

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: P270564

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270564
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-05-D-UNV-5MQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30520.1 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

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

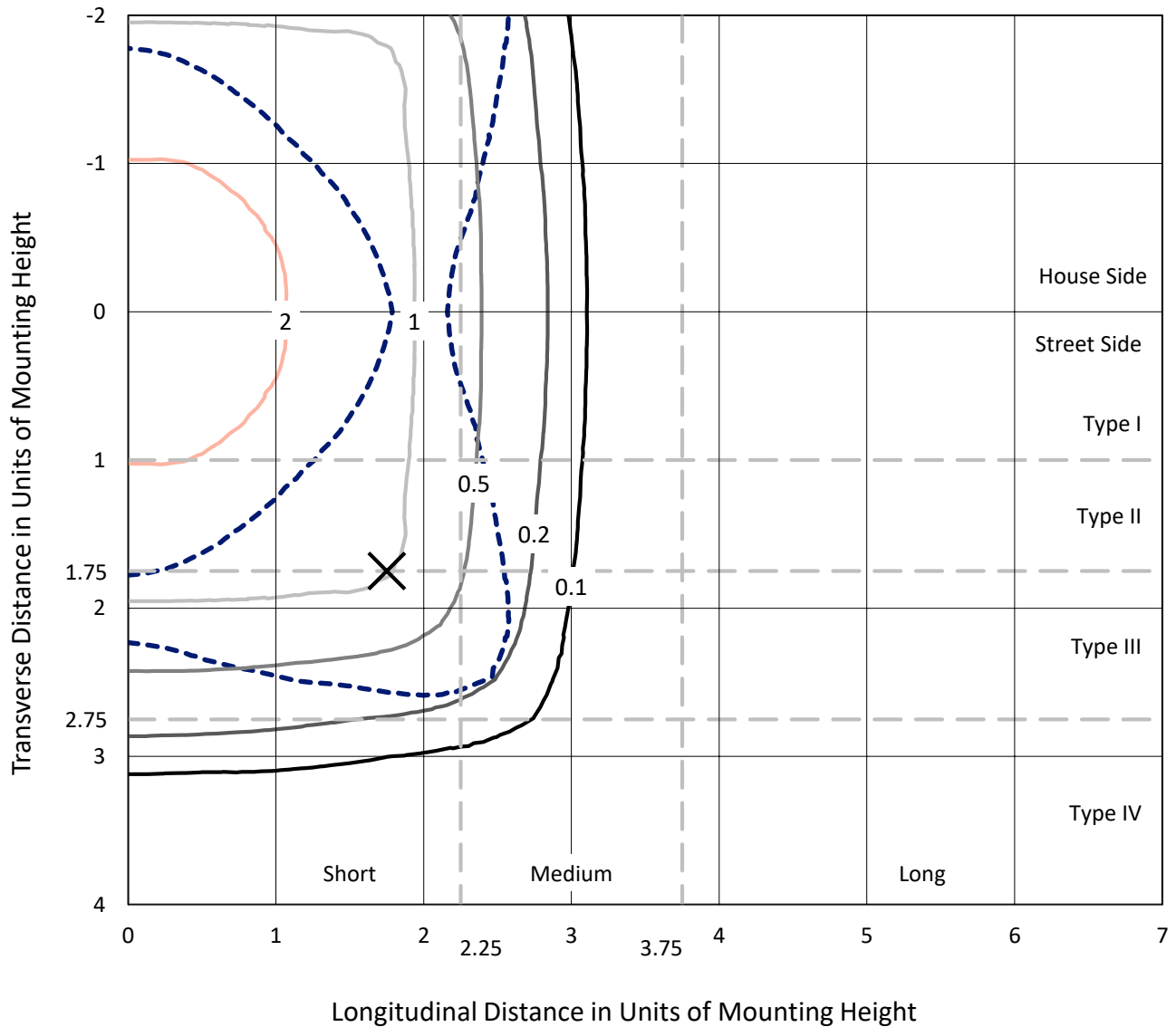


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Iso-Footcandle Lines of Horizontal Illumination

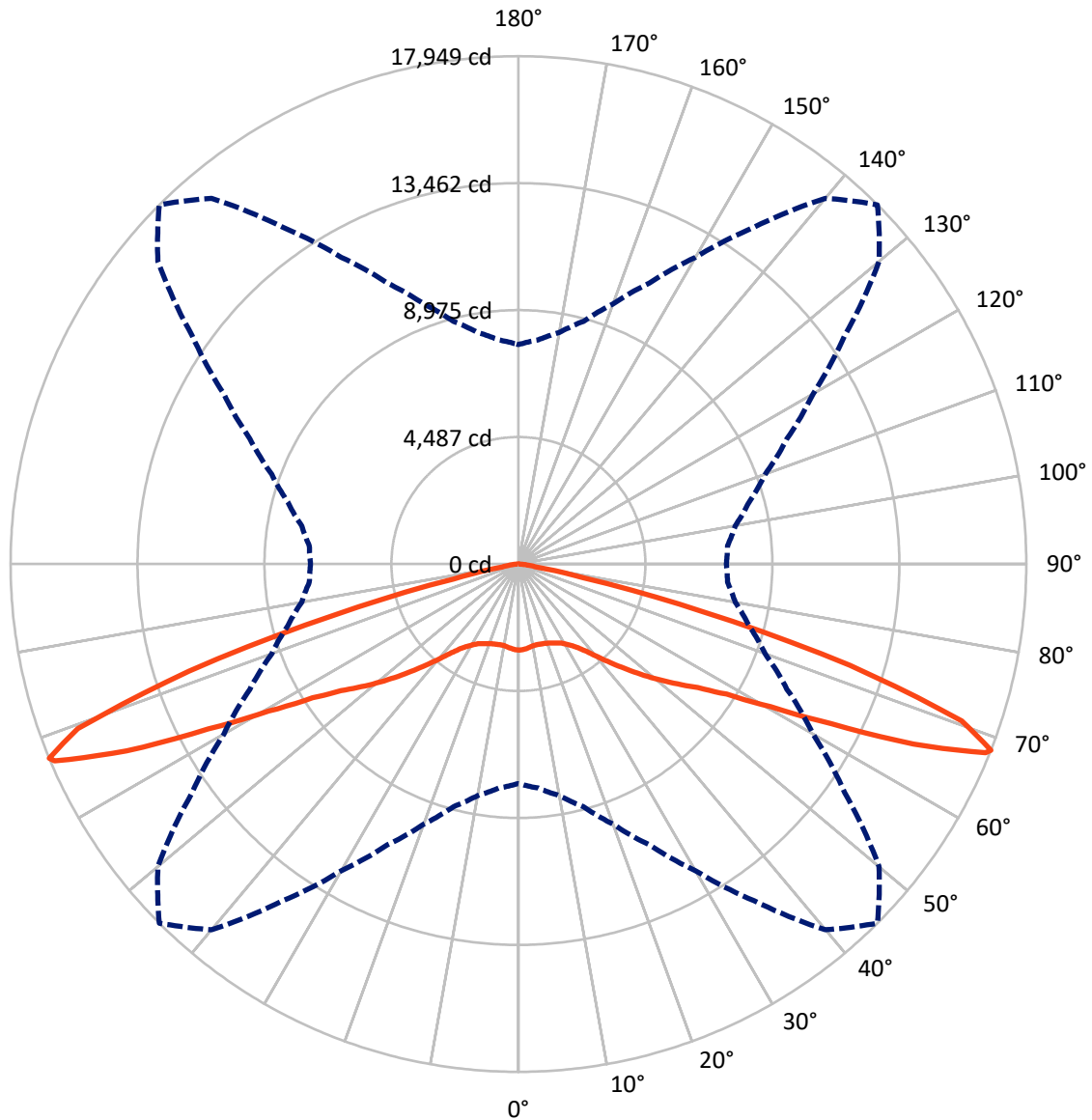
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.4 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	15260.1	0.0	15260.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15260.1	0.0	15260.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	30520.1	0.0	30520.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.9	0.9
10°-20°	826.2	2.7
20°-30°	1404.6	4.6
30°-40°	2298.7	7.5
40°-50°	4108.0	13.5
50°-60°	6937.8	22.7
60°-70°	10757.9	35.2
70°-80°	3698.8	12.1
80°-90°	203.3	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°	30520.1	100.0
0°-180°	30520.1	100.0



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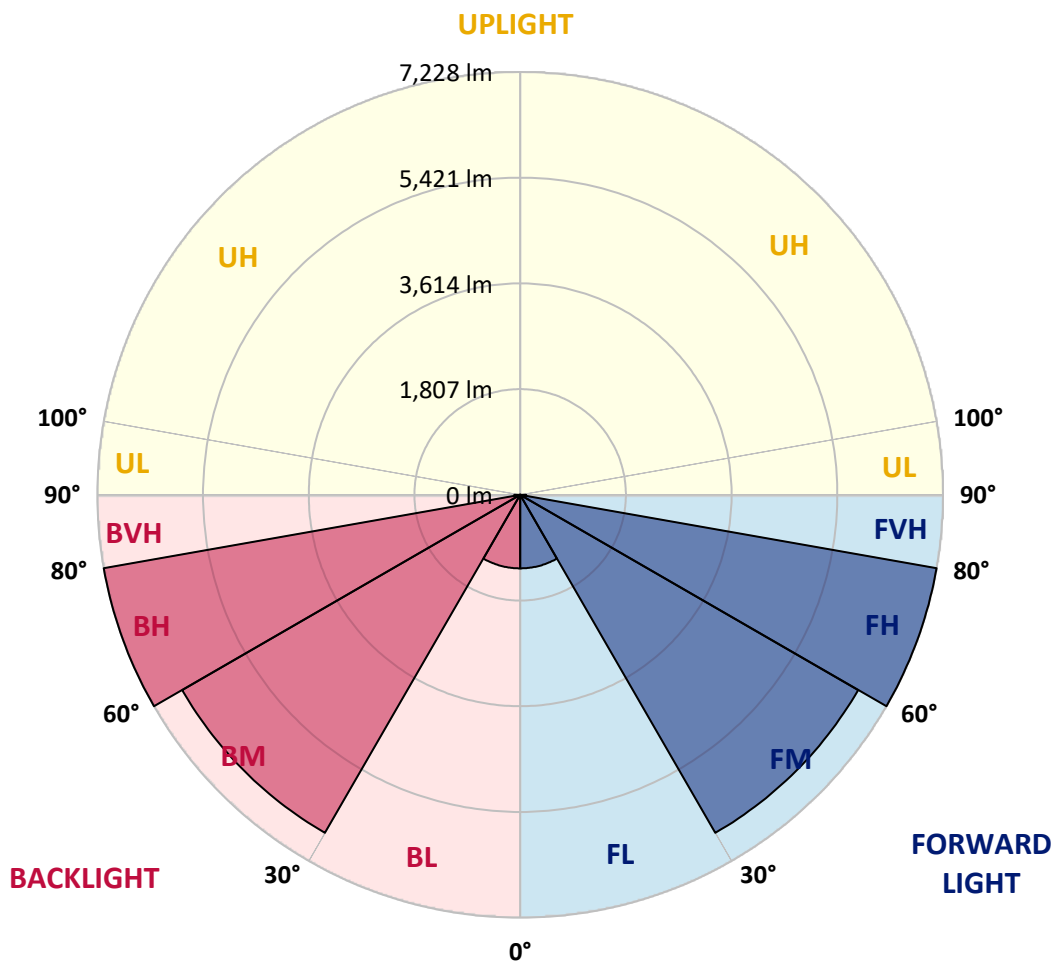
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1257.9	4.1			
FM	(30°-60°)	6672.2	21.9			
FH	(60°-80°)	7228.4	23.7			G3/7500
FVH	(80°-90°)	101.6	0.3			G2/225
BL	(0°-30°)	1257.9	4.1	B3/2500		
BM	(30°-60°)	6672.2	21.9	B4/8500		
BH	(60°-80°)	7228.4	23.7	B5		G3/7500
BVH	(80°-90°)	101.6	0.3			G2/225
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°	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4
2.5°	3057.6	3057.6	3061.3	3059.4	3053.8	3048.2	3042.6	3037.0	3033.2	3029.5	3025.9
5°	3025.9	3025.9	3031.4	3027.6	3024.0	3018.3	3014.6	3009.0	3005.2	3001.4	3003.4
7.5°	2984.7	2988.4	2992.2	2990.3	2982.8	2980.9	2975.4	2973.5	2969.7	2964.0	2965.9
10°	2949.1	2951.0	2954.7	2952.9	2951.0	2945.5	2943.6	2941.7	2939.9	2932.3	2930.5
12.5°	2913.7	2917.3	2921.1	2922.9	2921.1	2922.9	2924.9	2926.8	2924.9	2921.1	2921.1
15°	2885.6	2889.4	2895.0	2900.5	2902.5	2913.7	2921.1	2928.7	2934.3	2936.1	2930.5
17.5°	2870.7	2876.3	2883.7	2895.0	2904.3	2917.3	2930.5	2941.7	2951.0	2952.9	2947.2
20°	2868.7	2874.3	2885.6	2898.7	2915.4	2932.3	2952.9	2969.7	2979.0	2984.7	2979.0
22.5°	2881.9	2889.4	2904.3	2921.1	2941.7	2964.0	2990.3	3009.0	3027.6	3035.2	3029.5
25°	2919.2	2926.8	2943.6	2964.0	2986.5	3014.6	3040.8	3065.0	3083.7	3093.0	3085.6
27.5°	2997.7	2999.6	3018.3	3040.8	3067.0	3091.2	3124.8	3136.1	3151.1	3160.3	3151.1
30°	3108.0	3111.8	3128.5	3164.1	3188.4	3220.2	3238.8	3250.1	3266.9	3276.2	3265.0
32.5°	3276.2	3279.9	3295.0	3328.6	3350.9	3375.3	3397.7	3405.1	3422.1	3433.2	3420.1
35°	3513.6	3521.0	3534.1	3556.6	3575.3	3593.8	3610.7	3605.2	3616.3	3631.3	3618.3
37.5°	3838.7	3836.9	3840.7	3857.4	3876.1	3887.3	3913.6	3900.4	3911.7	3924.8	3917.2
40°	4218.1	4218.1	4216.3	4246.2	4253.7	4265.0	4292.9	4276.1	4291.1	4305.9	4292.9
42.5°	4649.8	4657.4	4666.8	4690.9	4711.6	4715.4	4728.4	4721.0	4739.5	4752.7	4739.5
45°	5147.0	5158.2	5169.4	5225.5	5234.9	5242.2	5251.8	5227.3	5248.0	5259.1	5255.4
47.5°	5662.8	5683.3	5707.7	5765.6	5803.1	5819.8	5827.3	5799.3	5801.2	5818.0	5819.8
50°	6245.9	6268.4	6292.6	6358.1	6393.5	6423.5	6432.9	6401.1	6404.7	6417.9	6421.7
52.5°	6784.2	6810.4	6862.7	6950.5	7001.0	7053.3	7057.1	7017.7	7034.6	7044.0	7036.6
55°	7290.6	7324.3	7393.5	7511.2	7602.7	7705.7	7752.4	7709.3	7709.3	7701.8	7698.0
57.5°	7881.3	7918.6	7989.6	8126.1	8253.2	8400.8	8527.9	8570.9	8649.4	8675.6	8634.4
60°	8770.8	8810.0	8883.0	9062.5	9223.2	9438.0	9647.3	9817.4	10094.1	10243.6	10108.9
62.5°	9583.8	9643.7	9815.6	10129.6	10477.2	10875.3	11336.9	11665.7	12168.6	12419.0	12080.8
65°	9398.8	9520.2	9856.7	10350.1	11067.7	11931.2	12871.3	13773.9	14813.1	15345.7	14658.0
67.5°	8210.1	8312.9	8675.6	9249.3	10144.5	11335.1	12796.5	14665.4	16809.1	17807.1	16590.4
68°	7756.1	7948.6	8309.2	8879.2	9782.0	10951.9	12512.4	14530.9	16870.8	17949.2	16635.4
70°	5946.9	6016.0	6361.7	6873.9	7847.7	8995.1	10570.6	12871.3	15515.7	16625.9	15274.7
72.5°	2825.8	2866.9	3091.2	3595.8	4214.4	5148.8	6539.3	8709.2	11092.0	12247.0	10899.6
75°	1035.3	1044.6	1097.1	1216.7	1448.3	1799.8	2466.9	3816.3	5649.8	6737.5	5672.2
77.5°	558.8	560.7	581.3	611.1	652.3	699.1	799.9	1072.8	1730.7	2354.8	1827.8
80°	351.3	349.5	370.0	394.4	422.4	444.8	454.2	486.0	547.5	641.0	588.7
82.5°	179.4	196.2	242.9	269.1	310.3	317.7	308.4	306.5	325.1	351.3	362.6
85°	99.1	87.9	128.9	171.9	186.8	192.4	194.4	183.2	179.4	175.7	185.1
87.5°	50.5	46.7	56.1	86.0	91.5	74.7	76.6	65.3	44.8	44.8	46.7
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°	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4	3044.4
2.5°	3022.1	3024.0	3020.2	3020.2	3020.2	3022.1	3020.2	3018.3
5°	2997.7	3001.4	3001.4	3003.4	3005.2	3005.2	3005.2	3005.2
7.5°	2962.3	2964.0	2967.8	2967.8	2967.8	2967.8	2967.8	2967.8
10°	2928.7	2924.9	2922.9	2919.2	2919.2	2913.7	2915.4	2917.3
12.5°	2911.8	2904.3	2900.5	2895.0	2891.3	2885.6	2885.6	2887.5
15°	2919.2	2908.1	2896.9	2893.1	2889.4	2885.6	2881.9	2883.7
17.5°	2934.3	2921.1	2908.1	2900.5	2893.1	2887.5	2885.6	2887.5
20°	2965.9	2947.2	2926.8	2913.7	2898.7	2895.0	2889.4	2895.0
22.5°	3009.0	2986.5	2960.4	2936.1	2919.2	2911.8	2904.3	2909.9
25°	3061.3	3037.0	3010.8	2982.8	2964.0	2958.5	2949.1	2949.1
27.5°	3134.1	3113.6	3091.2	3065.0	3046.3	3040.8	3025.9	3025.9
30°	3250.1	3229.4	3208.9	3186.5	3167.9	3162.3	3143.4	3143.4
32.5°	3403.3	3381.0	3367.7	3349.2	3334.1	3324.7	3302.3	3300.6
35°	3608.9	3588.3	3586.5	3573.4	3558.5	3560.3	3537.9	3534.1
37.5°	3904.2	3887.3	3893.0	3881.8	3868.7	3879.9	3866.8	3866.8
40°	4281.7	4276.1	4281.7	4274.2	4276.1	4278.0	4266.8	4270.5
42.5°	4737.8	4722.7	4756.4	4752.7	4747.1	4762.1	4735.9	4717.2
45°	5262.9	5257.3	5290.8	5296.5	5285.3	5294.7	5248.0	5246.0
47.5°	5833.0	5833.0	5862.8	5859.0	5847.8	5849.8	5793.7	5758.1
50°	6427.3	6423.5	6453.5	6445.9	6431.0	6429.1	6371.1	6335.7
52.5°	7045.9	7045.9	7088.9	7068.3	7032.8	7015.9	6944.9	6898.2
55°	7729.8	7720.6	7733.6	7666.3	7597.1	7546.8	7458.8	7423.4
57.5°	8595.3	8486.7	8393.4	8307.3	8210.1	8150.4	8047.6	8010.1
60°	9823.1	9533.4	9408.2	9236.3	9075.4	8995.1	8858.6	8785.9
62.5°	11523.7	11043.5	10703.3	10324.0	9957.6	9699.7	9492.3	9400.8
65°	13489.8	12443.3	11578.0	10765.0	10075.4	9527.8	9223.2	9127.8
67.5°	14237.4	12316.2	10822.9	9656.7	8819.5	8167.2	7802.8	7726.1
68°	14078.5	12024.6	10473.5	9279.2	8438.1	7780.3	7417.8	7348.7
70°	12419.0	10144.5	8507.4	7318.8	6533.7	5907.7	5651.6	5541.4
72.5°	8466.3	6515.0	4997.5	3997.6	3410.8	3014.6	2779.0	2698.7
75°	3896.7	2633.3	1758.6	1313.9	1115.8	1020.5	947.5	928.8
77.5°	1136.3	826.1	710.2	657.9	618.7	584.9	560.7	558.8
80°	540.2	506.5	491.6	457.9	422.4	390.7	368.1	371.9
82.5°	362.6	353.3	353.3	319.5	263.6	226.2	186.8	168.3
85°	192.4	200.0	211.2	200.0	173.8	128.9	84.1	91.5
87.5°	65.3	74.7	78.5	76.6	69.2	52.3	39.3	39.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)