

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: P195088

Luminaire Tested: **NAV-AF-04-D-UNV-RW-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195088
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-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24931 lumens
Efficiency: N/A
Efficacy: 110.8 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

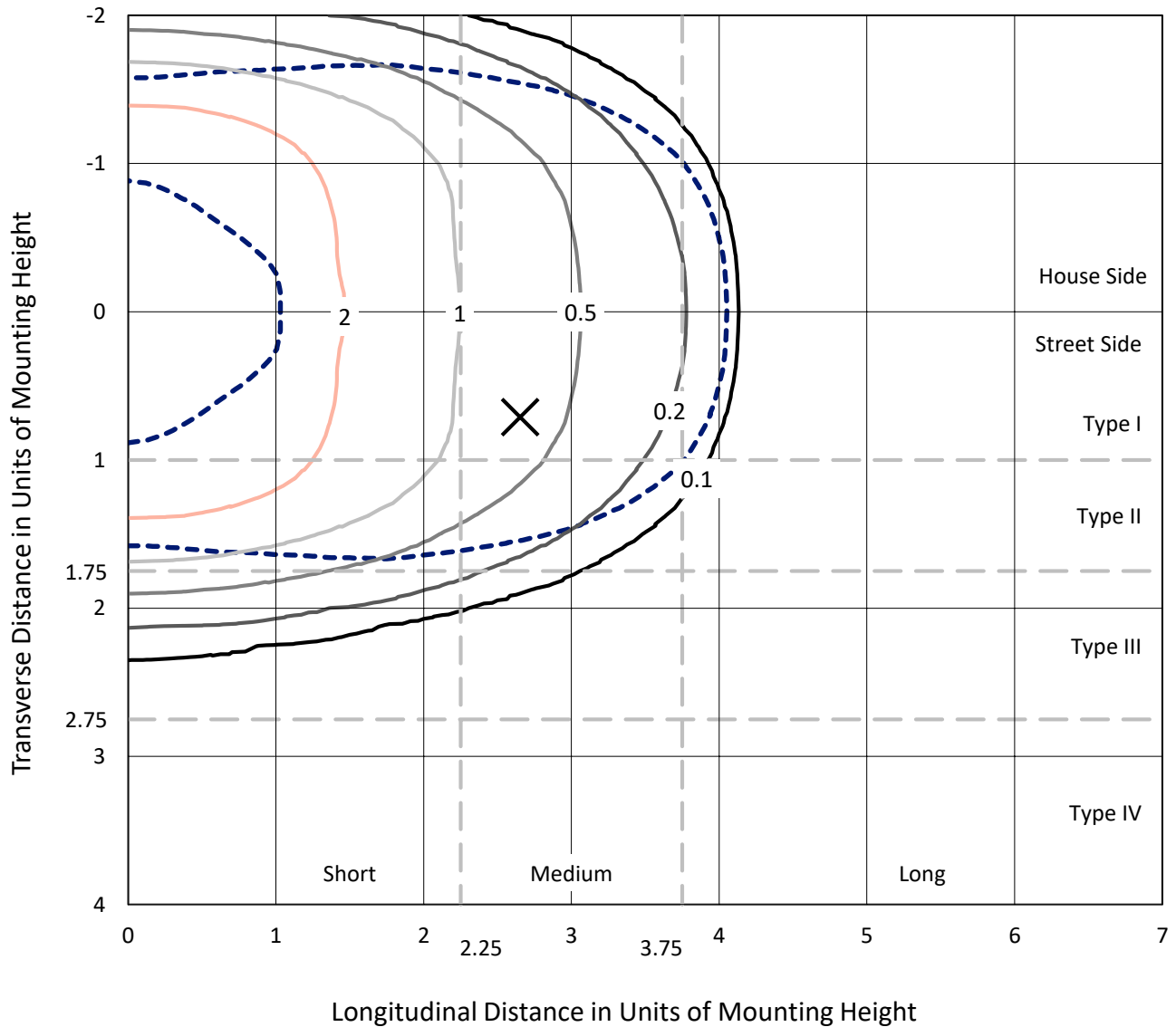
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

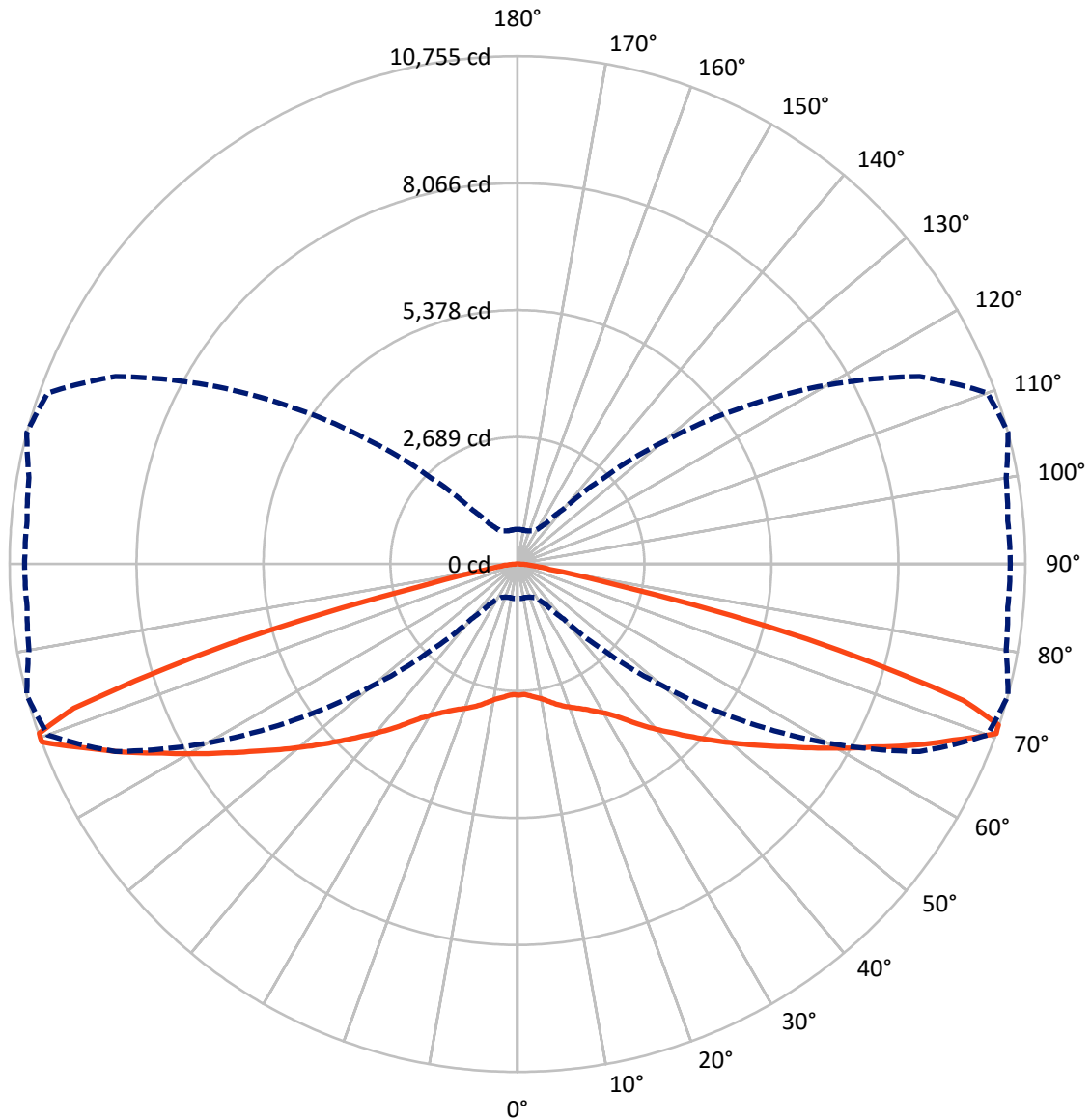
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 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
House Side	Lumens	12465.5	0.0	12465.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12465.5	0.0	12465.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	24931.0	0.0	24931.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.3	1.1
10°-20°	825.9	3.3
20°-30°	1551.1	6.2
30°-40°	2732.4	11.0
40°-50°	4528.4	18.2
50°-60°	6299.7	25.3
60°-70°	5947.1	23.9
70°-80°	2540.0	10.2
80°-90°	240.0	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°	24931.0	100.0
0°-180°	24931.0	100.0



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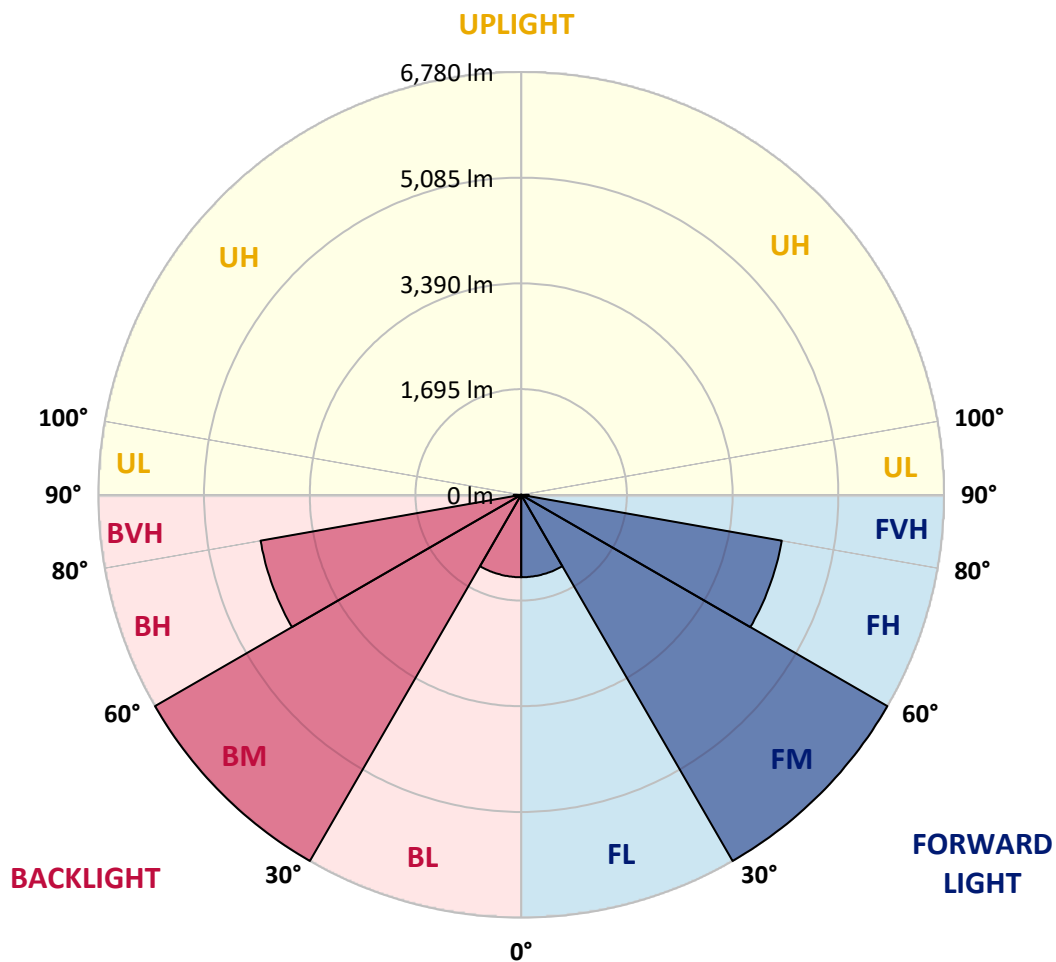
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1321.7	5.3			
FM	(30°-60°)	6780.3	27.2			
FH	(60°-80°)	4243.6	17.0			G2/5000
FVH	(80°-90°)	120.0	0.5			G2/225
BL	(0°-30°)	1321.7	5.3	B3/2500		
BM	(30°-60°)	6780.3	27.2	B4/8500		
BH	(60°-80°)	4243.6	17.0	B4/5000		G4/5000
BVH	(80°-90°)	120.0	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°	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3
2.5°	2793.5	2791.9	2793.5	2788.8	2790.4	2788.8	2788.8	2782.6	2782.6	2779.4	2774.7
5°	2762.2	2765.4	2765.4	2765.4	2770.1	2770.1	2776.3	2777.9	2782.6	2787.2	2790.4
7.5°	2710.7	2712.3	2716.9	2720.1	2729.4	2741.9	2754.4	2768.5	2781.0	2796.6	2813.8
10°	2666.9	2670.1	2677.9	2685.7	2702.9	2718.5	2740.4	2762.2	2784.1	2810.7	2837.2
12.5°	2643.5	2648.2	2660.7	2673.2	2699.8	2720.1	2749.7	2784.1	2813.8	2838.8	2868.5
15°	2646.6	2648.2	2665.4	2682.6	2720.1	2748.2	2790.4	2831.0	2866.9	2895.0	2929.4
17.5°	2691.9	2695.1	2712.3	2737.3	2773.2	2809.1	2854.4	2896.6	2945.0	2977.9	3018.5
20°	2781.0	2785.7	2804.4	2831.0	2870.1	2907.5	2954.4	2998.2	3048.2	3087.2	3127.8
22.5°	2896.6	2904.4	2924.7	2957.5	2996.6	3041.9	3090.3	3135.7	3182.5	3221.6	3256.0
25°	3051.3	3060.7	3082.5	3115.3	3154.4	3202.8	3252.8	3299.7	3348.1	3377.8	3405.9
27.5°	3259.1	3274.7	3298.1	3324.7	3359.1	3410.6	3457.5	3496.6	3543.4	3576.2	3595.0
30°	3538.7	3560.6	3579.4	3607.5	3632.5	3687.2	3724.7	3755.9	3791.8	3810.6	3815.3
32.5°	3880.9	3901.2	3920.0	3940.3	3974.6	4024.6	4060.6	4077.8	4096.5	4093.4	4076.2
35°	4266.8	4282.4	4293.4	4329.3	4385.5	4418.3	4444.9	4451.2	4454.3	4421.5	4388.7
37.5°	4673.0	4691.8	4701.1	4757.4	4810.5	4848.0	4860.5	4874.6	4865.2	4810.5	4751.1
40°	5112.0	5132.3	5160.5	5208.9	5271.4	5307.3	5323.0	5321.4	5313.6	5249.5	5152.7
42.5°	5543.2	5568.2	5591.7	5676.0	5727.6	5788.5	5796.3	5794.8	5777.6	5704.2	5591.7
45°	5908.8	5938.5	5987.0	6080.7	6163.5	6236.9	6266.6	6277.6	6260.4	6182.3	6054.1
47.5°	6210.4	6230.7	6291.6	6405.7	6511.9	6619.7	6679.1	6721.3	6719.7	6663.5	6527.5
50°	6416.6	6440.0	6515.0	6643.1	6775.9	6902.5	7019.7	7115.0	7160.3	7119.7	6993.1
52.5°	6476.0	6505.7	6604.1	6757.2	6911.9	7082.2	7257.2	7425.9	7527.4	7552.4	7454.0
55°	6226.0	6258.8	6402.5	6615.0	6869.7	7121.2	7386.8	7627.4	7836.8	7933.7	7894.6
57.5°	5497.9	5521.4	5704.2	5979.1	6343.2	6785.3	7232.2	7672.7	8032.1	8283.6	8327.4
60°	4348.0	4377.7	4577.7	4868.3	5282.3	5841.7	6466.6	7188.4	7893.0	8469.5	8755.5
62.5°	2934.1	2954.4	3146.6	3412.2	3865.3	4404.3	5101.1	6015.1	7019.7	8049.3	8855.4
65°	1540.5	1540.5	1670.2	1856.1	2217.0	2699.8	3413.8	4351.2	5546.4	6832.2	8180.5
67.5°	893.7	892.1	921.8	964.0	1078.0	1273.3	1667.0	2356.0	3487.2	4983.9	6518.2
70°	737.4	732.7	728.1	728.1	745.2	774.9	849.9	1039.0	1520.2	2570.1	4010.6
71°	704.6	701.5	689.0	684.3	692.1	707.7	740.6	828.0	1079.6	1753.0	2995.0
72.5°	665.6	657.8	639.0	631.2	632.8	639.0	648.4	682.8	759.3	996.8	1707.7
75°	606.2	587.4	564.0	553.1	548.4	546.8	546.8	556.2	573.4	601.5	699.9
77.5°	537.5	510.9	485.9	475.0	467.1	462.5	459.3	453.1	450.0	462.5	498.4
80°	454.6	426.5	406.2	400.0	395.3	385.9	373.4	360.9	353.1	359.3	381.2
82.5°	351.5	323.4	326.5	328.1	320.3	304.7	292.2	278.1	264.0	260.9	271.9
85°	279.7	265.6	256.2	276.5	259.4	240.6	223.4	200.0	167.2	137.5	150.0
87.5°	120.3	121.9	175.0	264.0	231.2	185.9	154.7	125.0	79.7	59.4	60.9
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°	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3	2776.3
2.5°	2773.2	2773.2	2768.5	2765.4	2765.4	2765.4	2762.2	2763.8
5°	2791.9	2795.1	2798.2	2796.6	2801.3	2806.0	2804.4	2802.9
7.5°	2823.2	2832.6	2841.9	2846.6	2852.9	2859.1	2860.7	2856.0
10°	2854.4	2873.2	2887.2	2899.7	2907.5	2913.8	2918.5	2916.9
12.5°	2893.5	2920.0	2945.0	2970.0	2987.2	2996.6	3006.0	3002.9
15°	2957.5	2987.2	3018.5	3051.3	3077.8	3091.9	3106.0	3102.8
17.5°	3045.0	3071.6	3096.6	3129.4	3162.2	3177.8	3193.5	3191.9
20°	3154.4	3174.7	3188.8	3207.5	3238.8	3256.0	3270.0	3265.3
22.5°	3279.4	3285.6	3287.2	3293.5	3318.4	3338.8	3357.5	3362.2
25°	3415.3	3410.6	3401.3	3396.6	3413.8	3435.6	3459.1	3465.3
27.5°	3584.0	3568.4	3545.0	3526.2	3530.9	3559.1	3585.6	3591.9
30°	3796.5	3760.6	3710.6	3674.7	3668.4	3698.1	3726.2	3735.6
32.5°	4038.7	3990.3	3921.5	3866.8	3843.4	3870.0	3895.0	3909.0
35°	4326.2	4273.0	4190.2	4119.9	4082.4	4099.6	4143.4	4159.0
37.5°	4666.8	4593.3	4501.2	4412.1	4349.6	4352.7	4399.6	4418.3
40°	5043.3	4937.1	4819.9	4708.9	4618.3	4612.1	4654.3	4668.3
42.5°	5435.4	5299.5	5162.0	5016.7	4904.2	4883.9	4938.6	4940.2
45°	5857.3	5682.3	5512.0	5343.3	5226.1	5190.2	5243.3	5249.5
47.5°	6307.2	6088.5	5887.0	5704.2	5577.6	5521.4	5572.9	5582.3
50°	6775.9	6549.4	6315.1	6111.9	5963.5	5894.8	5955.7	5962.0
52.5°	7240.0	7025.9	6793.1	6560.3	6380.7	6302.6	6374.4	6396.3
55°	7707.1	7500.9	7282.2	7049.4	6822.8	6754.1	6832.2	6855.6
57.5°	8193.0	7994.6	7796.2	7561.8	7341.5	7236.8	7321.2	7354.0
60°	8728.9	8553.9	8366.4	8130.5	7913.3	7791.5	7863.3	7900.8
62.5°	9255.4	9219.5	9049.2	8803.9	8528.9	8407.0	8468.0	8494.5
65°	9299.2	9881.9	9874.1	9630.4	9246.0	9041.4	9058.6	9071.1
67.5°	8116.4	9453.8	10308.4	10385.0	9956.9	9636.6	9599.1	9606.9
70°	5746.4	7582.1	9396.0	10586.5	10755.3	10506.9	10425.6	10438.1
71°	4604.3	6505.7	8502.4	10103.8	10742.8	10670.9	10625.6	10658.4
72.5°	2938.8	4793.3	6736.9	8652.3	9878.8	10230.3	10281.9	10302.2
75°	1067.1	2062.3	3490.3	5001.1	6338.5	7258.7	7764.9	7805.5
77.5°	573.4	739.0	1142.1	1706.1	2143.6	2377.9	2406.0	2417.0
80°	421.8	489.0	559.3	639.0	689.0	698.4	681.2	645.3
82.5°	298.4	337.5	365.6	393.7	414.0	396.8	329.7	251.5
85°	173.4	190.6	206.2	220.3	223.4	210.9	139.0	114.1
87.5°	68.7	75.0	73.4	82.8	79.7	73.4	54.7	46.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)