

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: P195477

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-7050-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195477  
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-03-D-UNV-5NQ-7050-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 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: 20428 lumens  
Efficiency: N/A  
Efficacy: 107.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

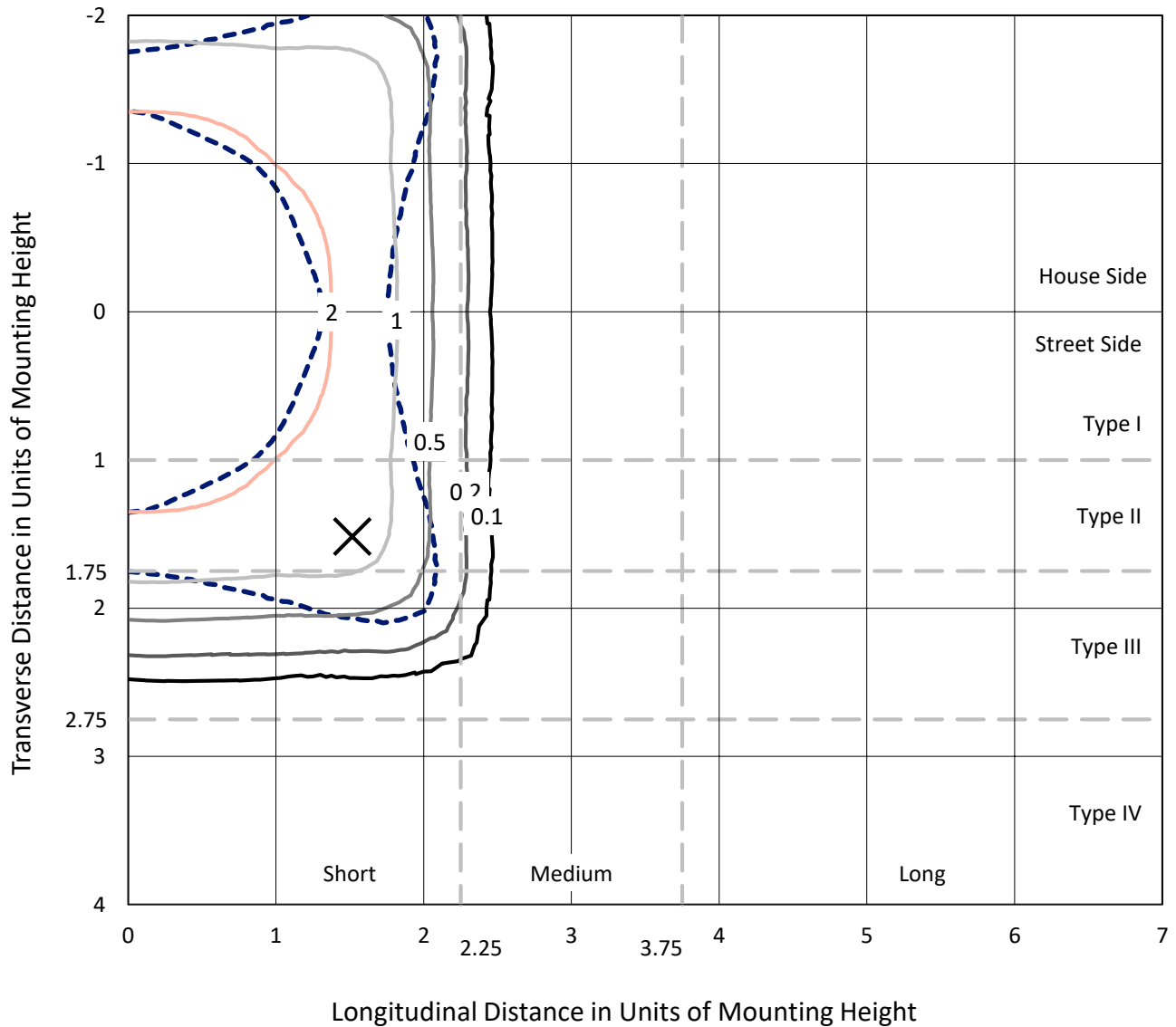
Input Watts (W): 191  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

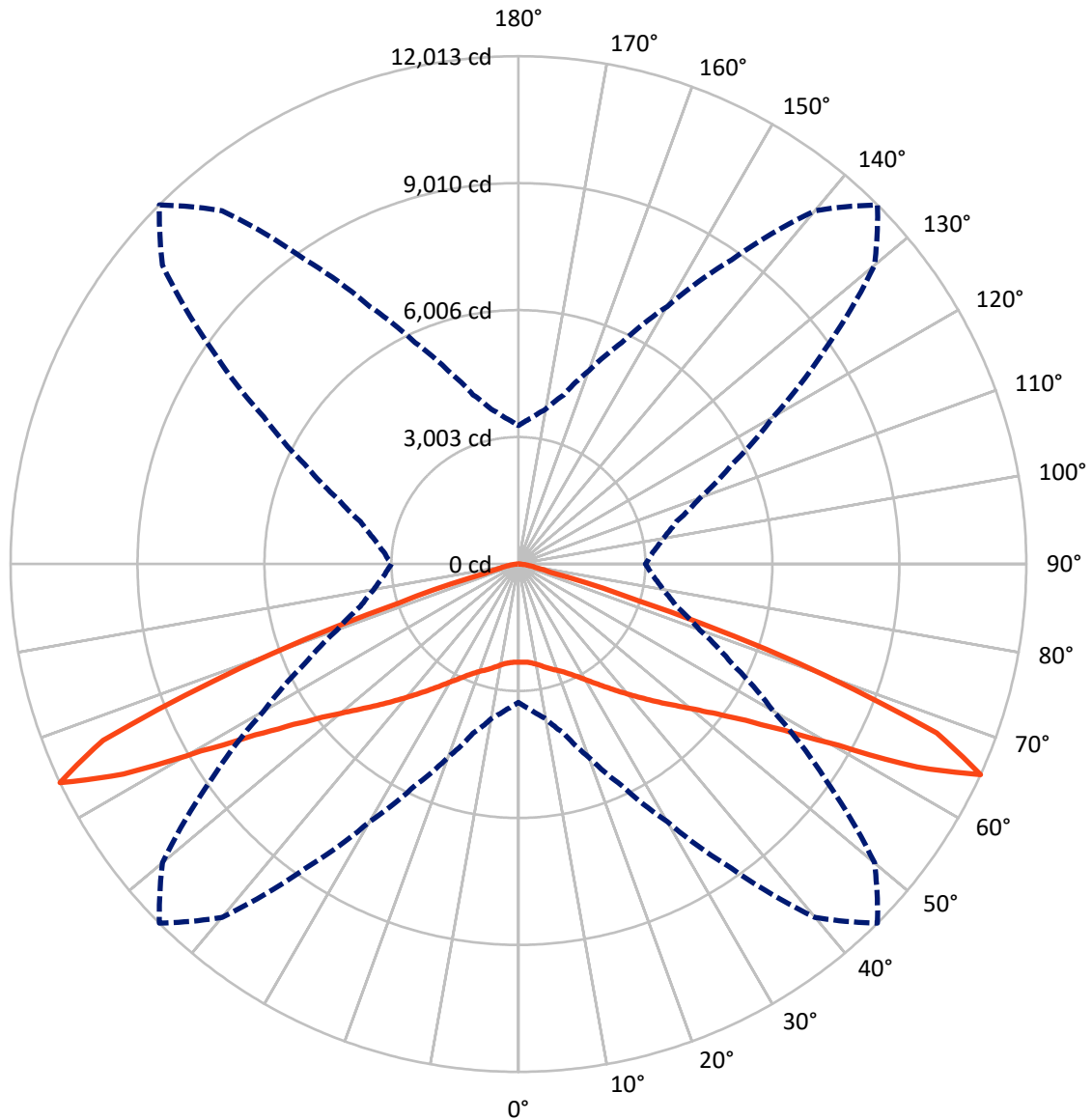
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 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	10214.0	0.0	10214.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10214.0	0.0	10214.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	20428.0	0.0	20428.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.3	1.1
10°-20°	725.2	3.6
20°-30°	1352.9	6.6
30°-40°	2281.2	11.2
40°-50°	3705.4	18.1
50°-60°	5805.7	28.4
60°-70°	5480.3	26.8
70°-80°	738.6	3.6
80°-90°	112.5	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°	20428.0	100.0
0°-180°	20428.0	100.0



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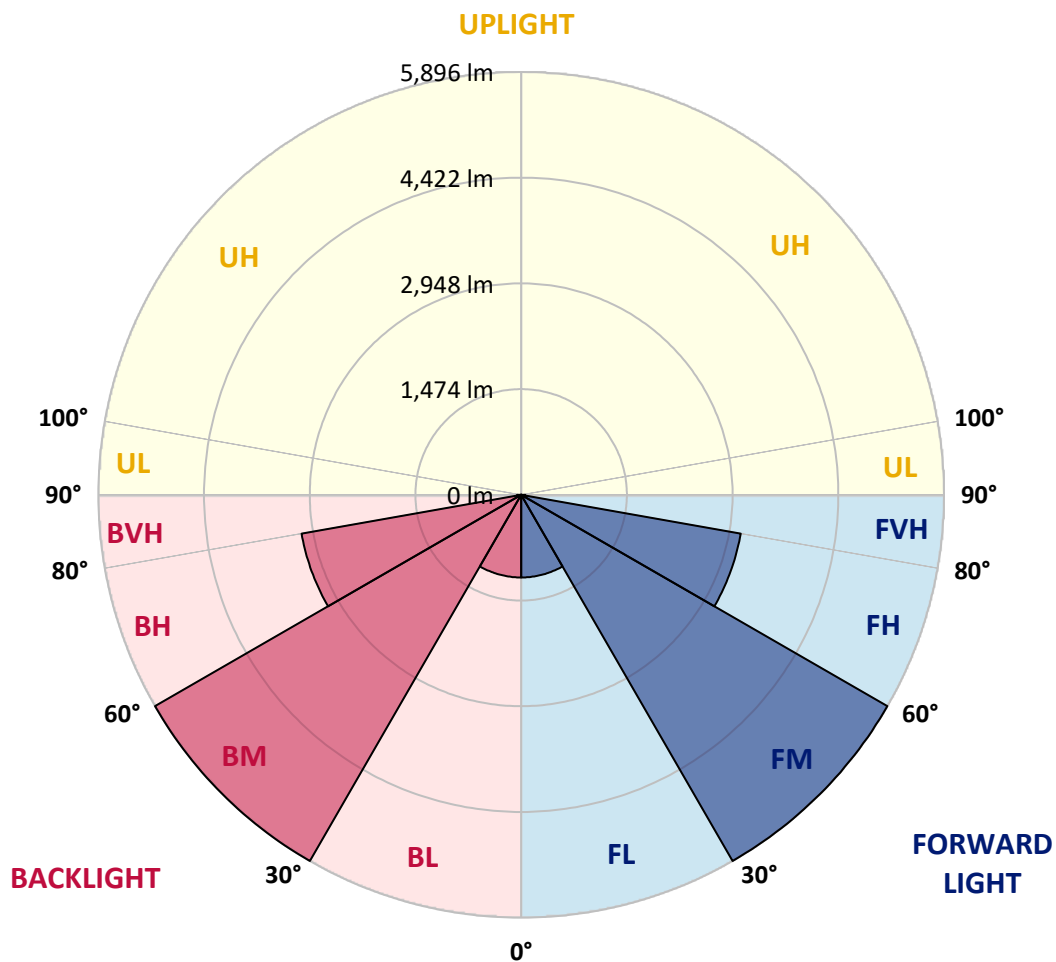
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1152.2	5.6			
FM (30°-60°)	5896.1	28.9			
FH (60°-80°)	3109.4	15.2			G2/5000
FVH (80°-90°)	56.2	0.3			G1/100
BL (0°-30°)	1152.2	5.6	B3/2500		
BM (30°-60°)	5896.1	28.9	B4/8500		
BH (60°-80°)	3109.4	15.2	B4/5000		G2/5000
BVH (80°-90°)	56.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7
2.5°	2342.7	2342.7	2346.6	2345.3	2340.2	2336.4	2332.6	2327.5	2324.9	2322.4	2321.1
5°	2355.5	2355.5	2359.3	2358.0	2354.2	2349.1	2346.6	2342.7	2338.9	2336.4	2337.7
7.5°	2387.3	2388.6	2389.8	2388.6	2384.7	2380.9	2375.8	2374.6	2369.5	2365.7	2368.2
10°	2435.6	2435.6	2436.9	2438.2	2435.6	2426.7	2426.7	2424.2	2419.1	2414.0	2415.3
12.5°	2489.1	2489.1	2490.4	2490.4	2490.4	2485.3	2486.5	2485.3	2478.9	2476.4	2478.9
15°	2541.3	2542.5	2542.5	2545.1	2545.1	2546.4	2551.4	2551.4	2548.9	2547.6	2547.6
17.5°	2602.3	2604.9	2606.2	2610.0	2611.3	2613.8	2618.9	2620.2	2621.4	2617.6	2618.9
20°	2683.8	2685.1	2688.9	2690.2	2695.2	2695.2	2697.8	2696.5	2694.0	2688.9	2688.9
22.5°	2775.4	2778.0	2785.6	2785.6	2792.0	2788.1	2789.4	2785.6	2779.2	2776.7	2774.1
25°	2895.0	2898.8	2905.2	2902.7	2905.2	2898.8	2898.8	2898.8	2895.0	2891.2	2889.9
27.5°	3046.5	3040.1	3046.5	3041.4	3040.1	3035.0	3036.3	3033.7	3029.9	3028.6	3023.6
30°	3204.3	3196.6	3200.4	3201.7	3199.2	3197.9	3192.8	3189.0	3182.6	3183.9	3180.1
32.5°	3385.0	3377.3	3381.1	3382.4	3379.9	3382.4	3381.1	3372.2	3364.6	3369.7	3369.7
35°	3600.0	3594.9	3605.1	3608.9	3601.3	3597.5	3592.4	3582.2	3570.8	3578.4	3579.7
37.5°	3858.3	3852.0	3859.6	3869.8	3855.8	3848.2	3827.8	3812.5	3804.9	3808.7	3813.8
40°	4126.9	4128.1	4149.8	4152.3	4137.0	4128.1	4107.8	4084.9	4063.2	4063.2	4069.6
42.5°	4409.4	4413.2	4438.6	4447.5	4442.4	4425.9	4397.9	4369.9	4341.9	4347.0	4354.6
45°	4728.8	4723.7	4750.4	4772.0	4768.2	4763.1	4736.4	4685.5	4660.0	4658.8	4671.5
47.5°	5064.7	5074.9	5102.9	5139.8	5138.5	5125.8	5091.4	5044.4	4997.3	5001.1	5016.4
50°	5456.7	5470.7	5517.7	5554.6	5559.7	5555.9	5515.2	5460.5	5394.3	5398.1	5418.5
52.5°	5807.9	5828.2	5883.0	5959.3	6006.4	6028.0	6001.3	5950.4	5883.0	5886.8	5908.4
55°	6126.0	6157.8	6239.3	6343.6	6437.8	6525.6	6565.0	6563.8	6514.1	6525.6	6553.6
57.5°	6325.8	6370.3	6493.8	6661.8	6848.8	7025.7	7178.4	7322.2	7354.0	7413.8	7413.8
60°	6057.3	6161.6	6325.8	6613.4	6981.2	7378.2	7808.3	8227.0	8496.8	8709.3	8594.7
62.5°	5058.4	5212.3	5442.7	5821.9	6394.5	7103.3	7967.4	8940.9	9956.4	10577.4	10121.8
65°	3273.0	3466.4	3717.1	4143.4	4864.9	5777.3	7035.9	8785.6	10910.8	12012.8	10994.8
67.5°	1296.7	1427.8	1580.5	1883.4	2509.5	3405.3	4817.8	6976.1	9634.4	10674.1	9532.6
70°	619.7	641.4	670.6	735.5	892.1	1203.8	1935.5	3437.1	5908.4	7004.1	5767.2
72.5°	447.9	451.8	465.8	487.4	533.2	596.8	725.3	1051.1	2037.3	2962.5	2039.9
75°	339.8	344.9	352.5	363.9	388.1	418.7	467.0	559.9	697.4	804.2	696.1
77.5°	258.3	263.4	269.8	281.2	294.0	315.6	333.4	370.3	428.8	451.8	449.2
80°	188.3	197.2	207.4	217.6	226.5	236.7	238.0	255.8	288.9	310.5	304.1
82.5°	119.6	127.3	154.0	165.4	166.7	169.2	168.0	169.2	187.1	202.3	197.2
85°	76.4	81.4	95.4	108.2	105.6	110.7	110.7	108.2	100.5	86.5	103.1
87.5°	38.2	39.4	45.8	57.3	54.7	48.4	47.1	47.1	34.4	29.3	31.8
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°	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7	2323.7
2.5°	2317.3	2319.8	2316.0	2316.0	2314.8	2317.3	2313.5	2313.5
5°	2335.1	2338.9	2337.7	2337.7	2340.2	2342.7	2341.5	2340.2
7.5°	2366.9	2369.5	2372.0	2373.3	2375.8	2374.6	2377.1	2375.8
10°	2415.3	2412.7	2416.6	2412.7	2414.0	2411.5	2412.7	2412.7
12.5°	2476.4	2472.5	2470.0	2467.5	2467.5	2462.4	2462.4	2463.6
15°	2546.4	2540.0	2534.9	2532.4	2529.8	2529.8	2526.0	2528.5
17.5°	2615.1	2608.7	2599.8	2599.8	2596.0	2593.4	2590.9	2597.3
20°	2687.6	2681.2	2676.2	2674.9	2667.2	2664.7	2666.0	2673.6
22.5°	2771.6	2767.8	2767.8	2765.2	2760.1	2756.3	2756.3	2765.2
25°	2884.9	2877.2	2878.5	2879.8	2877.2	2877.2	2874.7	2881.0
27.5°	3023.6	3017.2	3021.0	3023.6	3021.0	3024.8	3021.0	3026.1
30°	3186.4	3182.6	3186.4	3190.3	3183.9	3183.9	3181.4	3185.2
32.5°	3381.1	3376.1	3378.6	3378.6	3369.7	3362.1	3351.9	3359.5
35°	3594.9	3588.6	3593.7	3597.5	3587.3	3579.7	3564.4	3570.8
37.5°	3830.3	3832.9	3839.3	3855.8	3853.3	3840.5	3829.1	3834.2
40°	4093.8	4106.5	4134.5	4145.9	4143.4	4130.7	4115.4	4117.9
42.5°	4391.5	4408.1	4437.4	4456.4	4447.5	4429.7	4410.6	4418.3
45°	4716.0	4741.5	4779.7	4798.8	4787.3	4768.2	4741.5	4755.5
47.5°	5059.6	5110.5	5161.4	5186.9	5183.1	5156.3	5122.0	5125.8
50°	5470.7	5538.1	5603.0	5628.5	5609.4	5568.6	5520.3	5519.0
52.5°	5982.2	6054.8	6108.2	6101.8	6054.8	5991.1	5936.4	5933.9
55°	6621.0	6645.2	6637.6	6582.9	6500.1	6400.9	6330.9	6319.4
57.5°	7393.5	7312.0	7192.4	7027.0	6841.2	6652.8	6525.6	6478.5
60°	8337.7	7969.9	7542.4	7091.9	6680.8	6372.9	6178.2	6059.8
62.5°	9117.8	8052.6	7097.0	6314.4	5674.3	5293.8	5027.8	4863.7
65°	8850.5	6957.0	5572.5	4563.3	3864.7	3471.5	3190.3	3003.2
67.5°	6837.4	4648.6	3234.8	2242.2	1700.1	1439.2	1257.3	1138.9
70°	3447.3	1782.8	1080.4	762.3	651.5	605.7	575.2	557.4
72.5°	1011.7	675.7	561.2	496.3	456.8	428.8	411.0	402.1
75°	559.9	456.8	403.4	366.5	341.0	322.0	310.5	302.9
77.5°	385.6	332.1	305.4	281.2	260.9	246.9	238.0	230.3
80°	269.8	243.1	231.6	218.9	203.6	192.2	179.4	174.3
82.5°	179.4	168.0	165.4	155.3	146.3	133.6	110.7	103.1
85°	105.6	104.3	104.3	100.5	94.2	82.7	66.2	66.2
87.5°	36.9	38.2	39.4	42.0	40.7	34.4	28.0	26.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)