

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: P194958

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P194958
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-06-D-UNV-5MQ-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25276 lumens
Efficiency: N/A
Efficacy: 131.0 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): 193
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

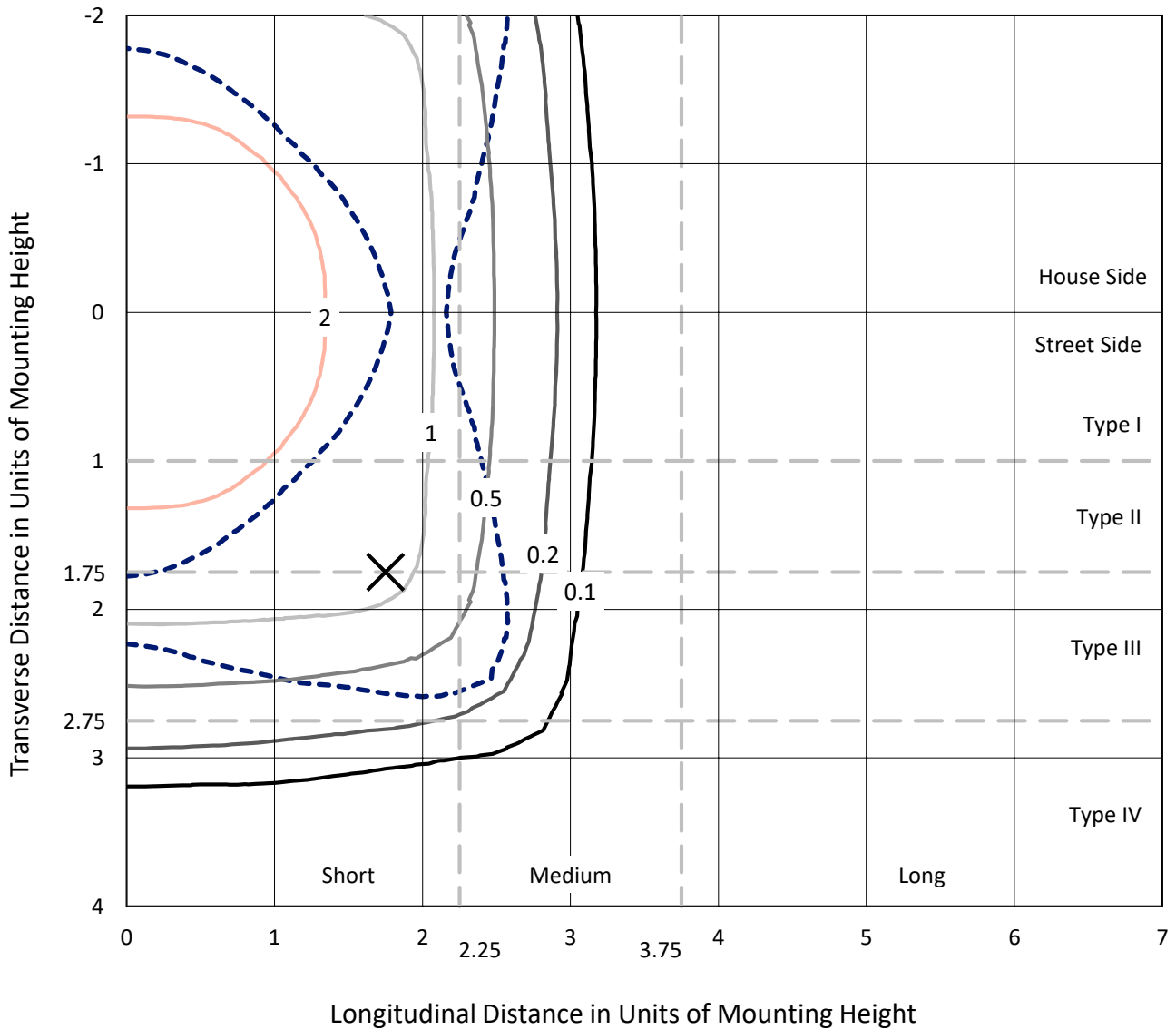


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

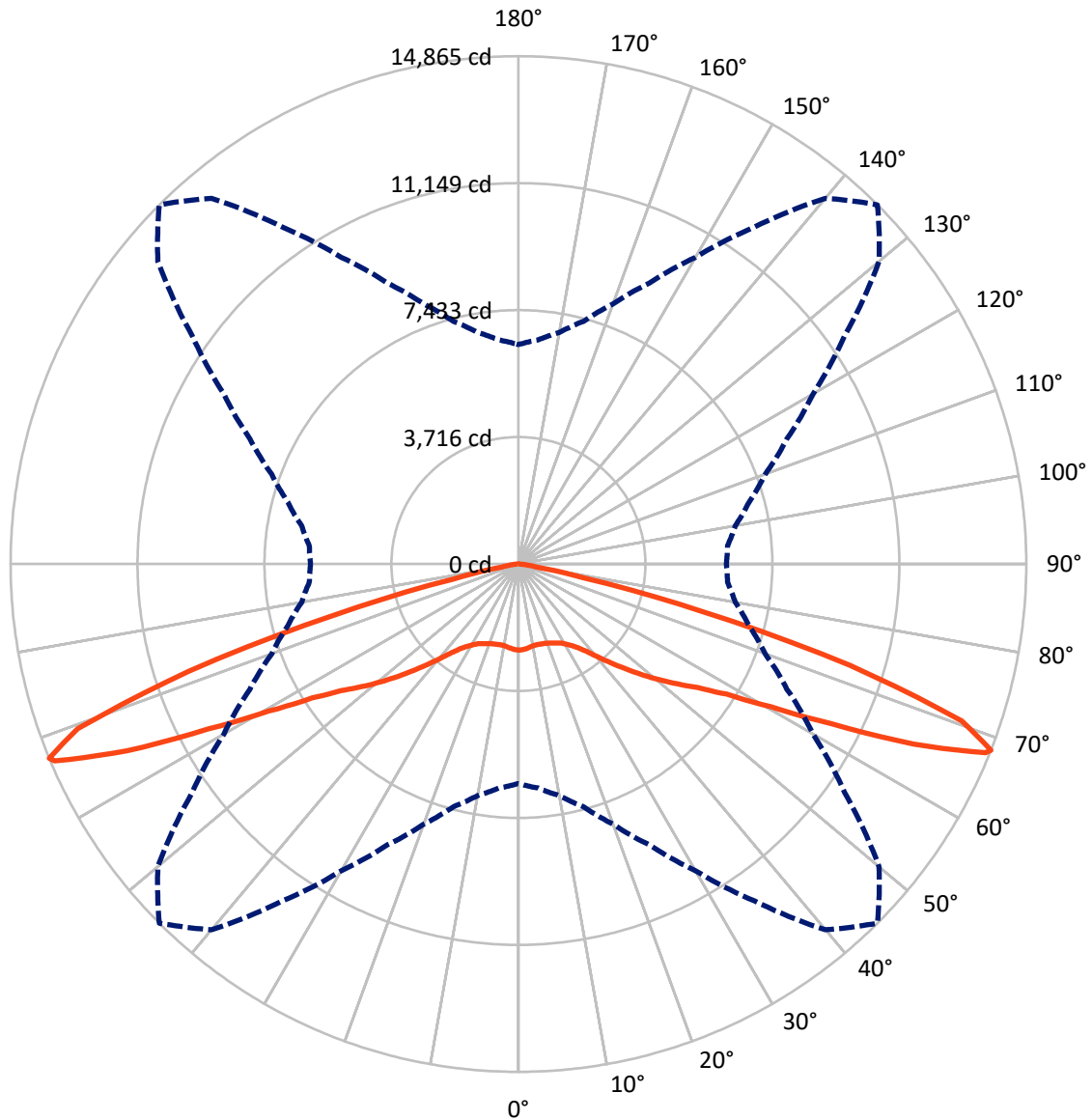


Based on 25 foot mounting height. Maximum calculated value = 4 fc
 Type V - Short - Full Cutoff

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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	12638.0	0.0	12638.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12638.0	0.0	12638.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	25276.0	0.0	25276.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.9	0.9
10°-20°	684.3	2.7
20°-30°	1163.3	4.6
30°-40°	1903.7	7.5
40°-50°	3402.1	13.5
50°-60°	5745.7	22.7
60°-70°	8909.4	35.2
70°-80°	3063.3	12.1
80°-90°	168.3	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°	25276.0	100.0
0°-180°	25276.0	100.0



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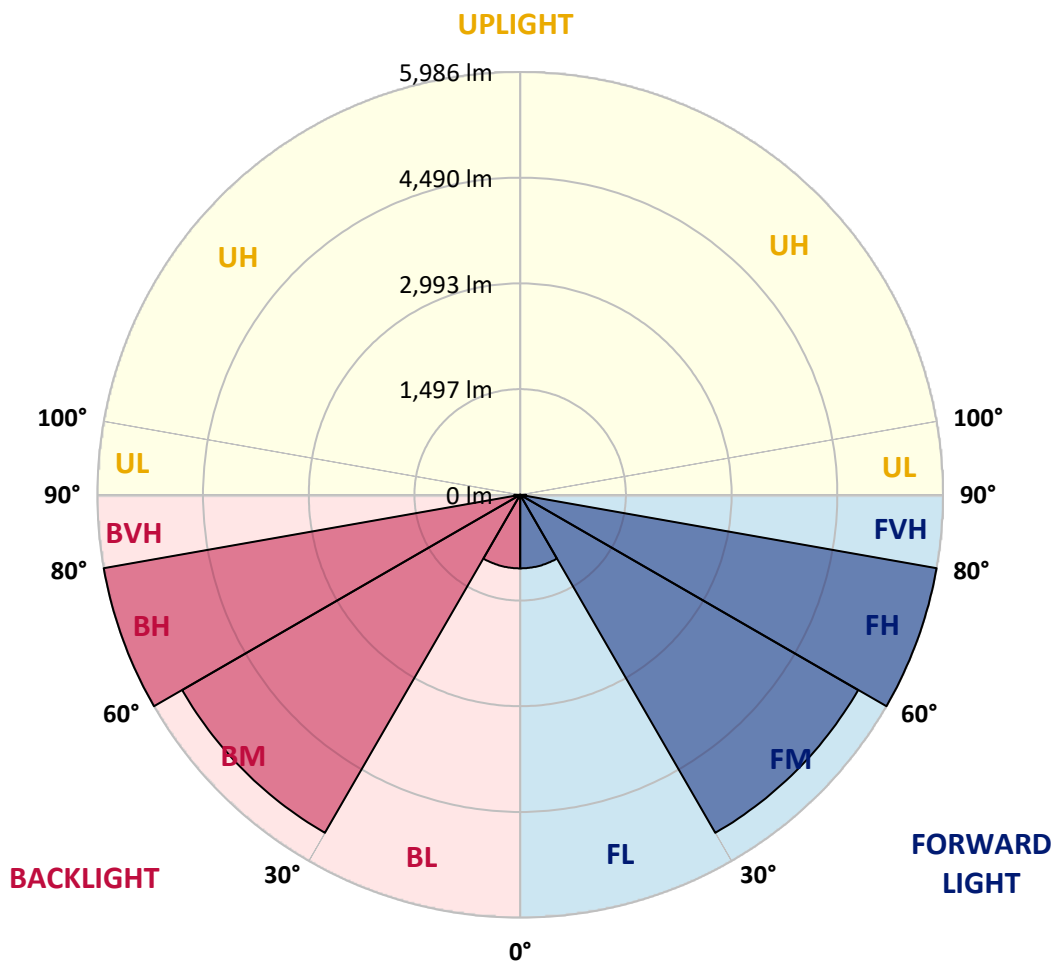
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1041.7	4.1			
FM	(30°-60°)	5525.8	21.9			
FH	(60°-80°)	5986.3	23.7			G3/7500
FVH	(80°-90°)	84.2	0.3			G1/100
BL	(0°-30°)	1041.7	4.1	B3/2500		
BM	(30°-60°)	5525.8	21.9	B4/8500		
BH	(60°-80°)	5986.3	23.7	B5		G3/7500
BVH	(80°-90°)	84.2	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°	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4
2.5°	2532.2	2532.2	2535.3	2533.7	2529.1	2524.5	2519.8	2515.2	2512.1	2509.0	2505.9
5°	2505.9	2505.9	2510.5	2507.4	2504.3	2499.7	2496.6	2491.9	2488.9	2485.8	2487.3
7.5°	2471.8	2474.9	2478.0	2476.5	2470.3	2468.7	2464.1	2462.5	2459.4	2454.8	2456.3
10°	2442.4	2444.0	2447.1	2445.5	2444.0	2439.3	2437.8	2436.2	2434.7	2428.5	2426.9
12.5°	2413.0	2416.1	2419.2	2420.7	2419.2	2420.7	2422.3	2423.8	2422.3	2419.2	2419.2
15°	2389.8	2392.9	2397.5	2402.2	2403.7	2413.0	2419.2	2425.4	2430.0	2431.6	2426.9
17.5°	2377.4	2382.1	2388.2	2397.5	2405.3	2416.1	2426.9	2436.2	2444.0	2445.5	2440.9
20°	2375.9	2380.5	2389.8	2400.6	2414.6	2428.5	2445.5	2459.4	2467.2	2471.8	2467.2
22.5°	2386.7	2392.9	2405.3	2419.2	2436.2	2454.8	2476.5	2491.9	2507.4	2513.6	2509.0
25°	2417.7	2423.8	2437.8	2454.8	2473.4	2496.6	2518.3	2538.4	2553.9	2561.6	2555.4
27.5°	2482.7	2484.2	2499.7	2518.3	2539.9	2560.1	2587.9	2597.2	2609.6	2617.3	2609.6
30°	2574.0	2577.1	2591.0	2620.4	2640.5	2666.8	2682.3	2691.6	2705.5	2713.3	2704.0
32.5°	2713.3	2716.4	2728.8	2756.6	2775.2	2795.3	2813.9	2820.1	2834.0	2843.3	2832.5
35°	2909.9	2916.0	2926.9	2945.5	2960.9	2976.4	2990.3	2985.7	2995.0	3007.4	2996.5
37.5°	3179.2	3177.6	3180.7	3194.6	3210.1	3219.4	3241.1	3230.2	3239.5	3250.4	3244.2
40°	3493.4	3493.4	3491.8	3516.6	3522.8	3532.1	3555.3	3541.4	3553.7	3566.1	3555.3
42.5°	3850.9	3857.1	3864.8	3885.0	3902.0	3905.1	3915.9	3909.7	3925.2	3936.0	3925.2
45°	4262.6	4271.9	4281.2	4327.6	4335.4	4341.6	4349.3	4329.2	4346.2	4355.5	4352.4
47.5°	4689.8	4706.8	4727.0	4774.9	4805.9	4819.8	4826.0	4802.8	4804.4	4818.3	4819.8
50°	5172.7	5191.3	5211.4	5265.6	5295.0	5319.8	5327.5	5301.2	5304.3	5315.1	5318.2
52.5°	5618.5	5640.2	5683.5	5756.2	5798.0	5841.4	5844.5	5812.0	5825.9	5833.6	5827.4
55°	6037.9	6065.8	6123.1	6220.6	6296.4	6381.6	6420.2	6384.6	6384.6	6378.5	6375.4
57.5°	6527.0	6558.0	6616.8	6729.8	6835.1	6957.3	7062.6	7098.2	7163.2	7184.9	7150.8
60°	7263.8	7296.3	7356.7	7505.3	7638.4	7816.4	7989.7	8130.6	8359.6	8483.5	8372.0
62.5°	7937.1	7986.6	8129.0	8389.0	8676.9	9006.6	9388.9	9661.3	10077.7	10285.1	10004.9
65°	7783.9	7884.5	8163.1	8571.7	9166.0	9881.1	10659.7	11407.2	12267.8	12708.9	12139.3
67.5°	6799.5	6884.6	7184.9	7660.0	8401.4	9387.4	10597.7	12145.5	13920.9	14747.4	13739.8
68°	6423.3	6582.8	6881.5	7353.6	8101.2	9070.1	10362.5	12034.1	13971.9	14865.0	13776.9
70°	4925.1	4982.3	5268.7	5692.8	6499.2	7449.5	8754.3	10659.7	12849.8	13769.2	12650.1
72.5°	2340.3	2374.3	2560.1	2978.0	3490.3	4264.2	5415.7	7212.7	9186.2	10142.7	9026.7
75°	857.5	865.2	908.6	1007.6	1199.5	1490.5	2043.1	3160.6	4679.0	5579.8	4697.6
77.5°	462.8	464.3	481.4	506.1	540.2	578.9	662.5	888.4	1433.3	1950.2	1513.7
80°	291.0	289.4	306.5	326.6	349.8	368.4	376.1	402.4	453.5	530.9	487.6
82.5°	148.6	162.5	201.2	222.9	256.9	263.1	255.4	253.8	269.3	291.0	300.3
85°	82.0	72.7	106.8	142.4	154.8	159.4	161.0	151.7	148.6	145.5	153.2
87.5°	41.8	38.7	46.4	71.2	75.8	61.9	63.5	54.2	37.1	37.1	38.7
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°	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4	2521.4
2.5°	2502.8	2504.3	2501.2	2501.2	2501.2	2502.8	2501.2	2499.7
5°	2482.7	2485.8	2485.8	2487.3	2488.9	2488.9	2488.9	2488.9
7.5°	2453.3	2454.8	2457.9	2457.9	2457.9	2457.9	2457.9	2457.9
10°	2425.4	2422.3	2420.7	2417.7	2417.7	2413.0	2414.6	2416.1
12.5°	2411.5	2405.3	2402.2	2397.5	2394.4	2389.8	2389.8	2391.3
15°	2417.7	2408.4	2399.1	2396.0	2392.9	2389.8	2386.7	2388.2
17.5°	2430.0	2419.2	2408.4	2402.2	2396.0	2391.3	2389.8	2391.3
20°	2456.3	2440.9	2423.8	2413.0	2400.6	2397.5	2392.9	2397.5
22.5°	2491.9	2473.4	2451.7	2431.6	2417.7	2411.5	2405.3	2409.9
25°	2535.3	2515.2	2493.5	2470.3	2454.8	2450.2	2442.4	2442.4
27.5°	2595.7	2578.6	2560.1	2538.4	2522.9	2518.3	2505.9	2505.9
30°	2691.6	2674.6	2657.6	2639.0	2623.5	2618.9	2603.4	2603.4
32.5°	2818.5	2800.0	2789.1	2773.6	2761.3	2753.5	2735.0	2733.4
35°	2988.8	2971.8	2970.2	2959.4	2947.0	2948.5	2930.0	2926.9
37.5°	3233.3	3219.4	3224.1	3214.8	3203.9	3213.2	3202.4	3202.4
40°	3546.0	3541.4	3546.0	3539.8	3541.4	3542.9	3533.6	3536.7
42.5°	3923.7	3911.3	3939.1	3936.0	3931.4	3943.8	3922.1	3906.6
45°	4358.6	4353.9	4381.8	4386.4	4377.2	4384.9	4346.2	4344.7
47.5°	4830.7	4830.7	4855.4	4852.3	4843.0	4844.6	4798.2	4768.8
50°	5322.9	5319.8	5344.5	5338.3	5326.0	5324.4	5276.4	5247.0
52.5°	5835.2	5835.2	5870.8	5853.8	5824.3	5810.4	5751.6	5712.9
55°	6401.7	6393.9	6404.8	6349.1	6291.8	6250.0	6177.2	6147.8
57.5°	7118.3	7028.5	6951.1	6879.9	6799.5	6749.9	6664.8	6633.8
60°	8135.2	7895.3	7791.6	7649.2	7516.1	7449.5	7336.5	7276.2
62.5°	9543.7	9145.9	8864.2	8550.0	8246.6	8033.1	7861.2	7785.4
65°	11172.0	10305.2	9588.6	8915.3	8344.2	7890.7	7638.4	7559.4
67.5°	11791.1	10200.0	8963.3	7997.5	7304.0	6763.9	6462.0	6398.6
68°	11659.5	9958.5	8673.8	7684.8	6988.3	6443.5	6143.2	6085.9
70°	10285.1	8401.4	7045.6	6061.2	5411.1	4892.6	4680.5	4589.2
72.5°	7011.5	5395.6	4138.8	3310.7	2824.7	2496.6	2301.6	2235.0
75°	3227.2	2180.8	1456.5	1088.1	924.0	845.1	784.7	769.3
77.5°	941.1	684.1	588.2	544.8	512.3	484.5	464.3	462.8
80°	447.3	419.5	407.1	379.2	349.8	323.5	304.9	308.0
82.5°	300.3	292.5	292.5	264.7	218.2	187.3	154.8	139.3
85°	159.4	165.6	174.9	165.6	143.9	106.8	69.7	75.8
87.5°	54.2	61.9	65.0	63.5	57.3	43.3	32.5	32.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)