

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: P195983

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195983  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-05-D-UNV-5WQ-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 35105.6 lumens  
Efficiency: N/A  
Efficacy: 109.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G4

Input Watts (W): 320  
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

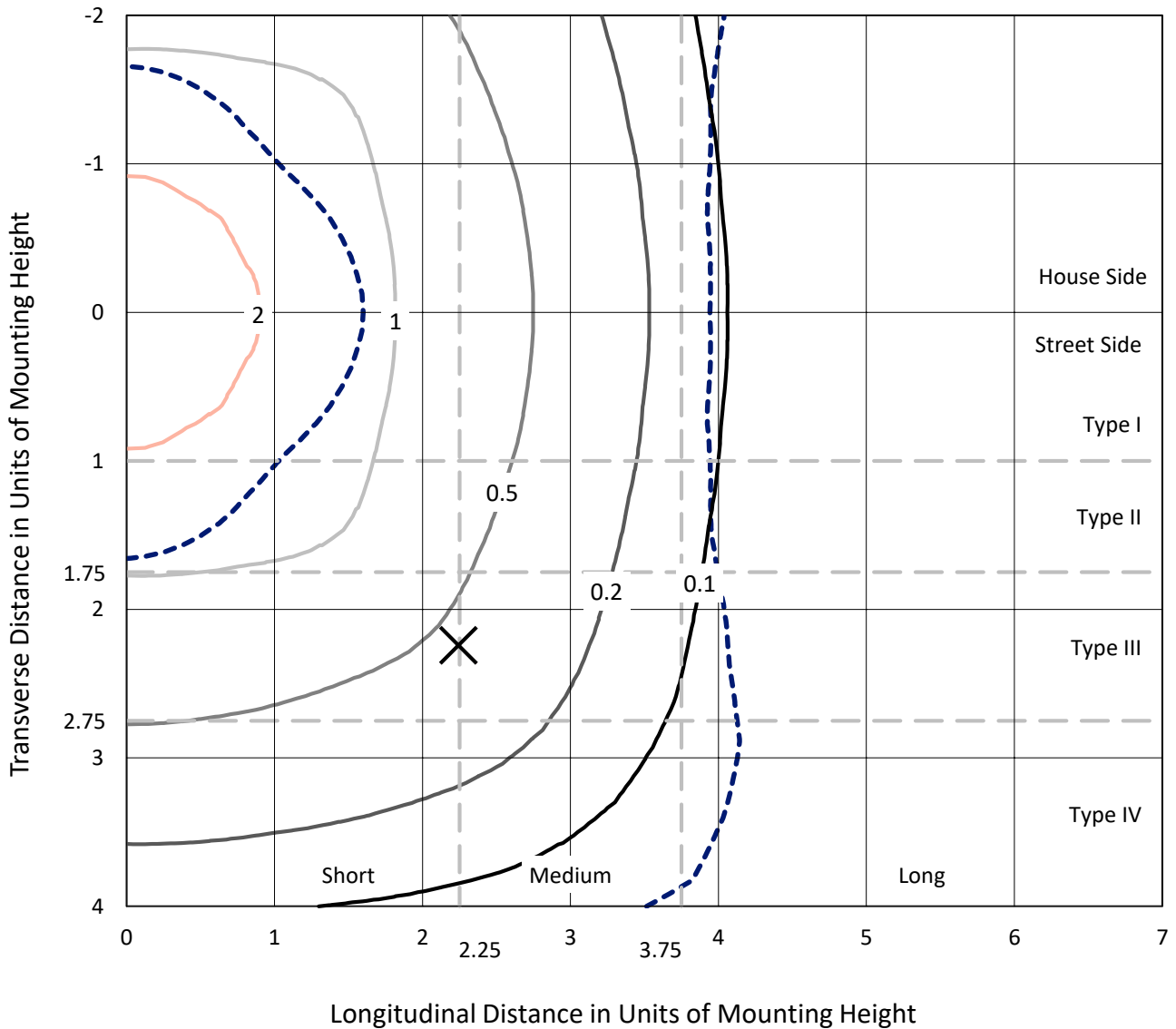


REPORT NUMBER: P195983

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-1200

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

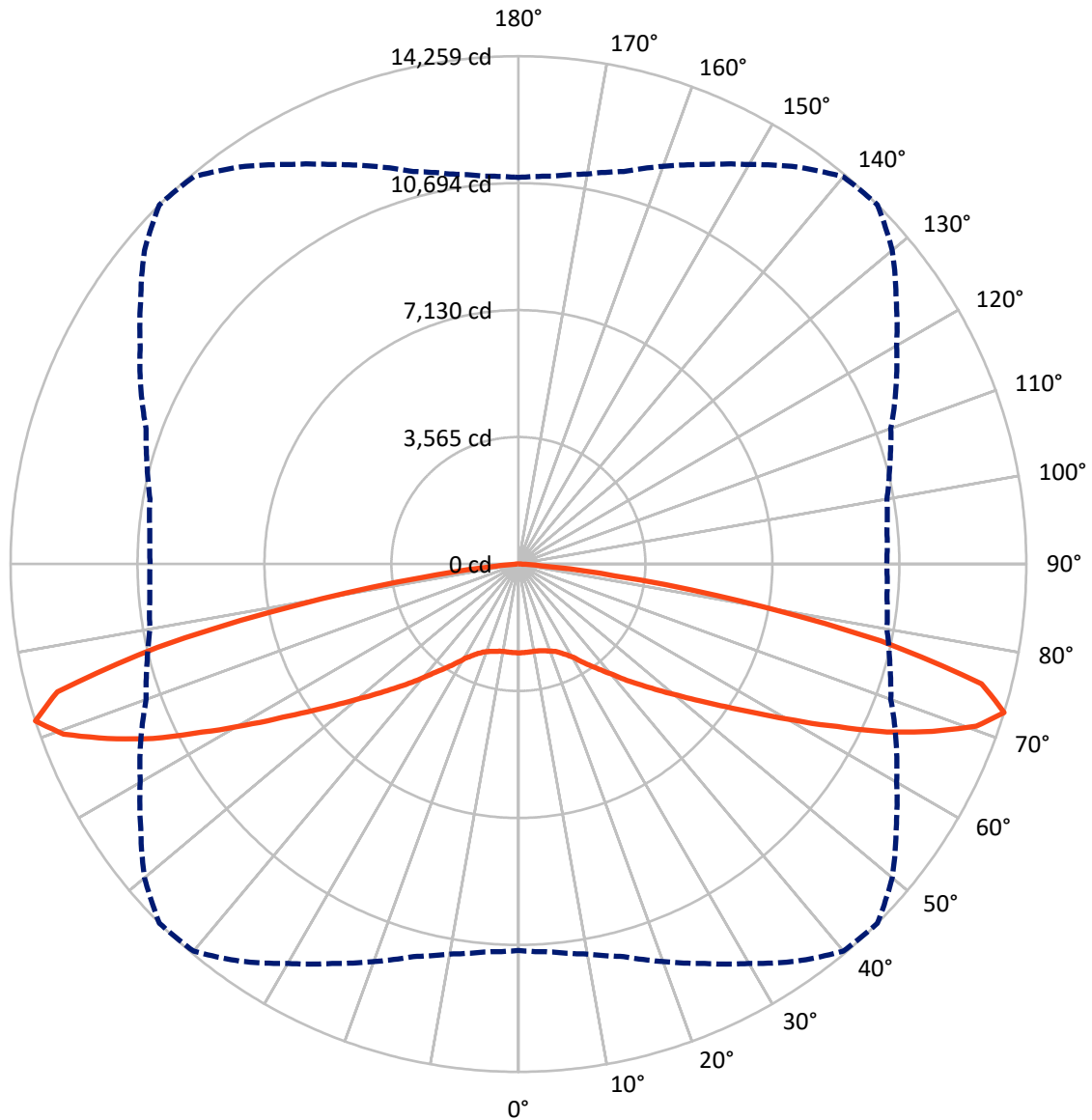


Based on 30 foot mounting height. Maximum calculated value = 2.8 fc  
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P195983

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-1200

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P195983

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-1200

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	17552.8	0.0	17552.8
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	17552.8	0.0	17552.8
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	35105.6	0.0	35105.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	238.2	0.7
10°-20°	720.9	2.1
20°-30°	1301.5	3.7
30°-40°	2220.0	6.3
40°-50°	3779.6	10.8
50°-60°	6082.7	17.3
60°-70°	10115.7	28.8
70°-80°	9785.7	27.9
80°-90°	861.3	2.5
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°	35105.6	100.0
0°-180°	35105.6	100.0



REPORT NUMBER: P195983

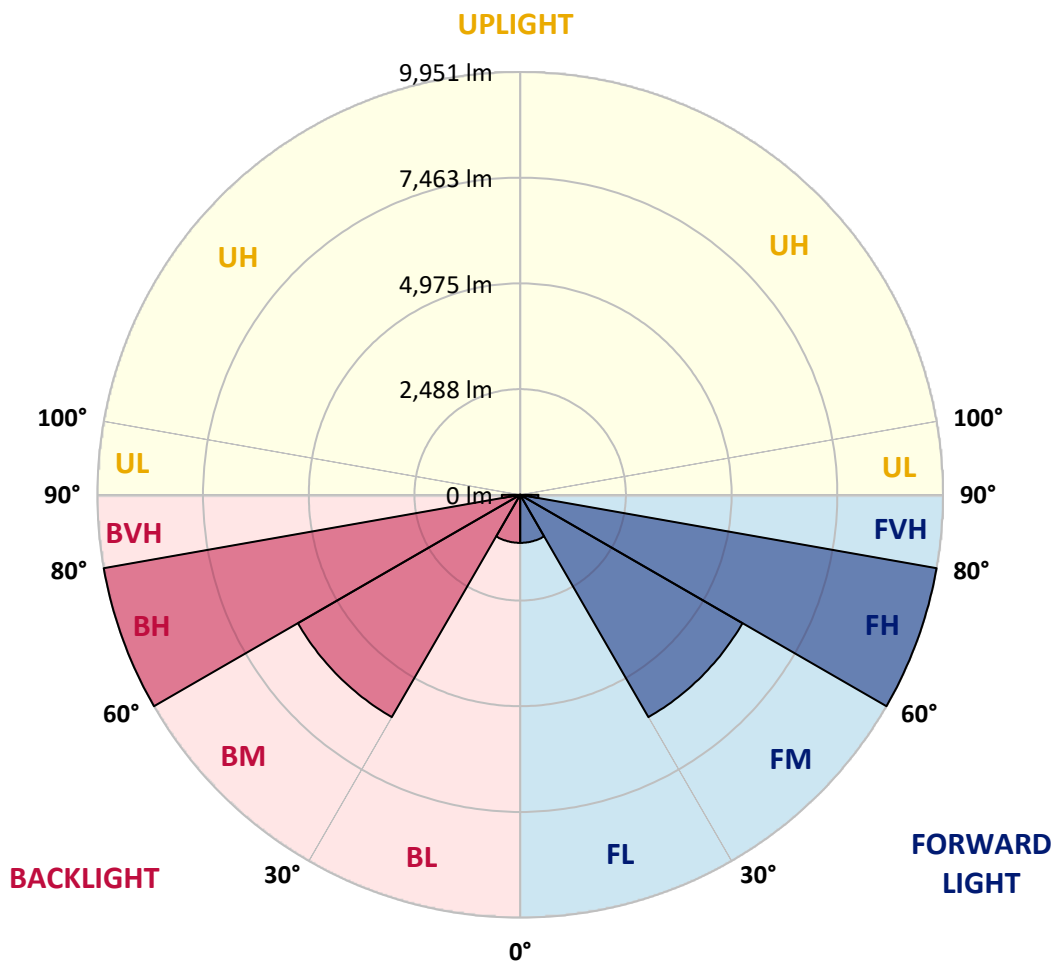
CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-1200

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1130.3	3.2			
FM	(30°-60°)	6041.2	17.2			
FH	(60°-80°)	9950.7	28.3			G4/12000
FVH	(80°-90°)	430.6	1.2			G3/500
BL	(0°-30°)	1130.3	3.2	B3/2500		
BM	(30°-60°)	6041.2	17.2	B4/8500		
BH	(60°-80°)	9950.7	28.3	B5		G4/12000
BVH	(80°-90°)	430.6	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G4**

Type V Short





REPORT NUMBER: P195983

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8
2.5°	2515.2	2515.2	2517.4	2515.2	2510.8	2508.7	2502.2	2497.9	2493.5	2491.4	2487.1
5°	2517.4	2517.4	2519.5	2517.4	2513.1	2508.7	2504.4	2497.9	2493.5	2489.2	2487.1
7.5°	2526.0	2528.1	2530.3	2528.1	2519.5	2515.2	2508.7	2502.2	2493.5	2489.2	2485.0
10°	2543.3	2543.3	2543.3	2541.1	2534.7	2526.0	2517.4	2510.8	2500.1	2489.2	2482.8
12.5°	2556.3	2558.4	2558.4	2554.1	2545.4	2534.7	2526.0	2519.5	2510.8	2502.2	2495.8
15°	2575.7	2575.7	2573.5	2564.8	2552.0	2543.3	2539.0	2536.8	2534.7	2530.3	2523.8
17.5°	2614.6	2612.4	2606.0	2593.0	2577.8	2571.4	2567.1	2567.1	2567.1	2564.8	2560.5
20°	2670.8	2670.8	2662.1	2640.5	2627.6	2621.1	2614.6	2614.6	2614.6	2608.1	2601.7
22.5°	2761.6	2763.7	2750.7	2724.8	2707.5	2694.6	2685.9	2679.4	2673.0	2668.6	2657.8
25°	2884.7	2882.6	2867.4	2835.0	2822.0	2809.0	2791.7	2781.0	2772.3	2765.9	2752.9
27.5°	3014.3	3012.2	2994.9	2966.8	2958.2	2938.7	2925.7	2910.6	2899.9	2889.0	2876.0
30°	3180.8	3169.9	3156.9	3135.3	3131.0	3115.9	3098.6	3077.0	3059.7	3042.5	3027.3
32.5°	3329.8	3329.8	3310.4	3299.5	3308.2	3301.8	3303.9	3290.9	3280.1	3273.6	3258.5
35°	3537.3	3537.3	3528.7	3515.7	3517.8	3502.7	3500.5	3502.7	3511.4	3511.4	3494.1
37.5°	3813.9	3818.2	3790.0	3785.7	3775.0	3753.3	3742.6	3746.9	3766.3	3777.1	3753.3
40°	4157.4	4166.1	4157.4	4129.3	4116.4	4079.6	4058.0	4058.0	4073.2	4083.9	4075.3
42.5°	4496.7	4511.8	4496.7	4475.1	4464.3	4436.1	4425.4	4434.0	4453.4	4466.4	4453.4
45°	4874.8	4885.6	4866.2	4840.2	4827.3	4812.2	4805.6	4812.2	4833.7	4846.7	4842.4
47.5°	5246.5	5261.5	5237.8	5227.0	5227.0	5211.9	5229.2	5246.5	5265.9	5296.1	5283.2
50°	5609.5	5628.9	5613.9	5616.0	5633.3	5661.3	5693.7	5728.3	5762.9	5795.3	5799.6
52.5°	5933.6	5963.9	5966.1	6004.9	6058.9	6102.1	6192.9	6268.5	6350.7	6378.7	6365.8
55°	6275.0	6316.1	6370.1	6430.6	6517.0	6605.6	6759.0	6895.2	7003.2	7070.2	7059.4
57.5°	6763.3	6804.5	6860.6	6960.0	7089.7	7210.7	7420.3	7632.0	7796.2	7897.8	7848.1
60°	7396.4	7439.7	7513.2	7619.0	7787.6	7951.8	8239.3	8543.9	8798.8	8915.5	8824.8
62.5°	8234.9	8276.0	8323.4	8463.9	8651.9	8863.7	9224.6	9615.6	9939.8	10052.1	9924.7
65°	9429.8	9479.5	9494.6	9609.2	9792.8	9989.4	10378.4	10819.2	11188.7	11372.3	11117.4
67.5°	10776.0	10795.4	10856.0	10990.0	11177.9	11355.1	11661.9	12079.0	12433.4	12534.9	12262.6
70°	11564.7	11603.6	11709.5	11895.3	12120.0	12398.8	12733.7	13183.2	13585.1	13632.7	13286.9
72.5°	10851.7	10931.6	11119.6	11409.2	11880.1	12375.0	12952.0	13615.4	14192.2	14259.2	13704.0
75°	8703.8	8794.5	9019.3	9336.9	9894.4	10629.1	11463.2	12459.2	13323.6	13433.8	12699.1
77.5°	4639.3	4751.6	5077.9	5505.7	6301.0	7273.3	8278.1	9414.7	10149.4	10397.9	9868.5
80°	1169.0	1229.5	1387.2	1637.9	2175.9	2960.3	3826.9	5049.8	5961.7	6348.5	5961.7
82.5°	453.8	499.2	542.4	572.6	624.5	732.5	1011.3	1648.7	2221.3	2735.6	2368.2
85°	175.0	185.9	267.9	304.6	304.6	334.9	384.6	453.8	561.8	613.7	514.2
87.5°	69.2	75.6	92.9	142.6	146.9	129.6	138.3	155.6	118.9	99.4	112.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195983

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-1200

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8	2495.8
2.5°	2485.0	2482.8	2478.5	2480.7	2478.5	2478.5	2478.5	2478.5
5°	2482.8	2482.8	2478.5	2478.5	2478.5	2480.7	2478.5	2478.5
7.5°	2480.7	2478.5	2474.1	2472.0	2472.0	2469.8	2469.8	2469.8
10°	2476.3	2472.0	2467.7	2465.5	2465.5	2461.2	2461.2	2461.2
12.5°	2487.1	2480.7	2476.3	2474.1	2474.1	2474.1	2476.3	2476.3
15°	2517.4	2504.4	2497.9	2495.8	2497.9	2502.2	2504.4	2506.5
17.5°	2549.8	2536.8	2526.0	2521.7	2523.8	2530.3	2536.8	2541.1
20°	2590.8	2580.0	2567.1	2562.7	2562.7	2571.4	2575.7	2582.1
22.5°	2649.1	2640.5	2629.7	2623.3	2619.0	2629.7	2636.2	2640.5
25°	2742.1	2733.4	2724.8	2718.3	2716.1	2727.0	2731.3	2733.4
27.5°	2865.3	2856.6	2852.3	2850.1	2843.6	2848.0	2854.4	2852.3
30°	3025.2	3031.6	3025.2	3025.2	3014.3	3018.6	3014.3	3010.0
32.5°	3239.1	3232.6	3213.1	3200.2	3185.1	3185.1	3178.6	3172.1
35°	3453.0	3431.4	3420.5	3427.1	3420.5	3424.9	3414.1	3403.3
37.5°	3705.8	3692.9	3690.7	3710.1	3705.8	3710.1	3710.1	3695.0
40°	4040.8	4032.1	4047.2	4079.6	4092.6	4090.5	4094.8	4075.3
42.5°	4425.4	4410.2	4416.7	4444.8	4460.0	4464.3	4462.1	4444.8
45°	4810.0	4814.3	4814.3	4844.6	4859.7	4868.3	4853.2	4846.7
47.5°	5244.3	5250.8	5235.7	5255.1	5259.4	5274.5	5261.5	5250.8
50°	5745.6	5721.9	5687.3	5693.7	5693.7	5689.4	5674.3	5661.3
52.5°	6305.3	6251.3	6186.4	6164.8	6141.1	6117.2	6087.1	6063.2
55°	6942.7	6849.8	6733.2	6679.1	6633.7	6579.7	6510.6	6486.7
57.5°	7681.7	7521.9	7366.3	7269.0	7152.3	7081.0	6992.4	6988.1
60°	8559.0	8342.9	8068.5	7923.7	7807.1	7722.8	7655.8	7629.9
62.5°	9572.5	9200.7	8904.8	8749.2	8613.0	8561.2	8476.9	8487.7
65°	10611.8	10233.6	9946.3	9820.9	9693.5	9658.9	9581.1	9609.2
67.5°	11737.5	11426.5	11110.9	10994.3	10877.5	10843.0	10763.1	10786.8
70°	12746.7	12351.2	11992.6	11763.5	11564.7	11404.8	11303.2	11262.2
72.5°	12947.6	12262.6	11698.7	11126.0	10795.4	10505.9	10387.0	10341.7
75°	11633.8	10570.8	9766.9	9094.9	8723.2	8301.9	8256.4	8193.8
77.5°	9049.5	7839.5	6867.1	6002.8	5503.6	4989.3	4812.2	4678.2
80°	5397.7	4148.8	3215.3	2253.8	1838.9	1480.2	1391.5	1298.6
82.5°	1931.7	1238.2	834.1	650.4	581.2	535.9	501.3	455.9
85°	466.8	393.2	371.6	337.1	332.8	283.1	200.9	179.3
87.5°	149.1	136.2	138.3	131.9	138.3	103.7	84.3	75.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)