

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: P194968

Luminaire Tested: **NAV-AF-04-D-UNV-5MQ-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P194968
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-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 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: 25982 lumens
Efficiency: N/A
Efficacy: 115.5 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

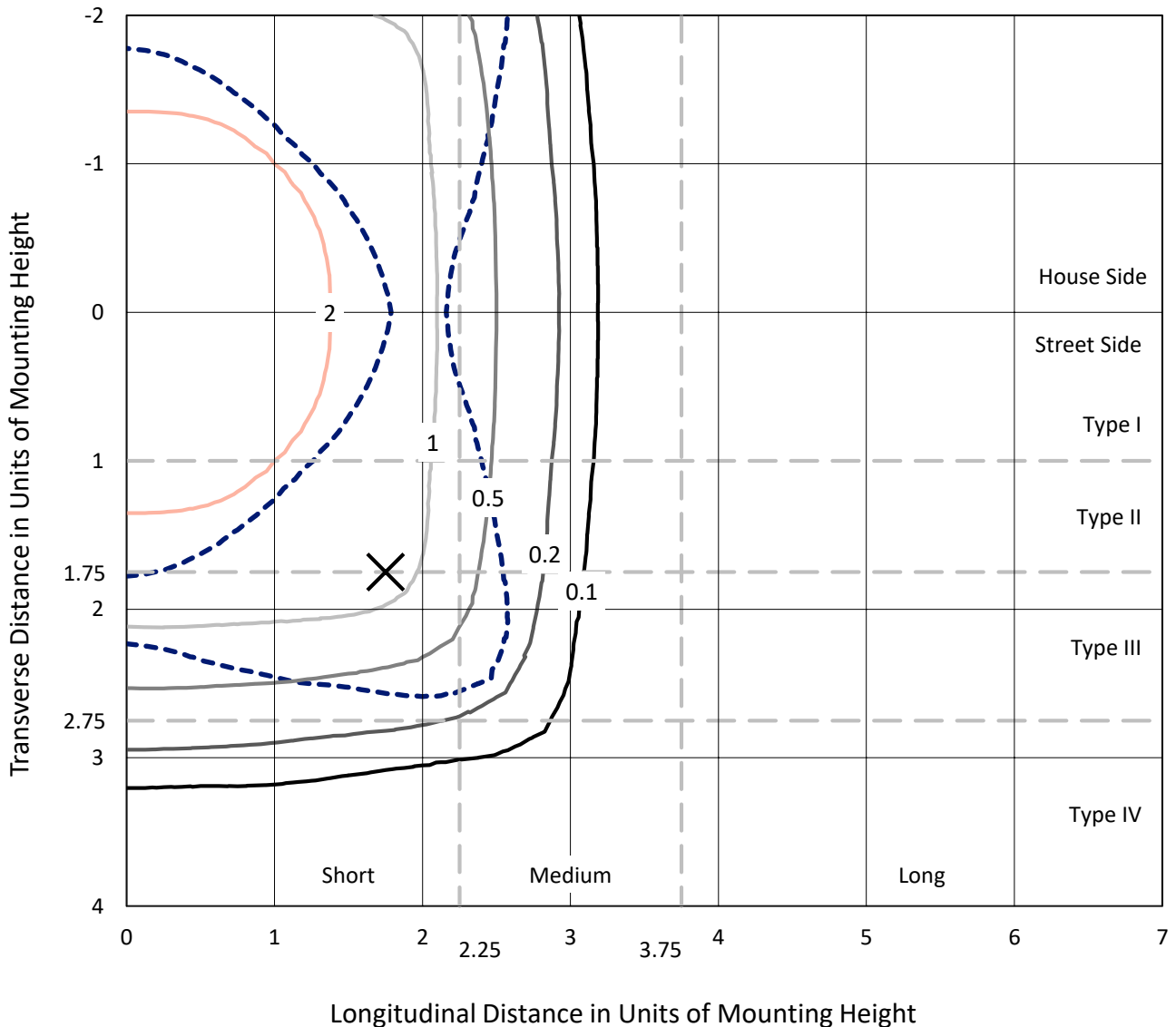


REPORT NUMBER: P194968

CATALOG NUMBER: NAV-AF-04-D-UNV-5MQ-7060

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

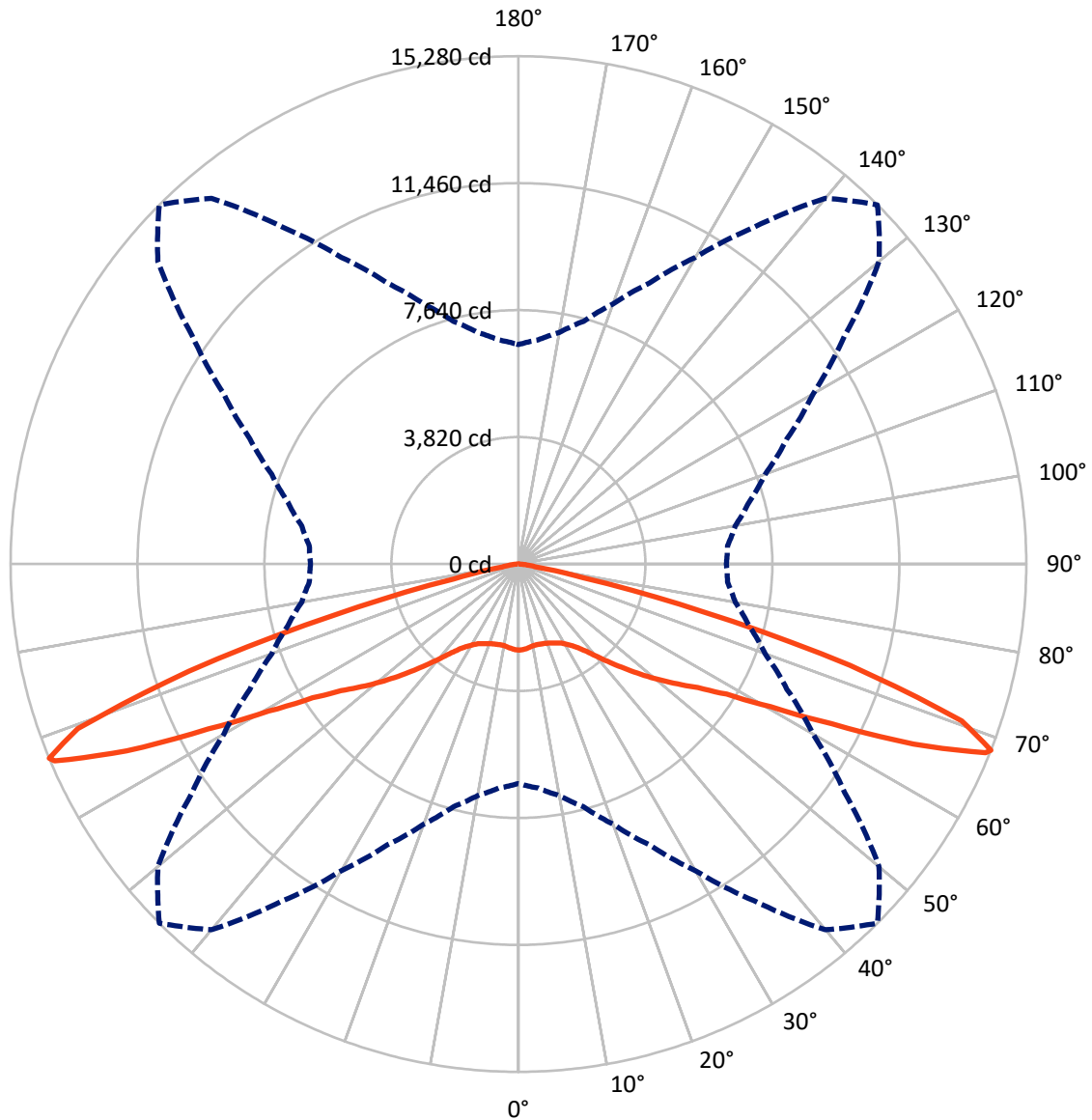


Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P194968

CATALOG NUMBER: NAV-AF-04-D-UNV-5MQ-7060

Luminous Intensity Polar Plot



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

REPORT NUMBER: P194968

CATALOG NUMBER: NAV-AF-04-D-UNV-5MQ-7060

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12991.0	0.0	12991.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12991.0	0.0	12991.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	25982.0	0.0	25982.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.5	0.9
10°-20°	703.4	2.7
20°-30°	1195.8	4.6
30°-40°	1956.9	7.5
40°-50°	3497.2	13.5
50°-60°	5906.2	22.7
60°-70°	9158.3	35.2
70°-80°	3148.8	12.1
80°-90°	173.0	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°	25982.0	100.0
0°-180°	25982.0	100.0



REPORT NUMBER: P194968

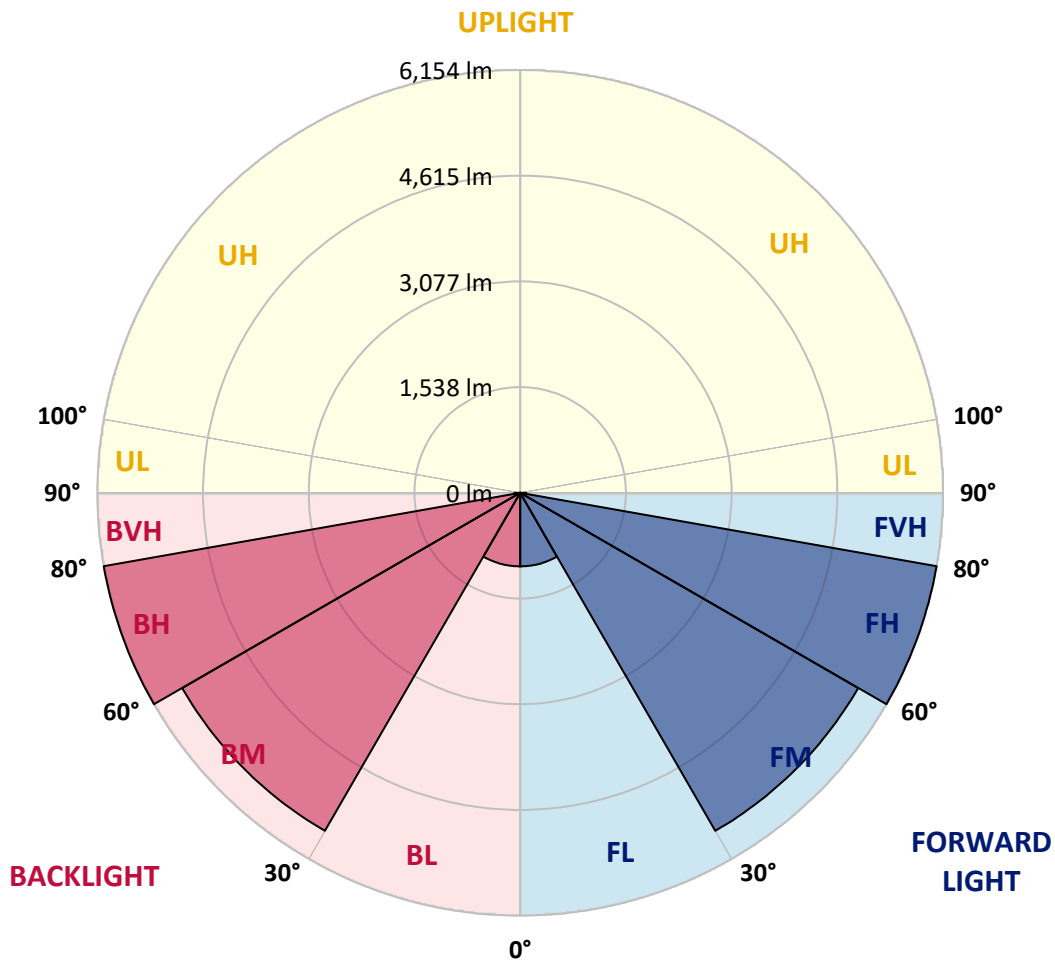
CATALOG NUMBER: NAV-AF-04-D-UNV-5MQ-7060

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1070.8	4.1			
FM	(30°-60°)	5680.1	21.9			
FH	(60°-80°)	6153.6	23.7			G3/7500
FVH	(80°-90°)	86.5	0.3			G1/100
BL	(0°-30°)	1070.8	4.1	B3/2500		
BM	(30°-60°)	5680.1	21.9	B4/8500		
BH	(60°-80°)	6153.6	23.7	B5		G3/7500
BVH	(80°-90°)	86.5	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





REPORT NUMBER: P194968

CATALOG NUMBER: NAV-AF-04-D-UNV-5MQ-7060

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8
2.5°	2602.9	2602.9	2606.1	2604.5	2599.7	2595.0	2590.2	2585.4	2582.2	2579.1	2575.9
5°	2575.9	2575.9	2580.6	2577.5	2574.3	2569.5	2566.3	2561.6	2558.4	2555.2	2556.8
7.5°	2540.9	2544.1	2547.2	2545.6	2539.3	2537.7	2532.9	2531.3	2528.1	2523.4	2525.0
10°	2510.6	2512.2	2515.4	2513.8	2512.2	2507.5	2505.9	2504.3	2502.7	2496.3	2494.7
12.5°	2480.4	2483.6	2486.8	2488.4	2486.8	2488.4	2490.0	2491.5	2490.0	2486.8	2486.8
15°	2456.5	2459.7	2464.5	2469.3	2470.9	2480.4	2486.8	2493.1	2497.9	2499.5	2494.7
17.5°	2443.8	2448.6	2455.0	2464.5	2472.5	2483.6	2494.7	2504.3	2512.2	2513.8	2509.0
20°	2442.2	2447.0	2456.5	2467.7	2482.0	2496.3	2513.8	2528.1	2536.1	2540.9	2536.1
22.5°	2453.4	2459.7	2472.5	2486.8	2504.3	2523.4	2545.6	2561.6	2577.5	2583.8	2579.1
25°	2485.2	2491.5	2505.9	2523.4	2542.5	2566.3	2588.6	2609.3	2625.2	2633.1	2626.8
27.5°	2552.0	2553.6	2569.5	2588.6	2610.9	2631.6	2660.2	2669.7	2682.5	2690.4	2682.5
30°	2645.9	2649.1	2663.4	2693.6	2714.3	2741.3	2757.2	2766.8	2781.1	2789.1	2779.5
32.5°	2789.1	2792.3	2805.0	2833.6	2852.7	2873.4	2892.5	2898.8	2913.2	2922.7	2911.6
35°	2991.1	2997.5	3008.6	3027.7	3043.6	3059.5	3073.9	3069.1	3078.6	3091.4	3080.2
37.5°	3268.0	3266.4	3269.6	3283.9	3299.8	3309.3	3331.6	3320.5	3330.0	3341.2	3334.8
40°	3590.9	3590.9	3589.4	3614.8	3621.2	3630.7	3654.6	3640.3	3653.0	3665.7	3654.6
42.5°	3958.5	3964.8	3972.8	3993.5	4011.0	4014.2	4025.3	4018.9	4034.8	4046.0	4034.8
45°	4381.7	4391.2	4400.8	4448.5	4456.5	4462.8	4470.8	4450.1	4467.6	4477.1	4474.0
47.5°	4820.8	4838.3	4859.0	4908.3	4940.1	4954.5	4960.8	4937.0	4938.5	4952.9	4954.5
50°	5317.2	5336.3	5357.0	5412.7	5442.9	5468.4	5476.3	5449.3	5452.4	5463.6	5466.8
52.5°	5775.4	5797.7	5842.2	5917.0	5960.0	6004.5	6007.7	5974.3	5988.6	5996.6	5990.2
55°	6206.6	6235.2	6294.1	6394.3	6472.3	6559.8	6599.6	6563.0	6563.0	6556.6	6553.4
57.5°	6709.4	6741.2	6801.6	6917.8	7026.0	7151.7	7259.9	7296.4	7363.3	7385.5	7350.5
60°	7466.7	7500.1	7562.1	7714.9	7851.7	8034.7	8212.9	8357.7	8593.1	8720.4	8605.9
62.5°	8158.8	8209.7	8356.1	8623.4	8919.3	9258.2	9651.2	9931.2	10359.2	10572.4	10284.4
65°	8001.3	8104.7	8391.1	8811.1	9422.1	10157.1	10957.4	11725.9	12610.5	13063.9	12478.4
67.5°	6989.4	7076.9	7385.5	7874.0	8636.1	9649.6	10893.8	12484.8	14309.7	15159.3	14123.5
68°	6602.8	6766.6	7073.7	7559.0	8327.4	9323.4	10651.9	12370.2	14362.2	15280.2	14161.7
70°	5062.6	5121.5	5415.9	5851.8	6680.7	7657.6	8998.8	10957.4	13208.7	14153.8	13003.5
72.5°	2405.6	2440.6	2631.6	3061.1	3587.8	4383.3	5567.0	7414.2	9442.7	10426.0	9278.9
75°	881.4	889.4	933.9	1035.8	1233.0	1532.2	2100.2	3248.9	4809.7	5735.6	4828.8
77.5°	475.7	477.3	494.8	520.3	555.3	595.0	681.0	913.2	1473.3	2004.7	1556.0
80°	299.1	297.5	315.0	335.7	359.6	378.7	386.6	413.7	466.2	545.7	501.2
82.5°	152.7	167.1	206.8	229.1	264.1	270.5	262.5	260.9	276.8	299.1	308.7
85°	84.3	74.8	109.8	146.4	159.1	163.9	165.5	155.9	152.7	149.6	157.5
87.5°	43.0	39.8	47.7	73.2	78.0	63.6	65.2	55.7	38.2	38.2	39.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P194968

CATALOG NUMBER: NAV-AF-04-D-UNV-5MQ-7060

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8	2591.8
2.5°	2572.7	2574.3	2571.1	2571.1	2571.1	2572.7	2571.1	2569.5
5°	2552.0	2555.2	2555.2	2556.8	2558.4	2558.4	2558.4	2558.4
7.5°	2521.8	2523.4	2526.5	2526.5	2526.5	2526.5	2526.5	2526.5
10°	2493.1	2490.0	2488.4	2485.2	2485.2	2480.4	2482.0	2483.6
12.5°	2478.8	2472.5	2469.3	2464.5	2461.3	2456.5	2456.5	2458.1
15°	2485.2	2475.6	2466.1	2462.9	2459.7	2456.5	2453.4	2455.0
17.5°	2497.9	2486.8	2475.6	2469.3	2462.9	2458.1	2456.5	2458.1
20°	2525.0	2509.0	2491.5	2480.4	2467.7	2464.5	2459.7	2464.5
22.5°	2561.6	2542.5	2520.2	2499.5	2485.2	2478.8	2472.5	2477.2
25°	2606.1	2585.4	2563.1	2539.3	2523.4	2518.6	2510.6	2510.6
27.5°	2668.2	2650.6	2631.6	2609.3	2593.4	2588.6	2575.9	2575.9
30°	2766.8	2749.3	2731.8	2712.7	2696.8	2692.0	2676.1	2676.1
32.5°	2897.3	2878.2	2867.0	2851.1	2838.4	2830.4	2811.3	2809.8
35°	3072.3	3054.8	3053.2	3042.0	3029.3	3030.9	3011.8	3008.6
37.5°	3323.7	3309.3	3314.1	3304.6	3293.4	3303.0	3291.8	3291.8
40°	3645.0	3640.3	3645.0	3638.7	3640.3	3641.9	3632.3	3635.5
42.5°	4033.3	4020.5	4049.2	4046.0	4041.2	4053.9	4031.7	4015.8
45°	4480.3	4475.6	4504.2	4509.0	4499.4	4507.4	4467.6	4466.0
47.5°	4965.6	4965.6	4991.0	4987.9	4978.3	4979.9	4932.2	4902.0
50°	5471.5	5468.4	5493.8	5487.4	5474.7	5473.1	5423.8	5393.6
52.5°	5998.2	5998.2	6034.8	6017.3	5987.0	5972.7	5912.3	5872.5
55°	6580.5	6572.5	6583.7	6526.4	6467.5	6424.6	6349.8	6319.6
57.5°	7317.1	7224.9	7145.3	7072.1	6989.4	6938.5	6851.0	6819.1
60°	8362.4	8115.8	8009.2	7862.9	7726.0	7657.6	7541.5	7479.4
62.5°	9810.3	9401.4	9111.8	8788.8	8477.0	8257.4	8080.8	8002.9
65°	11484.0	10593.1	9856.4	9164.3	8577.2	8111.1	7851.7	7770.6
67.5°	12120.4	10484.9	9213.6	8220.8	7508.1	6952.8	6642.5	6577.3
68°	11985.2	10236.7	8916.1	7899.4	7183.5	6623.4	6314.8	6255.9
70°	10572.4	8636.1	7242.4	6230.5	5562.2	5029.2	4811.3	4717.4
72.5°	7207.3	5546.3	4254.4	3403.2	2903.6	2566.3	2365.9	2297.4
75°	3317.3	2241.8	1497.2	1118.5	949.8	868.7	806.7	790.7
77.5°	967.3	703.2	604.6	560.0	526.6	498.0	477.3	475.7
80°	459.8	431.2	418.4	389.8	359.6	332.5	313.4	316.6
82.5°	308.7	300.7	300.7	272.1	224.3	192.5	159.1	143.2
85°	163.9	170.2	179.8	170.2	148.0	109.8	71.6	78.0
87.5°	55.7	63.6	66.8	65.2	58.9	44.5	33.4	33.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)