

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: P195928

Luminaire Tested: **NAV-AF-04-D-UNV-5MQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195928
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26578.3 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

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

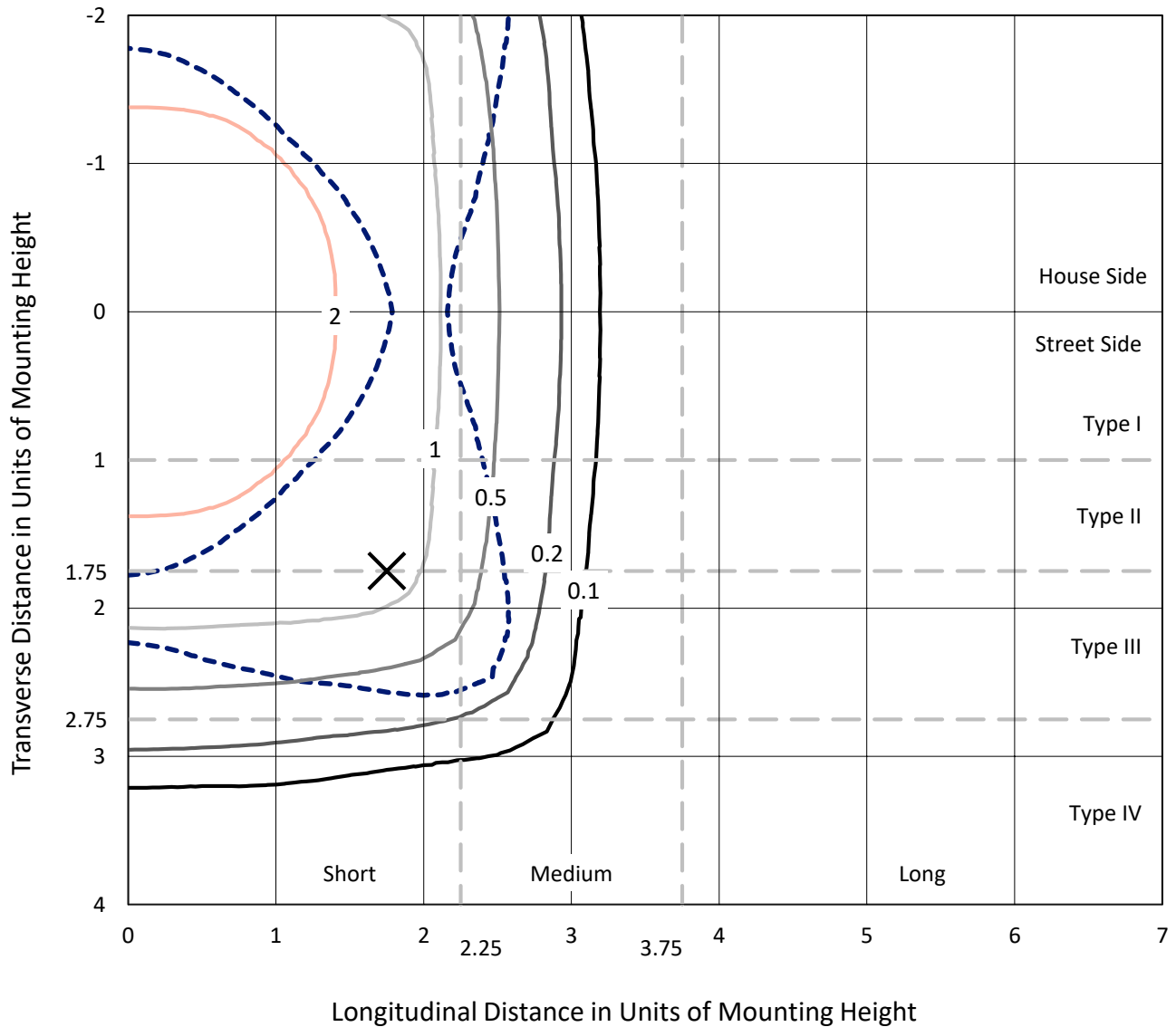


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Iso-Footcandle Lines of Horizontal Illumination

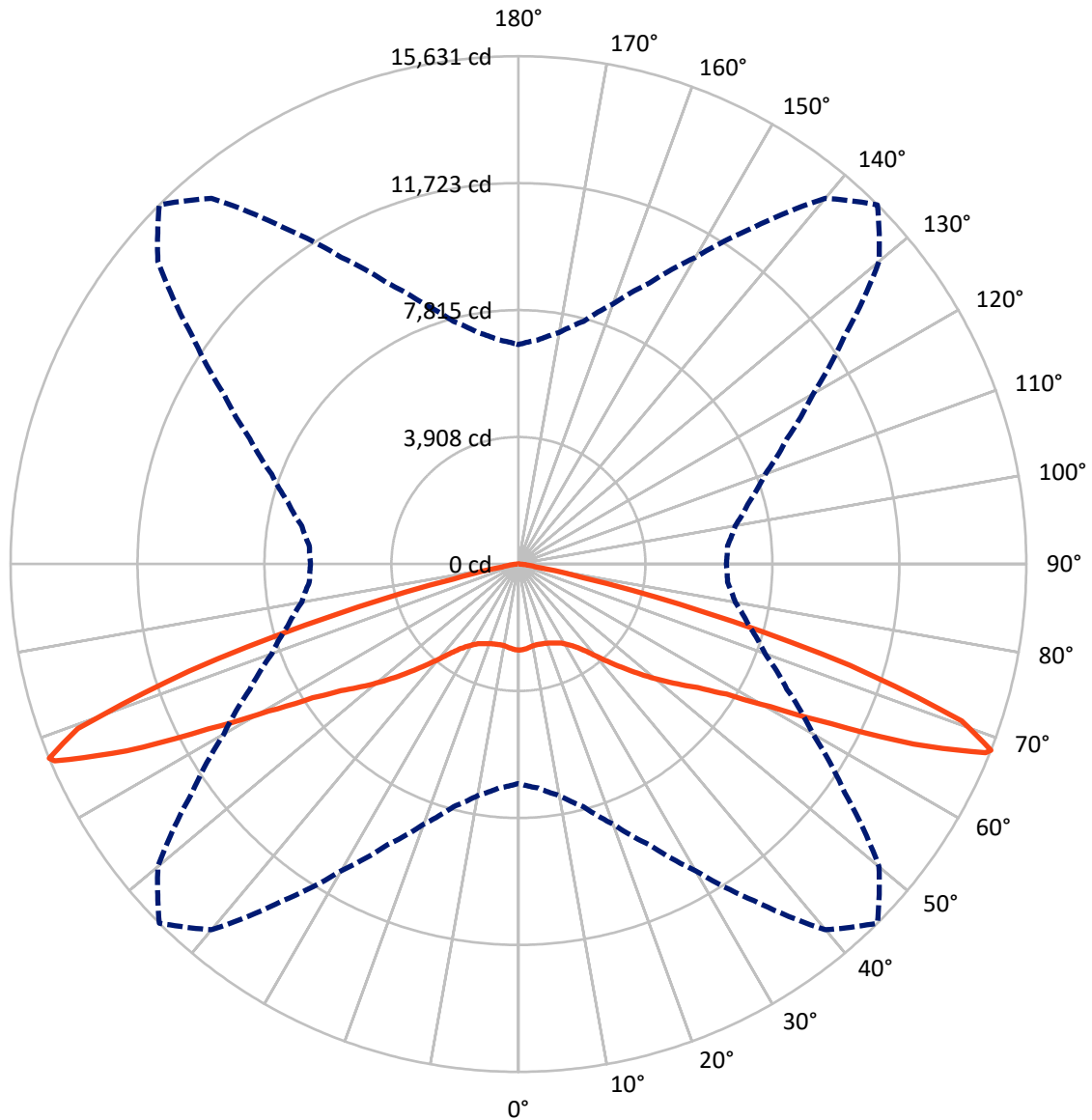
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	13289.2	0.0	13289.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	13289.2	0.0	13289.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	26578.3	0.0	26578.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.1	0.9
10°-20°	719.5	2.7
20°-30°	1223.2	4.6
30°-40°	2001.8	7.5
40°-50°	3577.4	13.5
50°-60°	6041.7	22.7
60°-70°	9368.5	35.2
70°-80°	3221.1	12.1
80°-90°	177.0	0.7
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°	26578.3	100.0
0°-180°	26578.3	100.0



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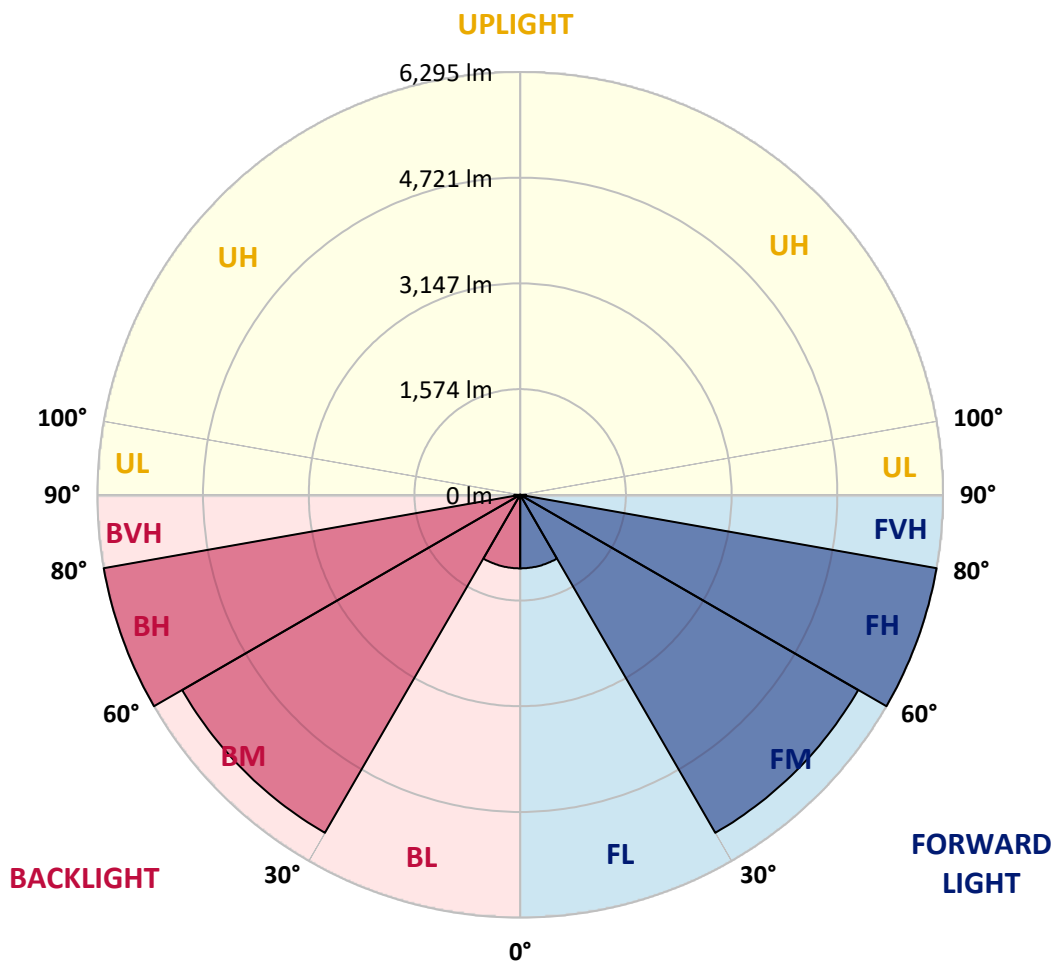
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1095.4	4.1			
FM	(30°-60°)	5810.5	21.9			
FH	(60°-80°)	6294.8	23.7			G3/7500
FVH	(80°-90°)	88.5	0.3			G1/100
BL	(0°-30°)	1095.4	4.1	B3/2500		
BM	(30°-60°)	5810.5	21.9	B4/8500		
BH	(60°-80°)	6294.8	23.7	B5		G3/7500
BVH	(80°-90°)	88.5	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3
2.5°	2662.6	2662.6	2665.9	2664.3	2659.4	2654.6	2649.6	2644.7	2641.5	2638.3	2635.0
5°	2635.0	2635.0	2639.8	2636.7	2633.4	2628.5	2625.2	2620.4	2617.1	2613.8	2615.5
7.5°	2599.2	2602.5	2605.7	2604.0	2597.6	2595.9	2591.0	2589.4	2586.1	2581.3	2583.0
10°	2568.2	2569.9	2573.1	2571.5	2569.9	2565.0	2563.4	2561.8	2560.1	2553.6	2552.0
12.5°	2537.3	2540.6	2543.9	2545.5	2543.9	2545.5	2547.1	2548.7	2547.1	2543.9	2543.9
15°	2512.9	2516.2	2521.1	2526.0	2527.6	2537.3	2543.9	2550.3	2555.2	2556.9	2552.0
17.5°	2499.9	2504.8	2511.3	2521.1	2529.2	2540.6	2552.0	2561.8	2569.9	2571.5	2566.6
20°	2498.3	2503.2	2512.9	2524.3	2539.0	2553.6	2571.5	2586.1	2594.3	2599.2	2594.3
22.5°	2509.7	2516.2	2529.2	2543.9	2561.8	2581.3	2604.0	2620.4	2636.7	2643.1	2638.3
25°	2542.2	2548.7	2563.4	2581.3	2600.9	2625.2	2648.0	2669.2	2685.5	2693.5	2687.1
27.5°	2610.6	2612.2	2628.5	2648.0	2670.8	2692.0	2721.3	2731.0	2744.1	2752.1	2744.1
30°	2706.6	2709.9	2724.5	2755.4	2776.6	2804.2	2820.5	2830.3	2844.9	2853.1	2843.3
32.5°	2853.1	2856.4	2869.4	2898.6	2918.2	2939.3	2958.9	2965.3	2980.1	2989.8	2978.4
35°	3059.7	3066.3	3077.6	3097.2	3113.5	3129.7	3144.4	3139.5	3149.3	3162.4	3150.9
37.5°	3343.0	3341.4	3344.6	3359.3	3375.5	3385.3	3408.1	3396.7	3406.4	3417.9	3411.3
40°	3673.3	3673.3	3671.8	3697.8	3704.3	3714.0	3738.5	3723.8	3736.8	3749.8	3738.5
42.5°	4049.4	4055.8	4064.0	4085.2	4103.1	4106.3	4117.7	4111.1	4127.4	4138.9	4127.4
45°	4482.3	4492.0	4501.8	4550.6	4558.8	4565.2	4573.4	4552.2	4570.1	4579.9	4576.7
47.5°	4931.4	4949.3	4970.5	5020.9	5053.5	5068.2	5074.7	5050.3	5051.8	5066.6	5068.2
50°	5439.2	5458.8	5479.9	5536.9	5567.8	5593.9	5602.0	5574.4	5577.5	5589.0	5592.3
52.5°	5908.0	5930.8	5976.3	6052.8	6096.8	6142.3	6145.6	6111.4	6126.0	6134.2	6127.7
55°	6349.0	6378.3	6438.6	6541.1	6620.8	6710.4	6751.1	6713.6	6713.6	6707.1	6703.8
57.5°	6863.4	6895.9	6957.7	7076.6	7187.3	7315.8	7426.5	7463.9	7532.3	7555.0	7519.2
60°	7638.1	7672.2	7735.7	7892.0	8031.9	8219.1	8401.4	8549.5	8790.3	8920.5	8803.4
62.5°	8346.1	8398.1	8547.9	8821.3	9124.0	9470.7	9872.7	10159.1	10597.0	10815.0	10520.4
65°	8184.9	8290.7	8583.7	9013.3	9638.3	10390.2	11208.9	11995.0	12899.9	13363.7	12764.8
67.5°	7149.8	7239.3	7555.0	8054.7	8834.3	9871.1	11143.8	12771.3	14638.1	15507.2	14447.6
68°	6754.3	6921.9	7236.0	7732.5	8518.5	9537.4	10896.4	12654.1	14691.8	15630.9	14486.7
70°	5178.8	5239.0	5540.2	5986.1	6834.0	7833.3	9205.3	11208.9	13511.9	14478.6	13301.9
72.5°	2460.8	2496.6	2692.0	3131.4	3670.1	4483.9	5694.8	7584.4	9659.4	10665.3	9491.9
75°	901.6	909.8	955.3	1059.6	1261.3	1567.4	2148.4	3323.5	4920.1	5867.2	4939.6
77.5°	486.6	488.3	506.2	532.2	568.0	608.7	696.6	934.2	1507.1	2050.7	1591.7
80°	306.0	304.3	322.2	343.4	367.9	387.4	395.5	423.2	476.9	558.2	512.7
82.5°	156.2	170.9	211.5	234.4	270.2	276.7	268.5	266.9	283.2	306.0	315.8
85°	86.2	76.5	112.3	149.8	162.8	167.7	169.3	159.5	156.2	153.0	161.1
87.5°	44.0	40.7	48.8	74.9	79.8	65.1	66.7	57.0	39.1	39.1	40.7
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°	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3
2.5°	2631.7	2633.4	2630.1	2630.1	2630.1	2631.7	2630.1	2628.5
5°	2610.6	2613.8	2613.8	2615.5	2617.1	2617.1	2617.1	2617.1
7.5°	2579.7	2581.3	2584.5	2584.5	2584.5	2584.5	2584.5	2584.5
10°	2550.3	2547.1	2545.5	2542.2	2542.2	2537.3	2539.0	2540.6
12.5°	2535.7	2529.2	2526.0	2521.1	2517.8	2512.9	2512.9	2514.5
15°	2542.2	2532.4	2522.7	2519.4	2516.2	2512.9	2509.7	2511.3
17.5°	2555.2	2543.9	2532.4	2526.0	2519.4	2514.5	2512.9	2514.5
20°	2583.0	2566.6	2548.7	2537.3	2524.3	2521.1	2516.2	2521.1
22.5°	2620.4	2600.9	2578.0	2556.9	2542.2	2535.7	2529.2	2534.1
25°	2665.9	2644.7	2621.9	2597.6	2581.3	2576.4	2568.2	2568.2
27.5°	2729.4	2711.4	2692.0	2669.2	2652.9	2648.0	2635.0	2635.0
30°	2830.3	2812.4	2794.5	2775.0	2758.7	2753.8	2737.5	2737.5
32.5°	2963.8	2944.3	2932.8	2916.5	2903.5	2895.4	2875.8	2874.3
35°	3142.8	3124.9	3123.3	3111.8	3098.8	3100.5	3080.9	3077.6
37.5°	3400.0	3385.3	3390.2	3380.4	3369.0	3378.8	3367.3	3367.3
40°	3728.7	3723.8	3728.7	3722.2	3723.8	3725.5	3715.7	3718.9
42.5°	4125.9	4112.8	4142.1	4138.9	4133.9	4146.9	4124.2	4108.0
45°	4583.1	4578.3	4607.6	4612.5	4602.7	4610.8	4570.1	4568.5
47.5°	5079.6	5079.6	5105.5	5102.4	5092.6	5094.2	5045.4	5014.5
50°	5597.1	5593.9	5619.9	5613.3	5600.3	5598.7	5548.3	5517.4
52.5°	6135.9	6135.9	6173.3	6155.4	6124.4	6109.8	6048.0	6007.3
55°	6731.5	6723.3	6734.8	6676.2	6615.9	6572.0	6495.5	6464.6
57.5°	7485.0	7390.7	7309.3	7234.4	7149.8	7097.7	7008.2	6975.6
60°	8554.3	8302.1	8193.0	8043.4	7903.3	7833.3	7714.6	7651.1
62.5°	10035.5	9617.2	9320.9	8990.5	8671.6	8446.9	8266.3	8186.6
65°	11747.6	10836.2	10082.6	9374.6	8774.1	8297.3	8031.9	7948.9
67.5°	12398.6	10725.5	9425.1	8409.5	7680.4	7112.4	6795.0	6728.3
68°	12260.3	10471.6	9120.7	8080.7	7348.4	6775.4	6459.7	6399.5
70°	10815.0	8834.3	7408.6	6373.5	5689.9	5144.6	4921.7	4825.7
72.5°	7372.7	5673.6	4352.0	3481.3	2970.2	2625.2	2420.2	2350.1
75°	3393.4	2293.3	1531.6	1144.2	971.6	888.6	825.2	808.8
77.5°	989.5	719.3	618.5	572.9	538.7	509.4	488.3	486.6
80°	470.4	441.1	428.0	398.7	367.9	340.1	320.6	323.9
82.5°	315.8	307.6	307.6	278.3	229.4	196.9	162.8	146.5
85°	167.7	174.1	183.9	174.1	151.4	112.3	73.2	79.8
87.5°	57.0	65.1	68.3	66.7	60.3	45.5	34.2	34.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)