

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: P196918

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196918  
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-04-D-UNV-5NQ-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22451 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

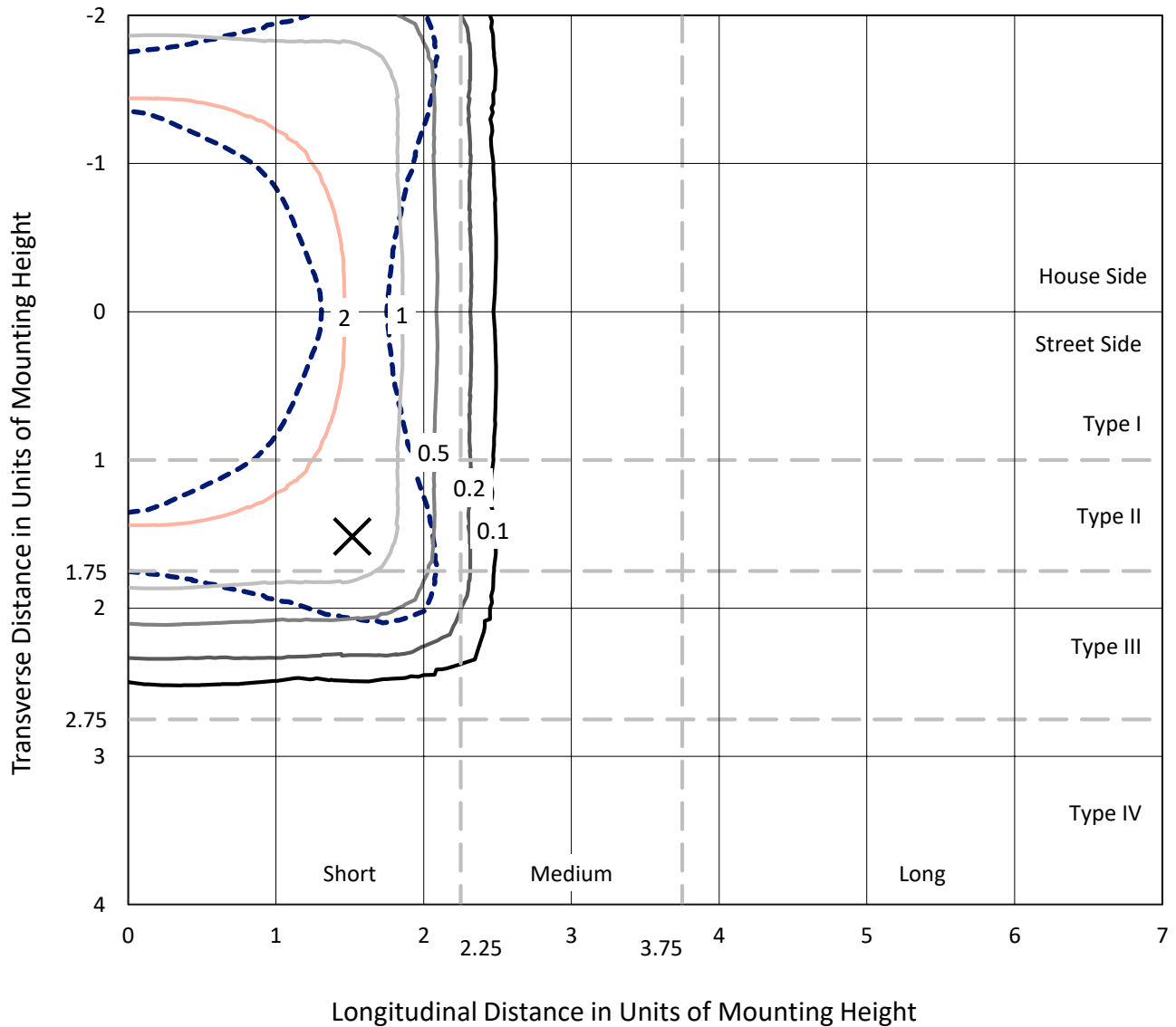
Input Watts (W): 258  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

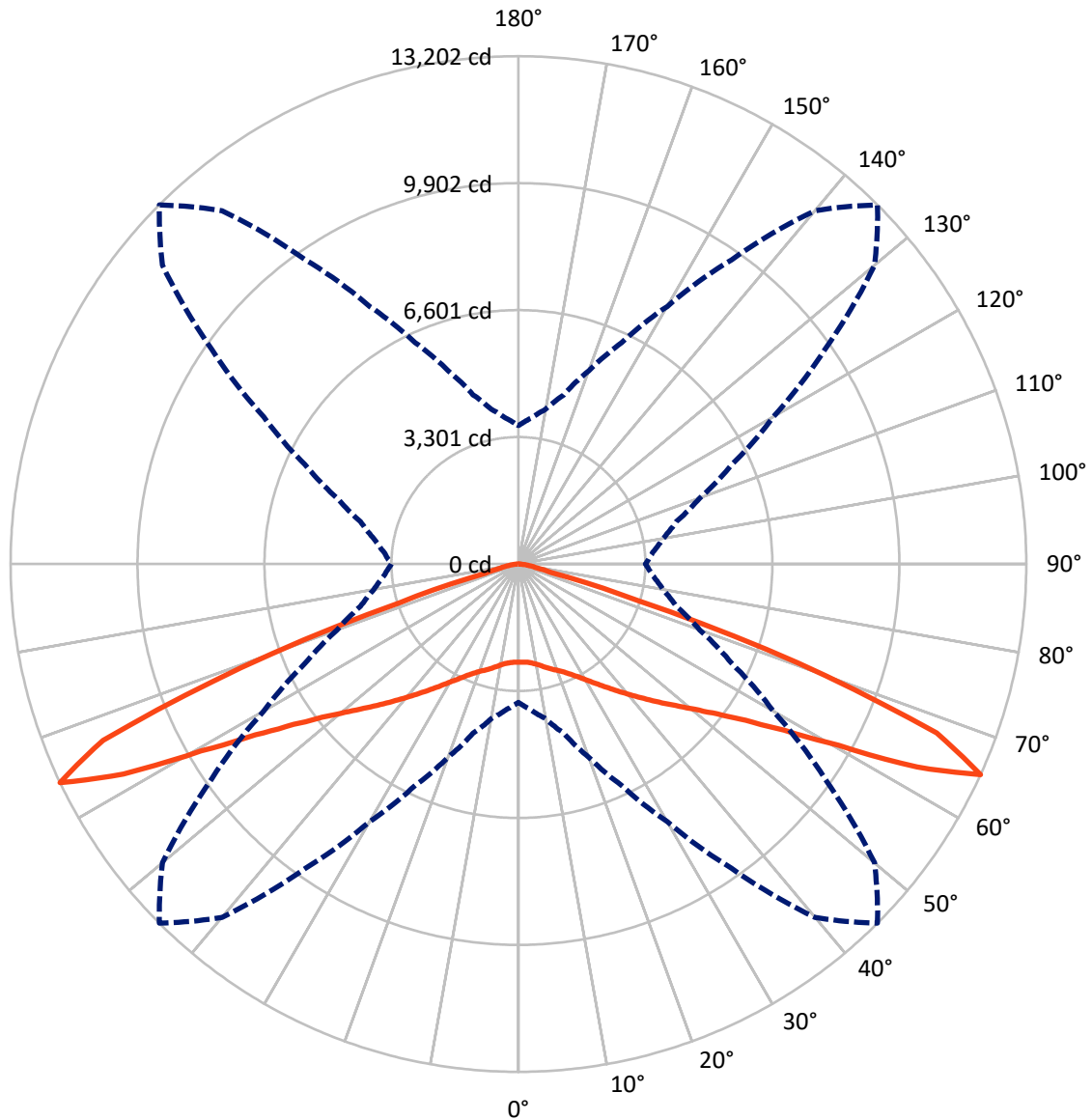
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 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	11225.5	0.0	11225.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	11225.5	0.0	11225.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	22451.0	0.0	22451.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.7	1.1
10°-20°	797.1	3.6
20°-30°	1486.9	6.6
30°-40°	2507.1	11.2
40°-50°	4072.3	18.1
50°-60°	6380.6	28.4
60°-70°	6023.0	26.8
70°-80°	811.7	3.6
80°-90°	123.6	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°	22451.0	100.0
0°-180°	22451.0	100.0

**Coefficient of Utilization**



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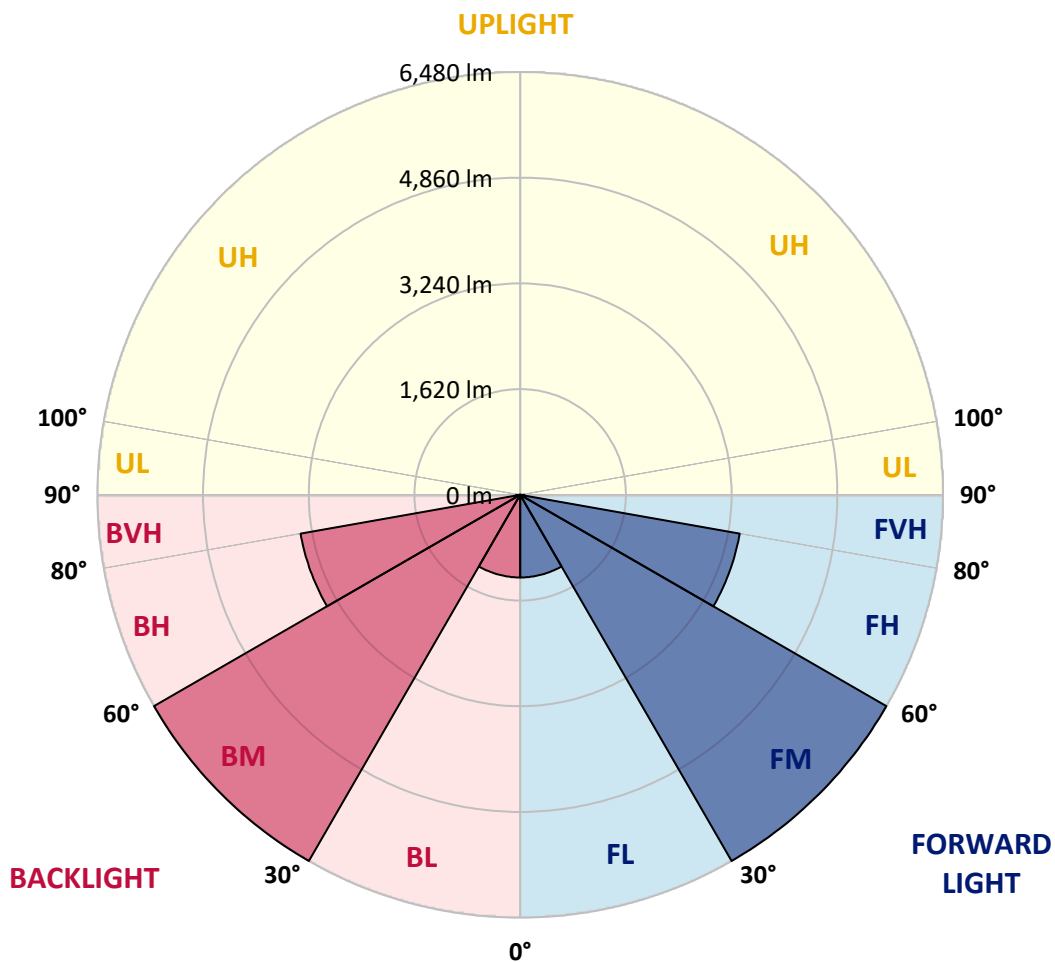
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1266.3	5.6			
FM	(30°-60°)	6480.0	28.9			
FH	(60°-80°)	3417.3	15.2			G2/5000
FVH	(80°-90°)	61.8	0.3			G1/100
BL	(0°-30°)	1266.3	5.6	B3/2500		
BM	(30°-60°)	6480.0	28.9	B4/8500		
BH	(60°-80°)	3417.3	15.2	B4/5000		G2/5000
BVH	(80°-90°)	61.8	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°	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8
2.5°	2574.8	2574.8	2578.9	2577.5	2572.0	2567.8	2563.6	2558.0	2555.2	2552.4	2551.0
5°	2588.7	2588.7	2592.9	2591.5	2587.3	2581.7	2578.9	2574.8	2570.6	2567.8	2569.2
7.5°	2623.7	2625.1	2626.5	2625.1	2620.9	2616.7	2611.1	2609.7	2604.1	2599.9	2602.7
10°	2676.8	2676.8	2678.2	2679.6	2676.8	2667.1	2667.1	2664.3	2658.7	2653.1	2654.5
12.5°	2735.6	2735.6	2737.0	2737.0	2737.0	2731.4	2732.8	2731.4	2724.4	2721.6	2724.4
15°	2792.9	2794.3	2794.3	2797.1	2797.1	2798.5	2804.1	2804.1	2801.3	2799.9	2799.9
17.5°	2860.1	2862.9	2864.3	2868.5	2869.8	2872.6	2878.2	2879.6	2881.0	2876.8	2878.2
20°	2949.6	2951.0	2955.2	2956.6	2962.2	2962.2	2965.0	2963.6	2960.8	2955.2	2955.2
22.5°	3050.3	3053.1	3061.5	3061.5	3068.4	3064.2	3065.6	3061.5	3054.5	3051.7	3048.9
25°	3181.7	3185.9	3192.9	3190.1	3192.9	3185.9	3185.9	3185.9	3181.7	3177.5	3176.1
27.5°	3348.2	3341.2	3348.2	3342.6	3341.2	3335.6	3337.0	3334.2	3330.0	3328.6	3323.0
30°	3521.6	3513.2	3517.4	3518.8	3516.0	3514.6	3509.0	3504.8	3497.8	3499.2	3495.0
32.5°	3720.2	3711.8	3716.0	3717.4	3714.6	3717.4	3716.0	3706.2	3697.8	3703.4	3703.4
35°	3956.5	3950.9	3962.1	3966.3	3957.9	3953.7	3948.1	3937.0	3924.4	3932.8	3934.2
37.5°	4240.4	4233.4	4241.8	4253.0	4237.6	4229.3	4206.9	4190.1	4181.7	4185.9	4191.5
40°	4535.5	4536.9	4560.7	4563.5	4546.7	4536.9	4514.6	4489.4	4465.6	4465.6	4472.6
42.5°	4846.0	4850.2	4878.2	4888.0	4882.4	4864.2	4833.4	4802.7	4771.9	4777.5	4785.9
45°	5197.1	5191.5	5220.8	5244.6	5240.4	5234.8	5205.4	5149.5	5121.5	5120.1	5134.1
47.5°	5566.3	5577.5	5608.2	5648.8	5647.4	5633.4	5595.6	5543.9	5492.2	5496.3	5513.1
50°	5997.0	6012.4	6064.2	6104.7	6110.3	6106.1	6061.4	6001.2	5928.5	5932.7	5955.1
52.5°	6383.0	6405.4	6465.6	6549.5	6601.2	6625.0	6595.6	6539.7	6465.6	6469.7	6493.5
55°	6732.7	6767.6	6857.2	6971.8	7075.3	7171.8	7215.2	7213.8	7159.2	7171.8	7202.6
57.5°	6952.3	7001.2	7136.9	7321.5	7527.1	7721.5	7889.3	8047.3	8082.3	8148.0	8148.0
60°	6657.2	6771.8	6952.3	7268.3	7672.5	8108.9	8581.6	9041.7	9338.2	9571.8	9445.9
62.5°	5559.3	5728.5	5981.7	6398.4	7027.8	7806.8	8756.4	9826.3	10942.4	11624.8	11124.2
65°	3597.1	3809.7	4085.2	4553.7	5346.7	6349.5	7732.6	9655.7	11991.3	13202.4	12083.6
67.5°	1425.1	1569.2	1737.0	2069.9	2758.0	3742.6	5295.0	7666.9	10588.5	11731.1	10476.6
70°	681.1	704.9	737.0	808.4	980.4	1323.0	2127.2	3777.5	6493.5	7697.7	6338.3
72.5°	492.3	496.5	511.9	535.6	586.0	655.9	797.2	1155.2	2239.1	3255.9	2241.9
75°	373.4	379.0	387.4	400.0	426.6	460.1	513.3	615.4	766.4	883.9	765.0
77.5°	283.9	289.5	296.5	309.1	323.1	346.8	366.4	407.0	471.3	496.5	493.7
80°	207.0	216.8	228.0	239.2	248.9	260.1	261.5	281.1	317.5	341.2	334.3
82.5°	131.5	139.9	169.2	181.8	183.2	186.0	184.6	186.0	205.6	222.4	216.8
85°	83.9	89.5	104.9	118.9	116.1	121.7	121.7	118.9	110.5	95.1	113.3
87.5°	42.0	43.4	50.3	62.9	60.1	53.1	51.7	51.7	37.8	32.2	35.0
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°	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8	2553.8
2.5°	2546.8	2549.6	2545.4	2545.4	2544.0	2546.8	2542.6	2542.6
5°	2566.4	2570.6	2569.2	2569.2	2572.0	2574.8	2573.4	2572.0
7.5°	2601.3	2604.1	2606.9	2608.3	2611.1	2609.7	2612.5	2611.1
10°	2654.5	2651.7	2655.9	2651.7	2653.1	2650.3	2651.7	2651.7
12.5°	2721.6	2717.4	2714.6	2711.8	2711.8	2706.2	2706.2	2707.6
15°	2798.5	2791.5	2785.9	2783.1	2780.3	2780.3	2776.1	2778.9
17.5°	2874.0	2867.1	2857.3	2857.3	2853.1	2850.3	2847.5	2854.5
20°	2953.8	2946.8	2941.2	2939.8	2931.4	2928.6	2930.0	2938.4
22.5°	3046.1	3041.9	3041.9	3039.1	3033.5	3029.3	3029.3	3039.1
25°	3170.5	3162.1	3163.5	3164.9	3162.1	3162.1	3159.4	3166.3
27.5°	3323.0	3316.0	3320.2	3323.0	3320.2	3324.4	3320.2	3325.8
30°	3502.0	3497.8	3502.0	3506.2	3499.2	3499.2	3496.4	3500.6
32.5°	3716.0	3710.4	3713.2	3713.2	3703.4	3695.0	3683.8	3692.2
35°	3950.9	3943.9	3949.5	3953.7	3942.5	3934.2	3917.4	3924.4
37.5°	4209.7	4212.5	4219.5	4237.6	4234.8	4220.9	4208.3	4213.9
40°	4499.2	4513.2	4543.9	4556.5	4553.7	4539.7	4522.9	4525.7
42.5°	4826.4	4844.6	4876.8	4897.8	4888.0	4868.4	4847.4	4855.8
45°	5183.1	5211.0	5253.0	5274.0	5261.4	5240.4	5211.0	5226.4
47.5°	5560.7	5616.6	5672.6	5700.5	5696.3	5667.0	5629.2	5633.4
50°	6012.4	6086.5	6157.9	6185.8	6164.9	6120.1	6067.0	6065.6
52.5°	6574.6	6654.4	6713.1	6706.1	6654.4	6584.4	6524.3	6521.5
55°	7276.7	7303.3	7294.9	7234.8	7143.9	7034.8	6957.8	6945.3
57.5°	8125.6	8036.1	7904.7	7722.9	7518.7	7311.7	7171.8	7120.1
60°	9163.4	8759.2	8289.3	7794.2	7342.5	7004.0	6790.0	6660.0
62.5°	10020.7	8850.1	7799.8	6939.7	6236.2	5818.0	5525.7	5345.3
65°	9727.0	7645.9	6124.3	5015.2	4247.4	3815.3	3506.2	3300.6
67.5°	7514.5	5108.9	3555.1	2464.3	1868.5	1581.8	1381.8	1251.7
70°	3788.7	1959.4	1187.4	837.7	716.1	665.7	632.2	612.6
72.5°	1111.9	742.6	616.8	545.4	502.1	471.3	451.7	441.9
75°	615.4	502.1	443.3	402.8	374.8	353.8	341.2	332.9
77.5°	423.8	365.0	335.7	309.1	286.7	271.3	261.5	253.1
80°	296.5	267.1	254.5	240.6	223.8	211.2	197.2	191.6
82.5°	197.2	184.6	181.8	170.6	160.8	146.8	121.7	113.3
85°	116.1	114.7	114.7	110.5	103.5	90.9	72.7	72.7
87.5°	40.6	42.0	43.4	46.2	44.8	37.8	30.8	29.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)