

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: P195941

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195941  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-05-D-UNV-5NQ-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20834.4 lumens  
Efficiency: N/A  
Efficacy: 128.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

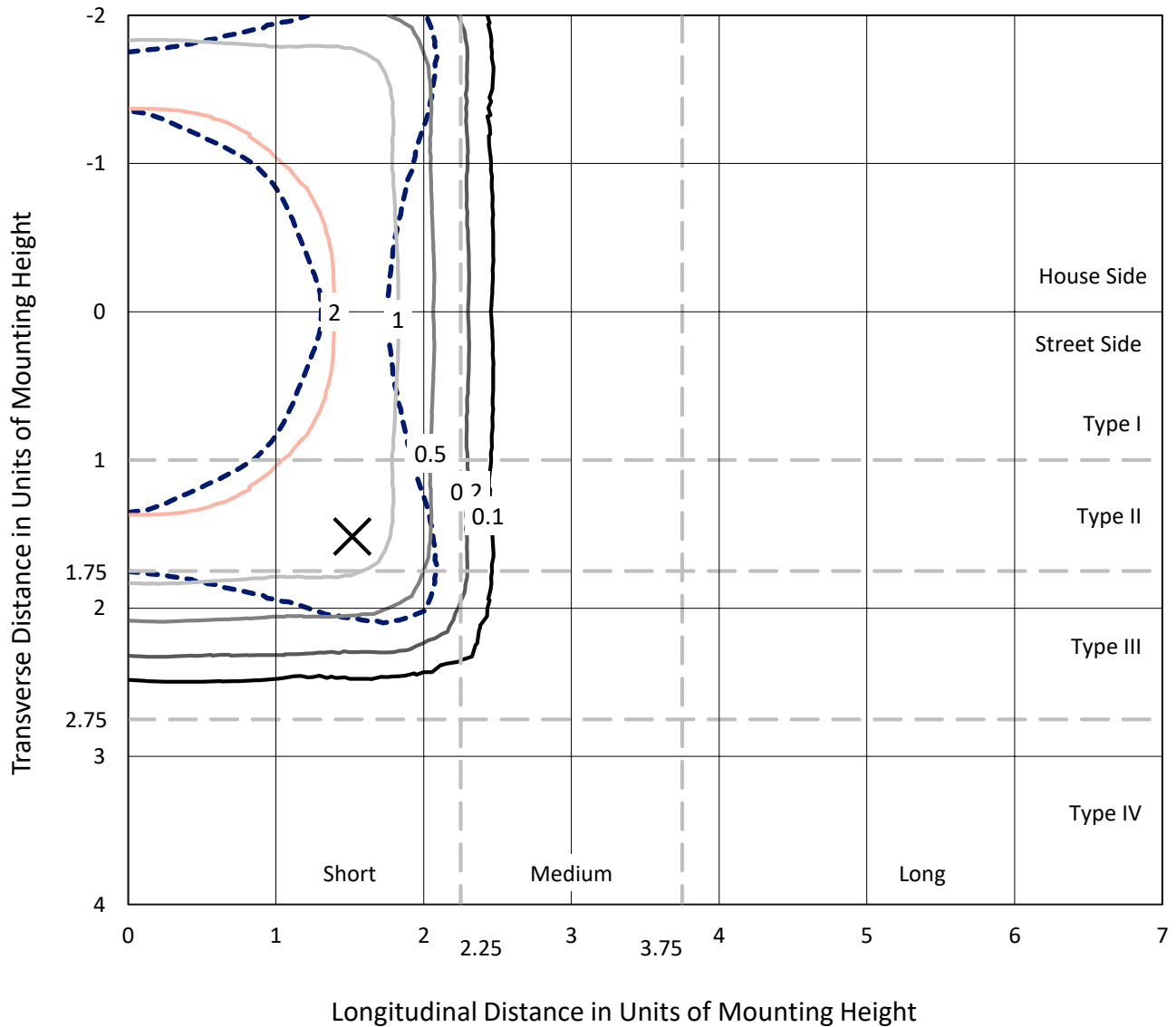
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

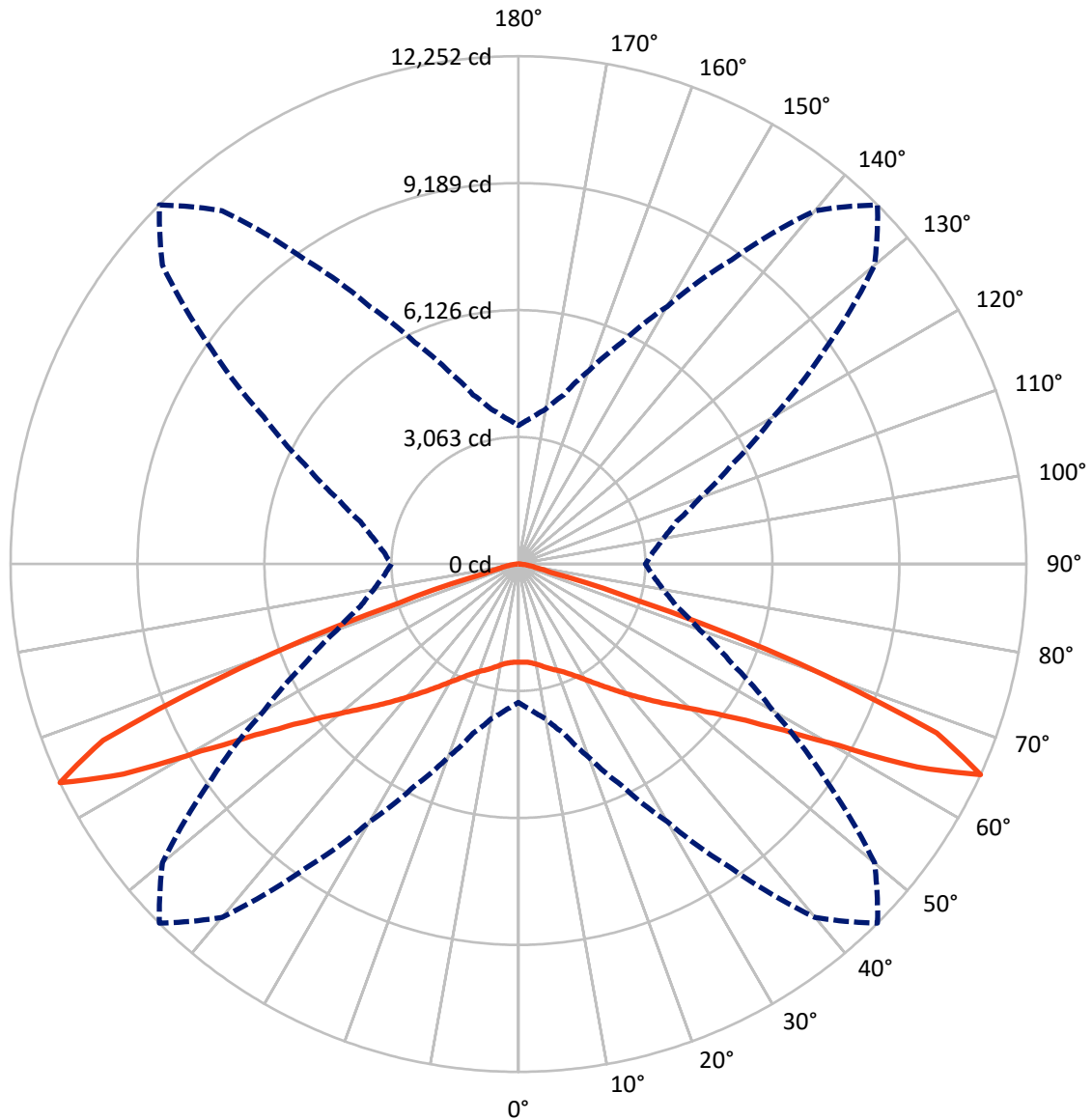
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10417.2	0.0	10417.2
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10417.2	0.0	10417.2
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	20834.4	0.0	20834.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	230.8	1.1
10°-20°	739.7	3.6
20°-30°	1379.8	6.6
30°-40°	2326.6	11.2
40°-50°	3779.1	18.1
50°-60°	5921.2	28.4
60°-70°	5589.3	26.8
70°-80°	753.3	3.6
80°-90°	114.7	0.6
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°	20834.4	100.0
0°-180°	20834.4	100.0



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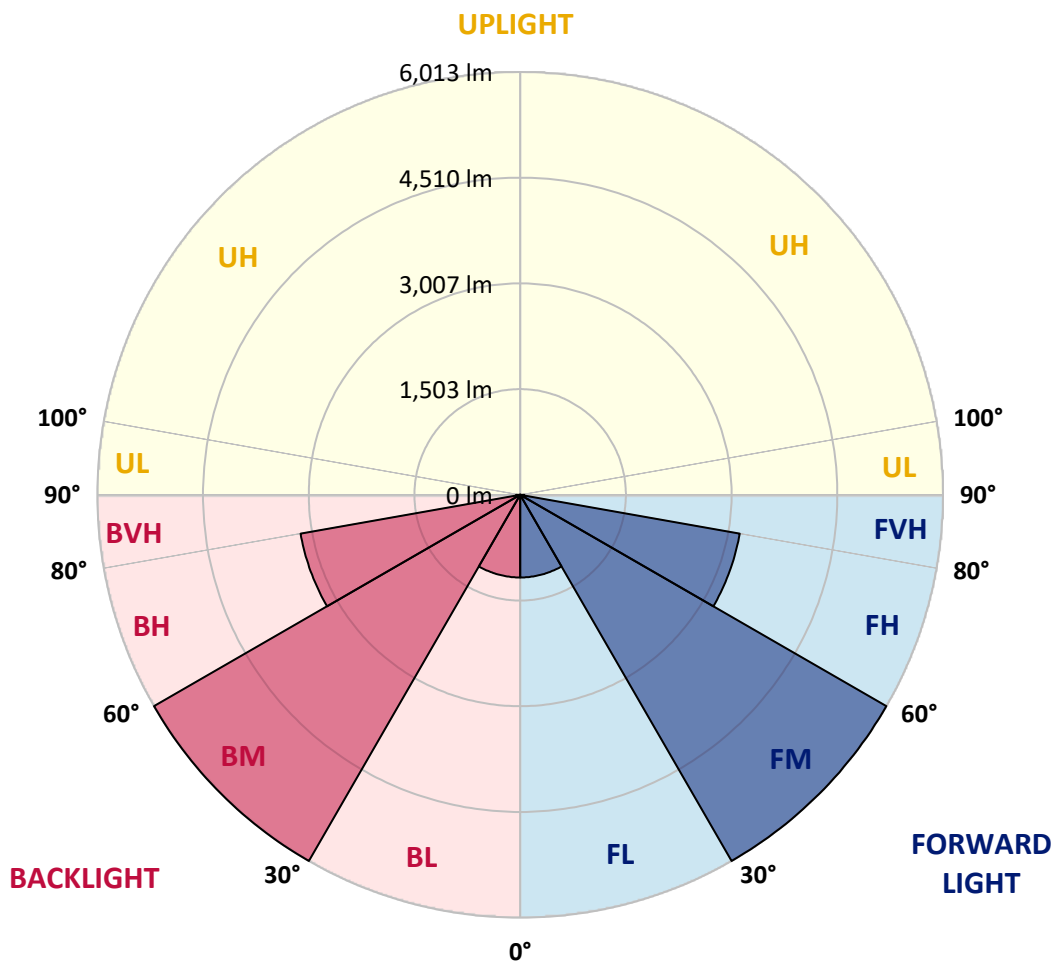
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1175.1	5.6			
FM	(30°-60°)	6013.4	28.9			
FH	(60°-80°)	3171.3	15.2			G2/5000
FVH	(80°-90°)	57.4	0.3			G1/100
BL	(0°-30°)	1175.1	5.6	B3/2500		
BM	(30°-60°)	6013.4	28.9	B4/8500		
BH	(60°-80°)	3171.3	15.2	B4/5000		G2/5000
BVH	(80°-90°)	57.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9
2.5°	2389.4	2389.4	2393.3	2392.0	2386.7	2382.9	2379.0	2373.8	2371.2	2368.6	2367.3
5°	2402.3	2402.3	2406.2	2405.0	2401.1	2395.9	2393.3	2389.4	2385.4	2382.9	2384.2
7.5°	2434.8	2436.1	2437.4	2436.1	2432.2	2428.3	2423.1	2421.8	2416.6	2412.7	2415.3
10°	2484.1	2484.1	2485.4	2486.7	2484.1	2475.0	2475.0	2472.5	2467.3	2462.0	2463.4
12.5°	2538.7	2538.7	2539.9	2539.9	2539.9	2534.8	2536.0	2534.8	2528.2	2525.7	2528.2
15°	2591.9	2593.1	2593.1	2595.7	2595.7	2597.1	2602.2	2602.2	2599.6	2598.3	2598.3
17.5°	2654.1	2656.7	2658.0	2661.9	2663.3	2665.8	2671.0	2672.3	2673.6	2669.7	2671.0
20°	2737.2	2738.4	2742.4	2743.7	2748.9	2748.9	2751.4	2750.2	2747.5	2742.4	2742.4
22.5°	2830.6	2833.3	2841.0	2841.0	2847.5	2843.6	2844.9	2841.0	2834.5	2831.9	2829.4
25°	2952.6	2956.5	2963.0	2960.4	2963.0	2956.5	2956.5	2956.5	2952.6	2948.8	2947.4
27.5°	3107.1	3100.6	3107.1	3101.9	3100.6	3095.3	3096.7	3094.1	3090.2	3088.9	3083.7
30°	3268.0	3260.2	3264.1	3265.5	3262.8	3261.5	3256.4	3252.5	3245.9	3247.3	3243.4
32.5°	3452.4	3444.5	3448.4	3449.7	3447.1	3449.7	3448.4	3439.4	3431.6	3436.7	3436.7
35°	3671.7	3666.5	3676.8	3680.8	3672.9	3669.0	3663.9	3653.5	3641.8	3649.6	3650.9
37.5°	3935.1	3928.6	3936.4	3946.7	3932.5	3924.8	3904.0	3888.3	3880.6	3884.5	3889.7
40°	4208.9	4210.3	4232.4	4234.9	4219.4	4210.3	4189.5	4166.2	4144.1	4144.1	4150.5
42.5°	4497.1	4501.0	4527.0	4536.1	4530.9	4514.0	4485.4	4456.9	4428.3	4433.5	4441.2
45°	4822.8	4817.7	4844.9	4867.0	4863.1	4857.9	4830.7	4778.7	4752.7	4751.5	4764.4
47.5°	5165.5	5175.8	5204.5	5242.0	5240.8	5227.8	5192.7	5144.7	5096.6	5100.6	5116.2
50°	5565.3	5579.5	5627.6	5665.2	5670.3	5666.4	5624.9	5569.1	5501.6	5505.5	5526.3
52.5°	5923.4	5944.2	6000.0	6077.9	6125.9	6147.9	6120.7	6068.8	6000.0	6003.9	6026.0
55°	6247.9	6280.3	6363.4	6469.9	6565.9	6655.4	6695.6	6694.4	6643.8	6655.4	6684.0
57.5°	6451.6	6497.1	6623.0	6794.3	6985.1	7165.5	7321.3	7467.8	7500.4	7561.3	7561.3
60°	6177.8	6284.2	6451.6	6744.9	7120.0	7525.0	7963.7	8390.7	8665.8	8882.6	8765.8
62.5°	5158.9	5316.1	5550.9	5937.7	6521.7	7244.6	8125.9	9118.8	10154.4	10787.8	10323.2
65°	3338.1	3535.4	3791.1	4225.8	4961.7	5892.3	7175.9	8960.4	11127.9	12251.8	11213.5
67.5°	1322.5	1456.2	1612.0	1920.8	2559.4	3473.1	4913.7	7114.8	9826.1	10886.4	9722.2
70°	632.1	654.1	683.9	750.1	909.8	1227.7	1974.1	3505.6	6026.0	7143.5	5881.9
72.5°	456.8	460.7	475.1	497.1	543.8	608.7	739.8	1072.1	2077.9	3021.4	2080.5
75°	346.6	351.7	359.5	371.2	395.9	427.0	476.3	571.0	711.3	820.2	709.9
77.5°	263.5	268.6	275.2	286.8	299.8	321.8	340.0	377.7	437.4	460.7	458.2
80°	192.1	201.2	211.5	222.0	231.0	241.4	242.7	260.9	294.6	316.7	310.2
82.5°	122.0	129.8	157.0	168.7	170.0	172.6	171.3	172.6	190.8	206.3	201.2
85°	77.8	83.1	97.4	110.3	107.7	112.9	112.9	110.3	102.5	88.3	105.2
87.5°	39.0	40.2	46.7	58.4	55.9	49.3	48.0	48.0	35.1	29.9	32.4
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°	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9	2369.9
2.5°	2363.4	2366.0	2362.1	2362.1	2360.8	2363.4	2359.5	2359.5
5°	2381.5	2385.4	2384.2	2384.2	2386.7	2389.4	2388.1	2386.7
7.5°	2414.1	2416.6	2419.2	2420.5	2423.1	2421.8	2424.4	2423.1
10°	2463.4	2460.7	2464.6	2460.7	2462.0	2459.5	2460.7	2460.7
12.5°	2525.7	2521.8	2519.1	2516.6	2516.6	2511.3	2511.3	2512.7
15°	2597.1	2590.5	2585.3	2582.7	2580.2	2580.2	2576.3	2578.9
17.5°	2667.1	2660.6	2651.5	2651.5	2647.6	2645.0	2642.5	2648.9
20°	2741.1	2734.6	2729.4	2728.1	2720.3	2717.7	2719.0	2726.8
22.5°	2826.7	2822.8	2822.8	2820.3	2815.1	2811.2	2811.2	2820.3
25°	2942.2	2934.4	2935.8	2937.1	2934.4	2934.4	2931.9	2938.3
27.5°	3083.7	3077.2	3081.1	3083.7	3081.1	3085.0	3081.1	3086.3
30°	3249.8	3245.9	3249.8	3253.7	3247.3	3247.3	3244.7	3248.6
32.5°	3448.4	3443.3	3445.8	3445.8	3436.7	3428.9	3418.6	3426.4
35°	3666.5	3660.0	3665.1	3669.0	3658.7	3650.9	3635.3	3641.8
37.5°	3906.5	3909.1	3915.7	3932.5	3929.9	3917.0	3905.2	3910.4
40°	4175.2	4188.2	4216.7	4228.5	4225.8	4212.8	4197.3	4199.8
42.5°	4478.9	4495.8	4525.6	4545.1	4536.1	4517.9	4498.4	4506.2
45°	4809.9	4835.8	4874.8	4894.2	4882.5	4863.1	4835.8	4850.1
47.5°	5160.3	5212.2	5264.1	5290.1	5286.2	5258.9	5223.9	5227.8
50°	5579.5	5648.3	5714.5	5740.4	5721.0	5679.4	5630.1	5628.8
52.5°	6101.3	6175.2	6229.8	6223.2	6175.2	6110.3	6054.5	6051.9
55°	6752.8	6777.5	6769.7	6713.8	6629.4	6528.3	6456.9	6445.2
57.5°	7540.6	7457.5	7335.5	7166.8	6977.3	6785.2	6655.4	6607.4
60°	8503.6	8128.5	7692.4	7233.0	6813.8	6499.7	6301.1	6180.4
62.5°	9299.1	8212.9	7238.2	6440.0	5787.1	5399.1	5127.8	4960.4
65°	9026.6	7095.4	5683.3	4654.1	3941.6	3540.5	3253.7	3062.9
67.5°	6973.4	4741.1	3299.1	2286.8	1733.9	1467.8	1282.3	1161.6
70°	3515.9	1818.3	1101.9	777.4	664.5	617.8	586.7	568.5
72.5°	1031.7	689.2	572.3	506.2	466.0	437.4	419.2	410.1
75°	571.0	466.0	411.4	373.8	347.8	328.4	316.7	308.9
77.5°	393.2	338.7	311.5	286.8	266.1	251.7	242.7	234.9
80°	275.2	247.9	236.2	223.2	207.7	196.0	183.0	177.8
82.5°	183.0	171.3	168.7	158.4	149.2	136.3	112.9	105.2
85°	107.7	106.4	106.4	102.5	96.1	84.4	67.5	67.5
87.5°	37.6	39.0	40.2	42.9	41.5	35.1	28.5	27.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)