870.8	6005.1	6153.1	6305.2	6451.6	6539.9	6561.6	6476.2
55°	5409.2	5437.7	5562.7	5747.1	5968.5	6186.9	6417.8	6626.7	6808.7	6892.9	6858.9
57.5°	4776.6	4796.9	4955.8	5194.8	5511.0	5895.1	6283.4	6666.1	6978.4	7197.0	7234.9
60°	3777.6	3803.5	3977.2	4229.6	4589.4	5075.3	5618.3	6245.3	6857.5	7358.5	7606.8
62.5°	2549.2	2566.8	2733.8	2964.5	3358.3	3826.5	4431.9	5226.0	6098.8	6993.2	7693.8
65°	1338.4	1338.4	1451.0	1612.5	1926.1	2345.6	2965.9	3780.3	4818.8	5935.9	7107.3
67.5°	776.5	775.1	800.8	837.5	936.7	1106.3	1448.3	2047.0	3029.8	4330.1	5663.1
70°	640.8	636.5	632.5	632.5	647.5	673.3	738.4	902.6	1320.8	2232.8	3484.4
71°	612.1	609.5	598.6	594.6	601.3	614.9	643.4	719.5	938.0	1522.9	2602.1
72.5°	578.2	571.4	555.2	548.3	549.8	555.2	563.2	593.2	659.6	866.1	1483.6
75°	526.6	510.3	490.0	480.6	476.5	475.2	475.2	483.2	498.2	522.6	608.2
77.5°	466.9	443.9	422.2	412.6	405.9	401.8	399.0	393.6	390.9	401.8	433.1
80°	395.1	370.6	352.9	347.5	343.4	335.2	324.4	313.6	306.9	312.3	331.3
82.5°	305.5	281.0	283.7	285.0	278.3	264.7	253.9	241.6	229.3	226.7	236.2
85°	243.0	230.8	222.6	240.2	225.4	209.0	194.2	173.7	145.3	119.5	130.3
87.5°	104.6	105.9	152.1	229.3	201.0	161.5	134.3	108.5	69.2	51.7	52.9
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°	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0	2412.0
2.5°	2409.3	2409.3	2405.3	2402.5	2402.5	2402.5	2399.9	2401.2
5°	2425.7	2428.4	2431.2	2429.7	2433.8	2437.9	2436.6	2435.1
7.5°	2452.8	2460.9	2469.1	2473.2	2478.7	2484.1	2485.4	2481.3
10°	2480.0	2496.2	2508.4	2519.3	2526.2	2531.6	2535.6	2534.3
12.5°	2513.8	2537.0	2558.7	2580.4	2595.4	2603.5	2611.6	2608.9
15°	2569.5	2595.4	2622.5	2651.0	2674.1	2686.3	2698.5	2695.8
17.5°	2645.6	2668.7	2690.3	2718.9	2747.3	2760.9	2774.5	2773.2
20°	2740.5	2758.2	2770.5	2786.7	2813.9	2828.9	2841.0	2836.9
22.5°	2849.2	2854.6	2855.9	2861.5	2883.1	2900.7	2917.1	2921.1
25°	2967.2	2963.1	2955.1	2951.0	2965.9	2984.9	3005.3	3010.7
27.5°	3113.9	3100.3	3079.8	3063.6	3067.7	3092.1	3115.2	3120.6
30°	3298.4	3267.2	3223.7	3192.5	3187.1	3213.0	3237.4	3245.5
32.5°	3508.9	3466.7	3407.0	3359.5	3339.2	3362.3	3383.9	3396.2
35°	3758.6	3712.4	3640.6	3579.4	3546.9	3561.8	3599.8	3613.4
37.5°	4054.5	3990.7	3910.6	3833.2	3779.0	3781.7	3822.4	3838.6
40°	4381.7	4289.3	4187.5	4091.2	4012.5	4007.0	4043.7	4055.8
42.5°	4722.4	4604.4	4484.8	4358.5	4260.9	4243.2	4290.8	4292.1
45°	5088.9	4936.8	4788.9	4642.4	4540.5	4509.2	4555.5	4560.9
47.5°	5479.8	5289.8	5114.7	4955.8	4845.8	4796.9	4841.9	4849.9
50°	5887.0	5690.3	5486.6	5310.2	5181.2	5121.4	5174.3	5179.7
52.5°	6290.1	6104.3	5902.0	5699.7	5543.6	5475.7	5538.2	5557.2
55°	6696.1	6516.8	6326.9	6124.6	5927.7	5868.0	5935.9	5956.2
57.5°	7118.2	6945.8	6773.4	6569.8	6378.3	6287.4	6360.8	6389.3
60°	7583.8	7431.7	7268.8	7063.9	6875.2	6769.3	6831.8	6864.4
62.5°	8041.2	8009.9	7862.1	7648.9	7409.9	7304.1	7357.1	7380.1
65°	8079.1	8585.6	8578.8	8367.0	8033.1	7855.1	7870.2	7881.0
67.5°	7051.6	8213.7	8956.1	9022.5	8650.7	8372.5	8339.9	8346.6
70°	4992.5	6587.5	8163.3	9197.7	9344.3	9128.4	9057.9	9068.7
71°	4000.2	5652.1	7386.9	8778.2	9333.4	9271.0	9231.6	9260.2
72.5°	2553.3	4164.5	5853.0	7517.2	8582.8	8888.2	8933.0	8950.6
75°	927.1	1791.8	3032.4	4345.0	5506.9	6306.5	6746.2	6781.6
77.5°	498.2	642.1	992.3	1482.3	1862.4	2065.9	2090.4	2099.9
80°	366.5	424.9	486.0	555.2	598.6	606.7	591.9	560.6
82.5°	259.3	293.1	317.6	342.1	359.7	344.8	286.4	218.6
85°	150.6	165.6	179.2	191.3	194.2	183.3	120.8	99.2
87.5°	59.7	65.1	63.8	72.0	69.2	63.8	47.5	40.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)