

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: P270649

Luminaire Tested: **NAV-AF-06-D-UNV-5WQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270649
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32559.7 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 333
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

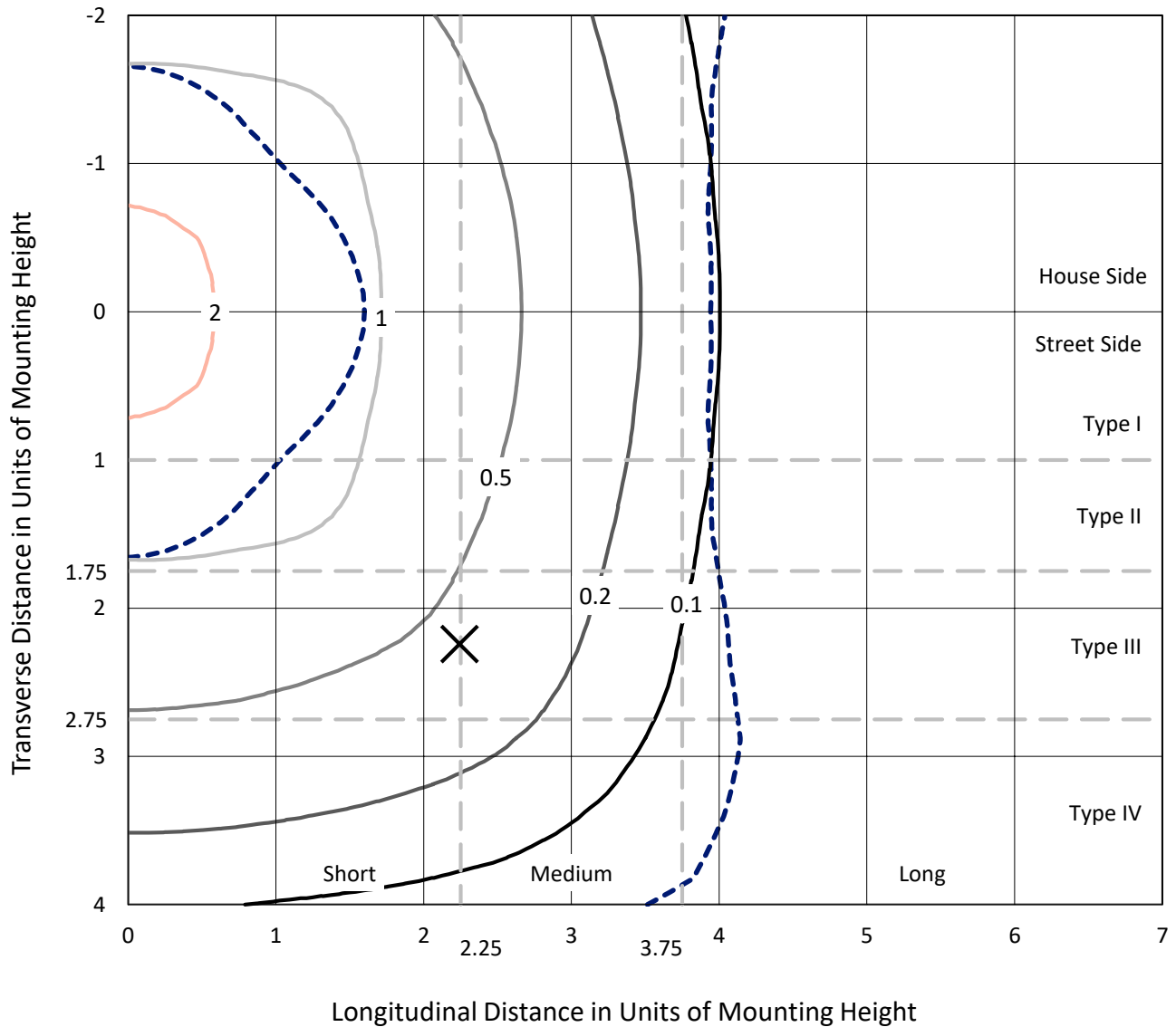


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

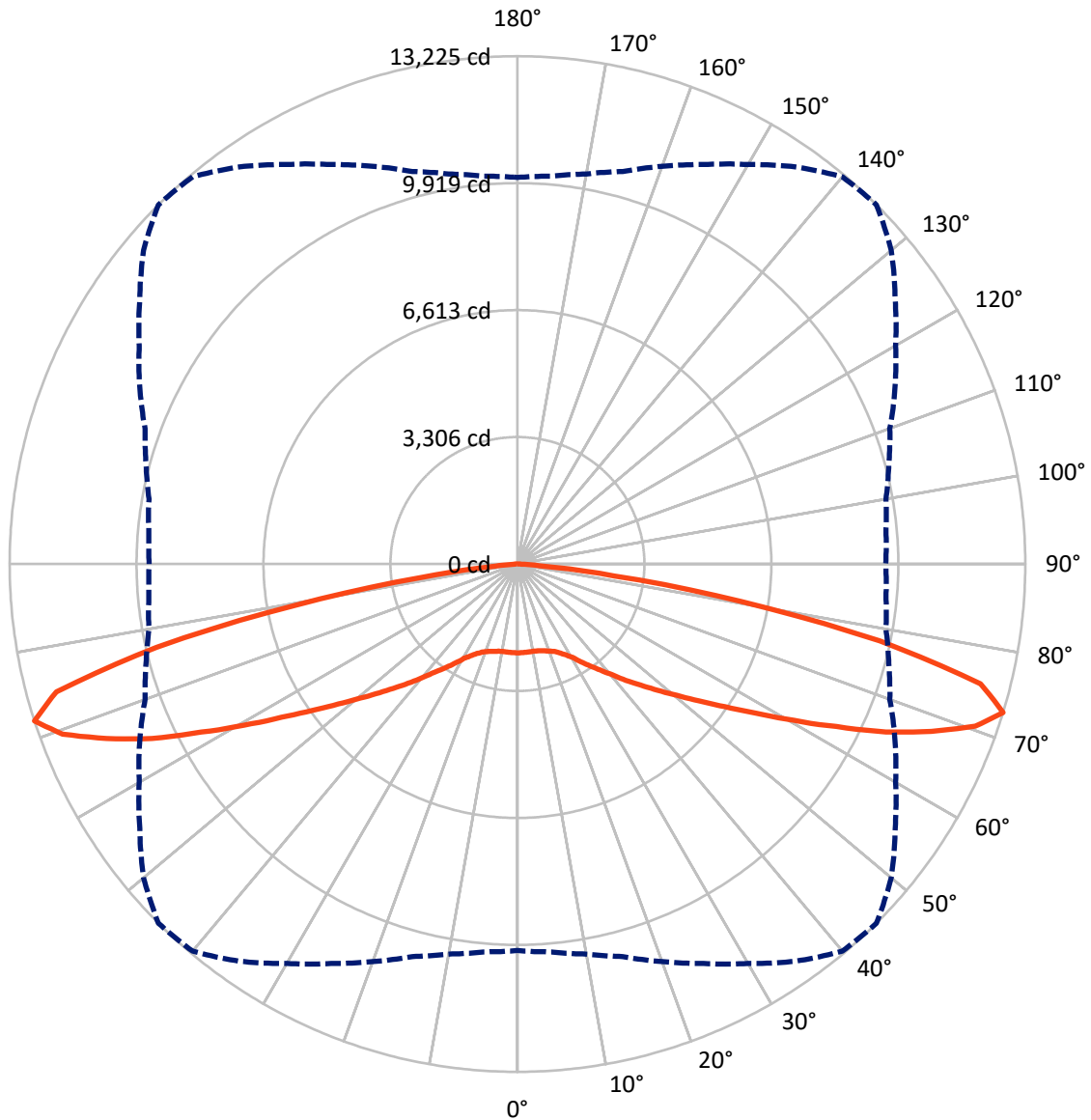


Based on 30 foot mounting height. Maximum calculated value = 2.6 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	16279.8	0.0	16279.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16279.8	0.0	16279.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	32559.7	0.0	32559.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.9	0.7
10°-20°	668.6	2.1
20°-30°	1207.1	3.7
30°-40°	2059.0	6.3
40°-50°	3505.5	10.8
50°-60°	5641.6	17.3
60°-70°	9382.0	28.8
70°-80°	9076.0	27.9
80°-90°	798.8	2.5
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°	32559.7	100.0
0°-180°	32559.7	100.0



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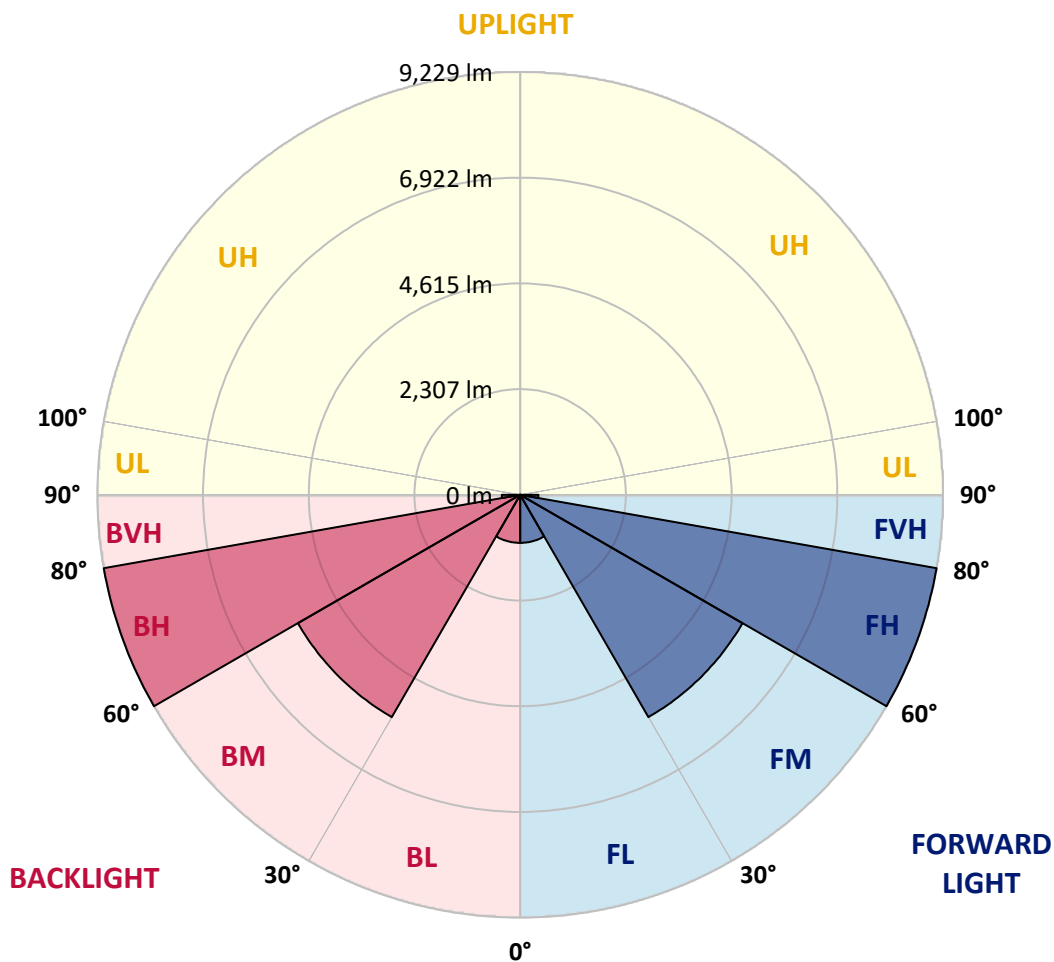
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1048.4	3.2			
FM	(30°-60°)	5603.0	17.2			
FH	(60°-80°)	9229.0	28.3			G4/12000
FVH	(80°-90°)	399.4	1.2			G3/500
BL	(0°-30°)	1048.4	3.2	B3/2500		
BM	(30°-60°)	5603.0	17.2	B4/8500		
BH	(60°-80°)	9229.0	28.3	B5		G4/12000
BVH	(80°-90°)	399.4	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8
2.5°	2332.8	2332.8	2334.8	2332.8	2328.8	2326.8	2320.7	2316.8	2312.7	2310.7	2306.8
5°	2334.8	2334.8	2336.9	2334.8	2330.8	2326.8	2322.7	2316.8	2312.7	2308.7	2306.8
7.5°	2342.8	2344.8	2346.8	2344.8	2336.9	2332.8	2326.8	2320.7	2312.7	2308.7	2304.7
10°	2358.8	2358.8	2358.8	2356.9	2350.9	2342.8	2334.8	2328.8	2318.7	2308.7	2302.7
12.5°	2370.8	2372.9	2372.9	2368.9	2360.8	2350.9	2342.8	2336.9	2328.8	2320.7	2314.8
15°	2389.0	2389.0	2386.8	2378.9	2366.9	2358.8	2354.8	2352.8	2350.9	2346.8	2340.9
17.5°	2425.0	2423.0	2417.0	2404.9	2390.8	2384.9	2380.9	2380.9	2380.9	2378.9	2374.8
20°	2477.0	2477.0	2469.1	2449.0	2437.0	2431.1	2425.0	2425.0	2425.0	2419.0	2412.9
22.5°	2561.2	2563.3	2551.2	2527.2	2511.1	2499.2	2491.1	2485.2	2479.1	2475.1	2465.0
25°	2675.5	2673.4	2659.4	2629.3	2617.4	2605.4	2589.4	2579.4	2571.3	2565.3	2553.3
27.5°	2795.7	2793.6	2777.6	2751.7	2743.7	2725.5	2713.6	2699.5	2689.5	2679.6	2667.4
30°	2950.0	2940.1	2928.0	2908.0	2904.0	2889.9	2873.9	2853.8	2837.8	2821.8	2807.7
32.5°	3088.4	3088.4	3070.2	3060.3	3068.3	3062.3	3064.3	3052.4	3042.2	3036.2	3022.2
35°	3280.7	3280.7	3272.7	3260.7	3262.7	3248.7	3246.7	3248.7	3256.6	3256.6	3240.6
37.5°	3537.3	3541.3	3515.2	3511.2	3501.1	3481.1	3471.1	3475.2	3493.1	3503.2	3481.1
40°	3856.0	3863.9	3856.0	3829.8	3817.8	3783.8	3763.7	3763.7	3777.7	3787.8	3779.8
42.5°	4170.6	4184.6	4170.6	4150.4	4140.5	4114.4	4104.4	4112.4	4130.4	4142.5	4130.4
45°	4521.3	4531.3	4513.3	4489.2	4477.2	4463.1	4457.1	4463.1	4483.3	4495.2	4491.3
47.5°	4865.9	4880.0	4857.9	4848.0	4848.0	4833.9	4849.9	4865.9	4884.1	4912.1	4900.1
50°	5202.7	5220.7	5206.7	5208.7	5224.7	5250.8	5280.9	5312.8	5344.9	5375.0	5379.1
52.5°	5503.2	5531.4	5533.4	5569.4	5619.5	5659.6	5743.9	5813.9	5890.0	5916.1	5904.1
55°	5819.8	5857.9	5908.2	5964.2	6044.3	6126.6	6268.8	6395.2	6495.4	6557.4	6547.4
57.5°	6272.9	6311.0	6363.1	6455.2	6575.6	6687.7	6882.2	7078.6	7230.8	7325.0	7279.0
60°	6860.0	6900.2	6968.3	7066.4	7222.8	7375.2	7641.7	7924.3	8160.7	8269.0	8184.7
62.5°	7637.7	7675.7	7719.9	7850.1	8024.5	8220.8	8555.5	8918.4	9218.9	9323.1	9204.9
65°	8746.0	8792.0	8806.1	8912.3	9082.7	9264.9	9625.8	10034.5	10377.3	10547.5	10311.1
67.5°	9994.5	10012.6	10068.7	10192.9	10367.2	10531.5	10816.2	11203.0	11531.6	11625.9	11373.4
70°	10726.0	10762.1	10860.2	11032.7	11241.1	11499.7	11810.2	12227.1	12599.8	12644.0	12323.3
72.5°	10064.6	10138.8	10313.1	10581.8	11018.6	11477.6	12012.7	12628.0	13163.0	13225.1	12710.1
75°	8072.6	8156.7	8365.1	8659.8	9176.8	9858.2	10631.8	11555.6	12357.4	12459.5	11778.1
77.5°	4302.8	4407.1	4709.6	5106.4	5844.1	6745.8	7677.8	8732.0	9413.2	9643.8	9152.8
80°	1084.3	1140.4	1286.6	1519.2	2018.1	2745.6	3549.3	4683.7	5529.3	5888.1	5529.3
82.5°	420.9	462.9	503.1	531.1	579.1	679.4	937.9	1529.2	2060.3	2537.3	2196.4
85°	162.4	172.4	248.6	282.5	282.5	310.6	356.7	420.9	521.0	569.2	477.0
87.5°	64.0	70.2	86.1	132.3	136.4	120.3	128.3	144.3	110.2	92.2	104.3
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°	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8	2314.8
2.5°	2304.7	2302.7	2298.8	2300.6	2298.8	2298.8	2298.8	2298.8
5°	2302.7	2302.7	2298.8	2298.8	2298.8	2300.6	2298.8	2298.8
7.5°	2300.6	2298.8	2294.7	2292.7	2292.7	2290.7	2290.7	2290.7
10°	2296.6	2292.7	2288.7	2286.6	2286.6	2282.8	2282.8	2282.8
12.5°	2306.8	2300.6	2296.6	2294.7	2294.7	2294.7	2296.6	2296.6
15°	2334.8	2322.7	2316.8	2314.8	2316.8	2320.7	2322.7	2324.8
17.5°	2364.9	2352.8	2342.8	2338.7	2340.9	2346.8	2352.8	2356.9
20°	2403.0	2392.9	2380.9	2376.8	2376.8	2384.9	2389.0	2394.9
22.5°	2457.0	2449.0	2439.0	2433.0	2428.9	2439.0	2444.9	2449.0
25°	2543.2	2535.1	2527.2	2521.2	2519.1	2529.2	2533.2	2535.1
27.5°	2657.5	2649.5	2645.4	2643.4	2637.5	2641.5	2647.5	2645.4
30°	2805.8	2811.8	2805.8	2805.8	2795.7	2799.7	2795.7	2791.8
32.5°	3004.1	2998.2	2980.0	2968.1	2954.0	2954.0	2948.1	2941.9
35°	3202.5	3182.5	3172.5	3178.6	3172.5	3176.4	3166.4	3156.5
37.5°	3437.1	3425.0	3423.0	3441.0	3437.1	3441.0	3441.0	3427.0
40°	3747.6	3739.6	3753.7	3783.8	3795.8	3793.8	3797.8	3779.8
42.5°	4104.4	4090.4	4096.5	4122.4	4136.4	4140.5	4138.5	4122.4
45°	4461.2	4465.1	4465.1	4493.2	4507.2	4515.3	4501.2	4495.2
47.5°	4864.0	4870.0	4856.0	4874.1	4877.9	4892.0	4880.0	4870.0
50°	5328.9	5306.8	5274.8	5280.9	5280.9	5276.9	5262.8	5250.8
52.5°	5848.0	5797.9	5737.7	5717.7	5695.7	5673.6	5645.6	5623.5
55°	6439.2	6353.1	6244.7	6194.7	6152.6	6102.5	6038.3	6016.4
57.5°	7124.5	6976.2	6832.0	6741.8	6633.7	6567.5	6485.4	6481.4
60°	7938.3	7737.9	7483.3	7349.0	7240.9	7162.6	7100.6	7076.5
62.5°	8878.2	8533.4	8258.9	8114.7	7988.4	7940.3	7862.1	7872.1
65°	9842.2	9491.5	9225.0	9108.6	8990.4	8958.3	8886.3	8912.3
67.5°	10886.3	10597.8	10305.1	10196.9	10088.7	10056.6	9982.4	10004.6
70°	11822.2	11455.5	11122.9	10910.4	10726.0	10577.7	10483.5	10445.4
72.5°	12008.6	11373.4	10850.3	10319.2	10012.6	9743.9	9633.8	9591.7
75°	10790.1	9804.1	9058.6	8435.4	8090.6	7699.8	7657.7	7599.7
77.5°	8393.3	7270.9	6369.1	5567.4	5104.4	4627.4	4463.1	4339.0
80°	5006.3	3847.9	2982.2	2090.3	1705.5	1372.8	1290.7	1204.4
82.5°	1791.7	1148.4	773.6	603.2	539.2	497.0	465.0	422.8
85°	433.0	364.7	344.7	312.6	308.7	262.6	186.4	166.4
87.5°	138.2	126.2	128.3	122.3	128.3	96.2	78.2	70.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)