

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: P195574

Luminaire Tested: **NAV-AF-04-D-UNV-RW-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195574
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-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27349 lumens
Efficiency: N/A
Efficacy: 106.0 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): 258
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

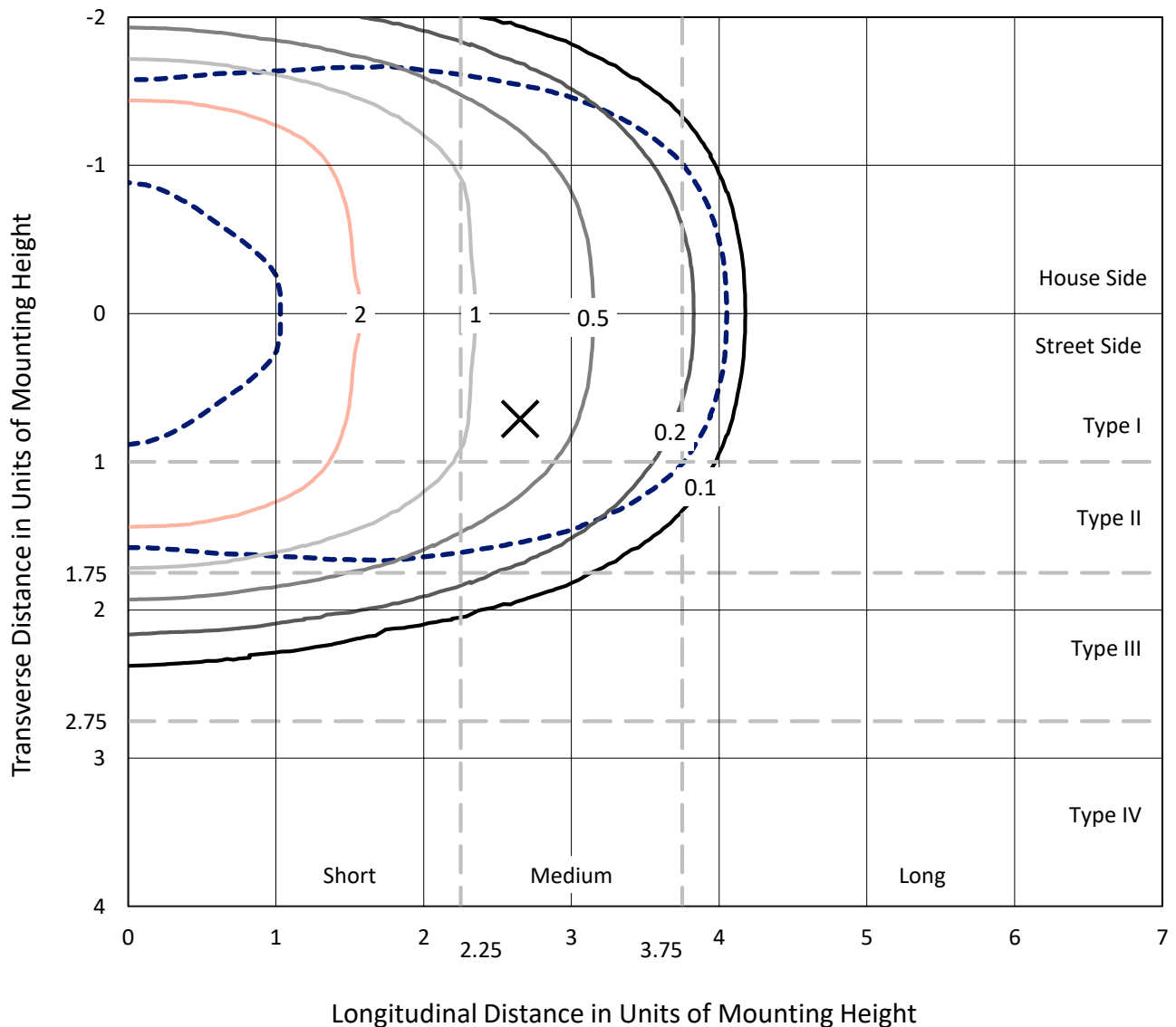


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Iso-Footcandle Lines of Horizontal Illumination

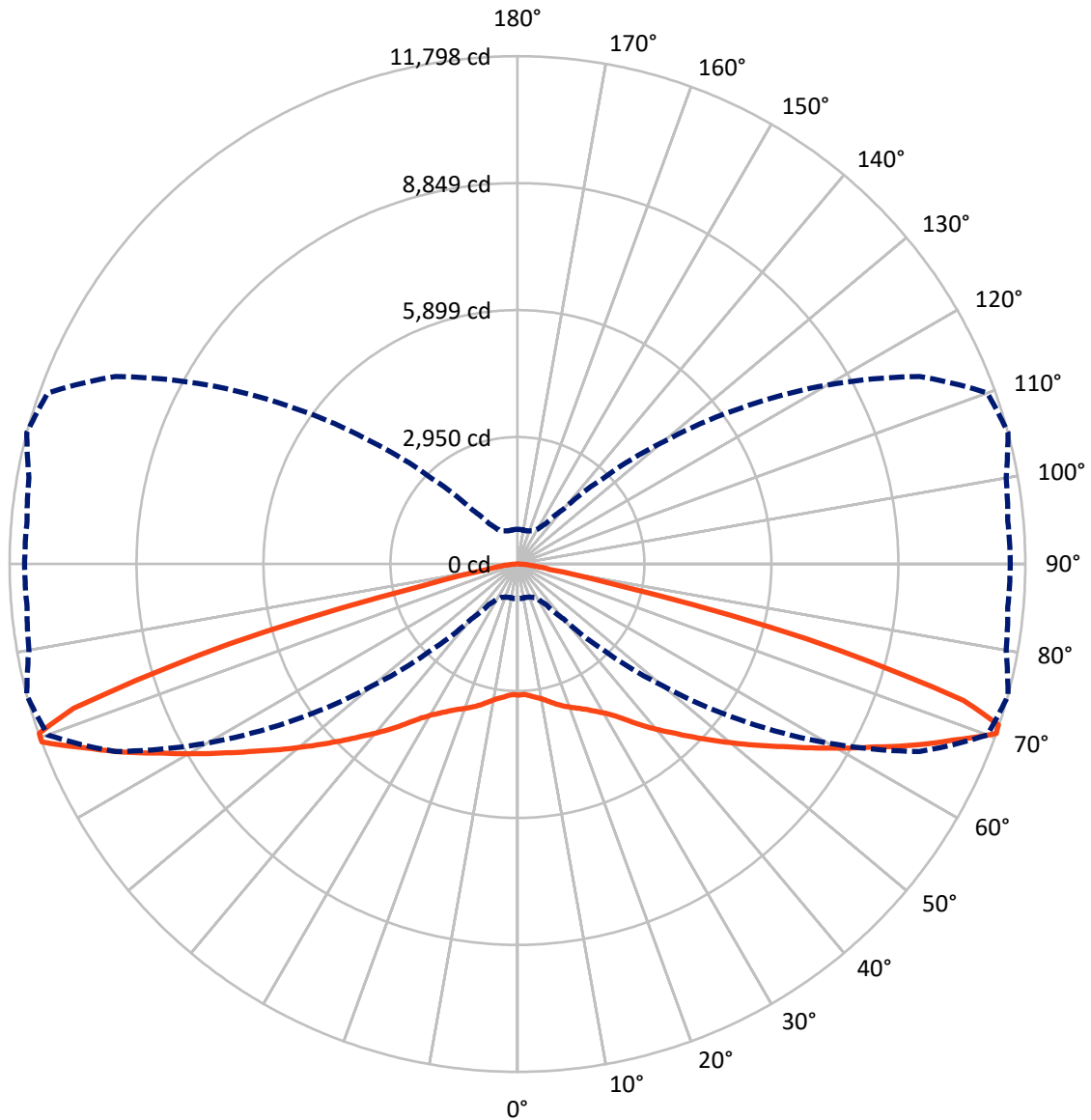
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 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
House Side	Lumens	13674.5	0.0	13674.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	13674.5	0.0	13674.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	27349.0	0.0	27349.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.1	1.1
10°-20°	906.0	3.3
20°-30°	1701.6	6.2
30°-40°	2997.4	11.0
40°-50°	4967.6	18.2
50°-60°	6910.7	25.3
60°-70°	6523.9	23.9
70°-80°	2786.4	10.2
80°-90°	263.3	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°	27349.0	100.0
0°-180°	27349.0	100.0

Coefficient of Utilization



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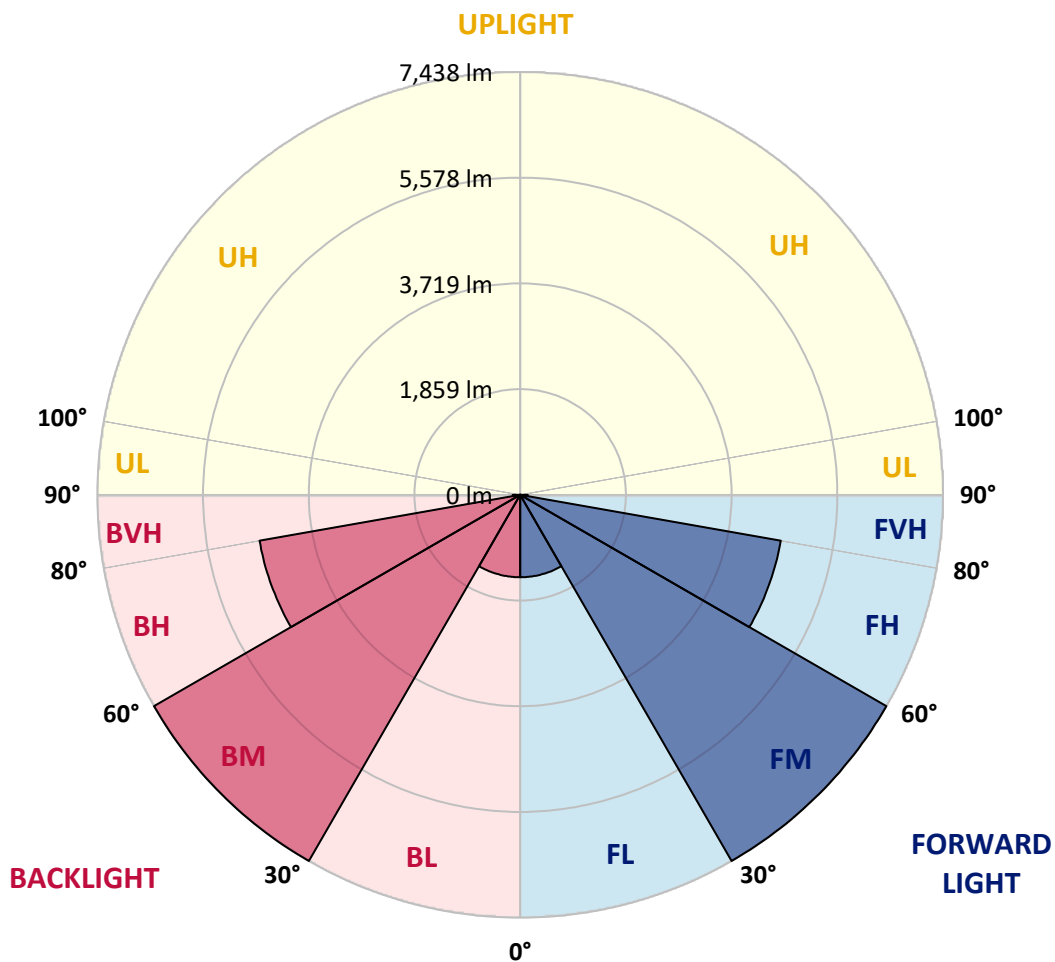
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1449.9	5.3			
FM	(30°-60°)	7437.9	27.2			
FH	(60°-80°)	4655.1	17.0			G2/5000
FVH	(80°-90°)	131.6	0.5			G2/225
BL	(0°-30°)	1449.9	5.3	B3/2500		
BM	(30°-60°)	7437.9	27.2	B4/8500		
BH	(60°-80°)	4655.1	17.0	B4/5000		G4/5000
BVH	(80°-90°)	131.6	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°	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6
2.5°	3064.4	3062.7	3064.4	3059.3	3061.0	3059.3	3059.3	3052.4	3052.4	3049.0	3043.9
5°	3030.2	3033.6	3033.6	3033.6	3038.7	3038.7	3045.6	3047.3	3052.4	3057.6	3061.0
7.5°	2973.6	2975.3	2980.5	2983.9	2994.2	3007.9	3021.6	3037.0	3050.7	3067.9	3086.7
10°	2925.6	2929.0	2937.6	2946.2	2965.0	2982.2	3006.2	3030.2	3054.1	3083.3	3112.4
12.5°	2899.9	2905.0	2918.8	2932.5	2961.6	2983.9	3016.4	3054.1	3086.7	3114.1	3146.7
15°	2903.3	2905.0	2923.9	2942.7	2983.9	3014.7	3061.0	3105.6	3145.0	3175.8	3213.5
17.5°	2953.0	2956.5	2975.3	3002.7	3042.2	3081.6	3131.3	3177.5	3230.7	3266.7	3311.2
20°	3050.7	3055.9	3076.4	3105.6	3148.4	3189.5	3241.0	3288.9	3343.8	3386.6	3431.2
22.5°	3177.5	3186.1	3208.4	3244.4	3287.2	3336.9	3390.1	3439.8	3491.2	3534.0	3571.7
25°	3347.2	3357.5	3381.5	3417.5	3460.3	3513.5	3568.3	3619.7	3672.9	3705.4	3736.3
27.5°	3575.2	3592.3	3618.0	3647.2	3684.9	3741.4	3792.8	3835.7	3887.1	3923.1	3943.7
30°	3882.0	3905.9	3926.5	3957.4	3984.8	4044.8	4085.9	4120.2	4159.6	4180.2	4185.3
32.5°	4257.3	4279.6	4300.1	4322.4	4360.1	4415.0	4454.4	4473.2	4493.8	4490.4	4471.5
35°	4680.6	4697.8	4709.8	4749.2	4810.9	4846.9	4876.0	4882.9	4886.3	4850.3	4814.3
37.5°	5126.2	5146.8	5157.1	5218.8	5277.1	5318.2	5331.9	5347.3	5337.0	5277.1	5211.9
40°	5607.8	5630.1	5661.0	5714.1	5782.7	5822.1	5839.2	5837.5	5828.9	5758.7	5652.4
42.5°	6080.9	6108.3	6134.0	6226.6	6283.1	6350.0	6358.5	6356.8	6338.0	6257.4	6134.0
45°	6481.9	6514.5	6567.6	6670.4	6761.3	6841.8	6874.4	6886.4	6867.5	6781.9	6641.3
47.5°	6812.7	6835.0	6901.8	7026.9	7143.5	7261.7	7326.9	7373.1	7371.4	7309.7	7160.6
50°	7038.9	7064.6	7146.9	7287.4	7433.1	7572.0	7700.5	7805.0	7854.7	7810.2	7671.4
52.5°	7104.1	7136.6	7244.6	7412.6	7582.2	7769.1	7961.0	8146.1	8257.5	8284.9	8177.0
55°	6829.8	6865.8	7023.5	7256.6	7536.0	7811.9	8103.3	8367.2	8596.9	8703.1	8660.3
57.5°	6031.2	6056.9	6257.4	6559.0	6958.4	7443.4	7933.6	8416.9	8811.1	9087.0	9135.0
60°	4769.7	4802.3	5021.7	5340.5	5794.7	6408.2	7093.8	7885.6	8658.6	9291.0	9604.6
62.5°	3218.7	3241.0	3451.8	3743.1	4240.2	4831.4	5595.8	6598.5	7700.5	8829.9	9714.3
65°	1689.9	1689.9	1832.1	2036.1	2432.0	2961.6	3744.8	4773.2	6084.3	7494.8	8973.9
67.5°	980.3	978.6	1011.2	1057.5	1182.6	1396.8	1828.7	2584.5	3825.4	5467.3	7150.3
70°	809.0	803.8	798.7	798.7	817.5	850.1	932.4	1139.7	1667.6	2819.3	4399.5
71°	773.0	769.5	755.8	750.7	759.3	776.4	812.4	908.4	1184.3	1923.0	3285.5
72.5°	730.1	721.5	701.0	692.4	694.1	701.0	711.3	749.0	832.9	1093.5	1873.3
75°	665.0	644.4	618.7	606.7	601.6	599.9	599.9	610.1	629.0	659.8	767.8
77.5°	589.6	560.4	533.0	521.0	512.5	507.3	503.9	497.0	493.6	507.3	546.7
80°	498.7	467.9	445.6	438.8	433.6	423.3	409.6	395.9	387.3	394.2	418.2
82.5°	385.6	354.8	358.2	359.9	351.3	334.2	320.5	305.1	289.6	286.2	298.2
85°	306.8	291.4	281.1	303.4	284.5	263.9	245.1	219.4	183.4	150.8	164.5
87.5°	132.0	133.7	192.0	289.6	253.7	204.0	169.7	137.1	87.4	65.1	66.8
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°	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6
2.5°	3042.2	3042.2	3037.0	3033.6	3033.6	3033.6	3030.2	3031.9
5°	3062.7	3066.1	3069.6	3067.9	3073.0	3078.1	3076.4	3074.7
7.5°	3097.0	3107.3	3117.6	3122.7	3129.6	3136.4	3138.1	3133.0
10°	3131.3	3151.8	3167.3	3181.0	3189.5	3196.4	3201.5	3199.8
12.5°	3174.1	3203.3	3230.7	3258.1	3277.0	3287.2	3297.5	3294.1
15°	3244.4	3277.0	3311.2	3347.2	3376.4	3391.8	3407.2	3403.8
17.5°	3340.4	3369.5	3396.9	3432.9	3468.9	3486.0	3503.2	3501.5
20°	3460.3	3482.6	3498.0	3518.6	3552.9	3571.7	3587.2	3582.0
22.5°	3597.4	3604.3	3606.0	3612.9	3640.3	3662.6	3683.1	3688.3
25°	3746.6	3741.4	3731.1	3726.0	3744.8	3768.8	3794.5	3801.4
27.5°	3931.7	3914.5	3888.8	3868.2	3873.4	3904.2	3933.4	3940.2
30°	4164.7	4125.3	4070.5	4031.1	4024.2	4056.8	4087.6	4097.9
32.5°	4430.4	4377.3	4301.9	4241.9	4216.2	4245.3	4272.7	4288.1
35°	4745.8	4687.5	4596.6	4519.5	4478.4	4497.2	4545.2	4562.4
37.5°	5119.4	5038.8	4937.7	4840.0	4771.5	4774.9	4826.3	4846.9
40°	5532.4	5415.9	5287.3	5165.7	5066.3	5059.4	5105.7	5121.1
42.5°	5962.6	5813.5	5662.7	5503.3	5379.9	5357.6	5417.6	5419.3
45°	6425.4	6233.4	6046.6	5861.5	5733.0	5693.5	5751.8	5758.7
47.5°	6919.0	6679.0	6457.9	6257.4	6118.6	6056.9	6113.4	6123.7
50°	7433.1	7184.6	6927.5	6704.7	6541.9	6466.5	6533.3	6540.2
52.5°	7942.2	7707.4	7452.0	7196.6	6999.5	6913.8	6992.7	7016.7
55°	8454.6	8228.4	7988.4	7733.1	7484.5	7409.1	7494.8	7520.5
57.5°	8987.6	8770.0	8552.3	8295.2	8053.6	7938.7	8031.3	8067.3
60°	9575.5	9383.5	9177.9	8919.1	8680.8	8547.2	8626.0	8667.1
62.5°	10153.1	10113.6	9926.8	9657.8	9356.1	9222.4	9289.3	9318.4
65°	10201.1	10840.3	10831.8	10564.4	10142.8	9918.3	9937.1	9950.8
67.5°	8903.6	10370.7	11308.2	11392.2	10922.6	10571.3	10530.1	10538.7
70°	6303.7	8317.5	10307.3	11613.3	11798.4	11525.9	11436.8	11450.5
71°	5050.8	7136.6	9327.0	11083.7	11784.7	11705.9	11656.1	11692.1
72.5°	3223.8	5258.2	7390.3	9491.5	10836.9	11222.5	11279.1	11301.4
75°	1170.6	2262.3	3828.8	5486.2	6953.2	7962.7	8518.0	8562.6
77.5°	629.0	810.7	1252.9	1871.6	2351.5	2608.5	2639.4	2651.4
80°	462.7	536.4	613.6	701.0	755.8	766.1	747.3	707.8
82.5°	327.4	370.2	401.0	431.9	454.2	435.3	361.6	275.9
85°	190.2	209.1	226.2	241.7	245.1	231.4	152.5	125.1
87.5°	75.4	82.3	80.6	90.8	87.4	80.6	60.0	51.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)