

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: P195466

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-7050-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195466  
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-7050-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20263 lumens  
Efficiency: N/A  
Efficacy: 118.5 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): 171  
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

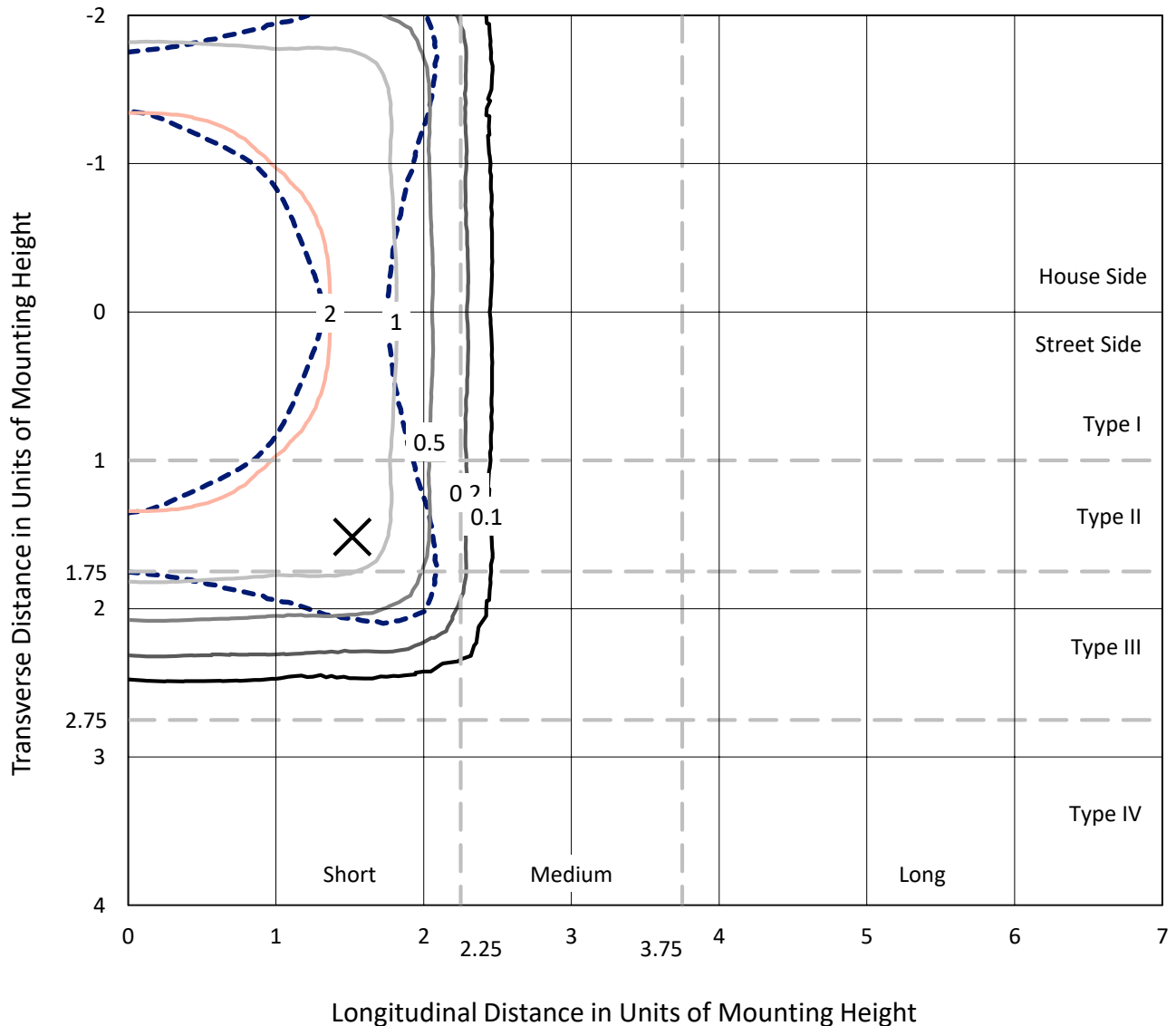


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### Iso-Footcandle Lines of Horizontal Illumination

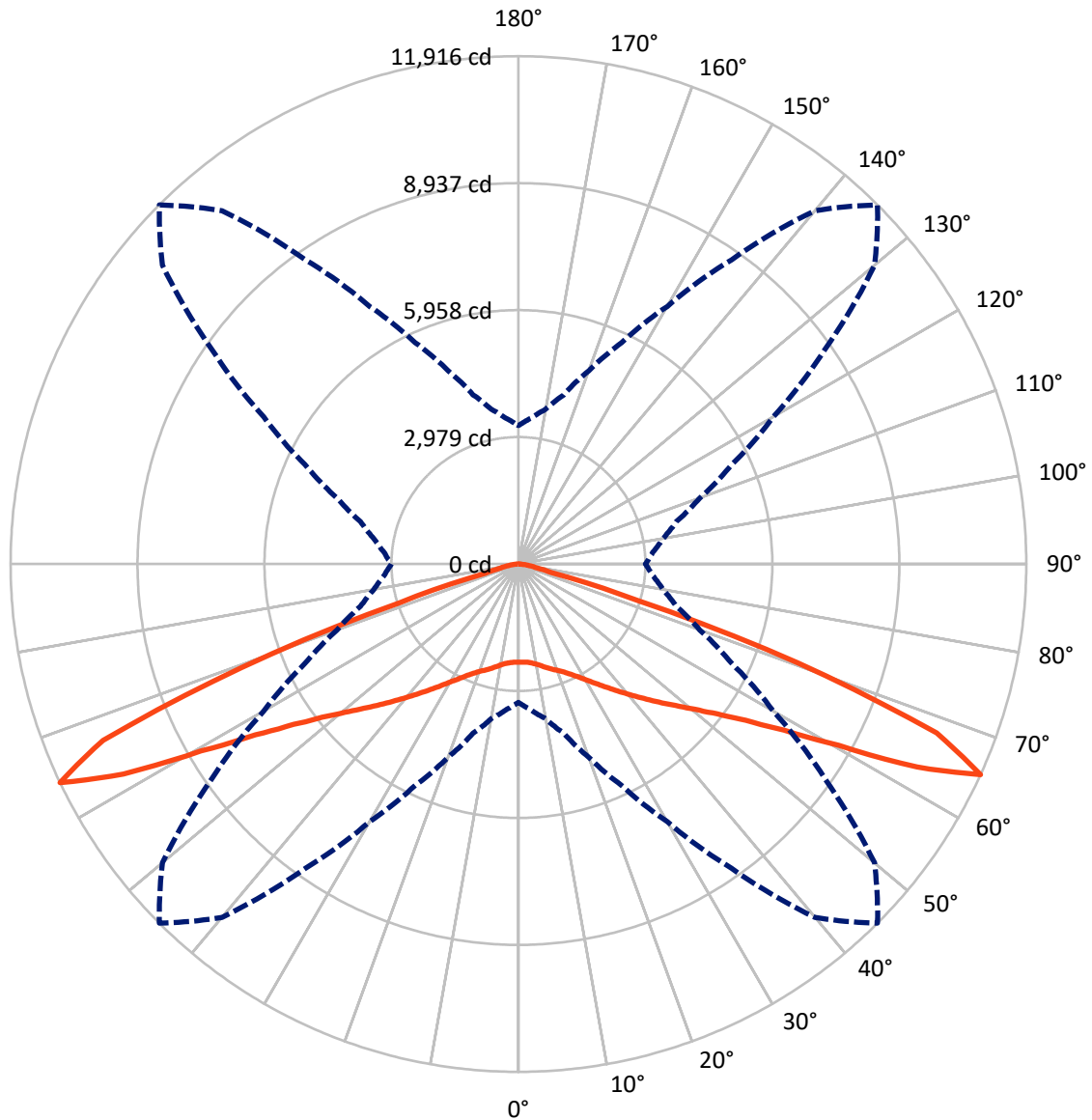
× Max cd  
 - - - 1/2 Max cd



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	10131.5	0.0	10131.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10131.5	0.0	10131.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	20263.0	0.0	20263.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	224.4	1.1
10°-20°	719.4	3.6
20°-30°	1342.0	6.6
30°-40°	2262.8	11.2
40°-50°	3675.4	18.1
50°-60°	5758.8	28.4
60°-70°	5436.0	26.8
70°-80°	732.6	3.6
80°-90°	111.6	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°	20263.0	100.0
0°-180°	20263.0	100.0



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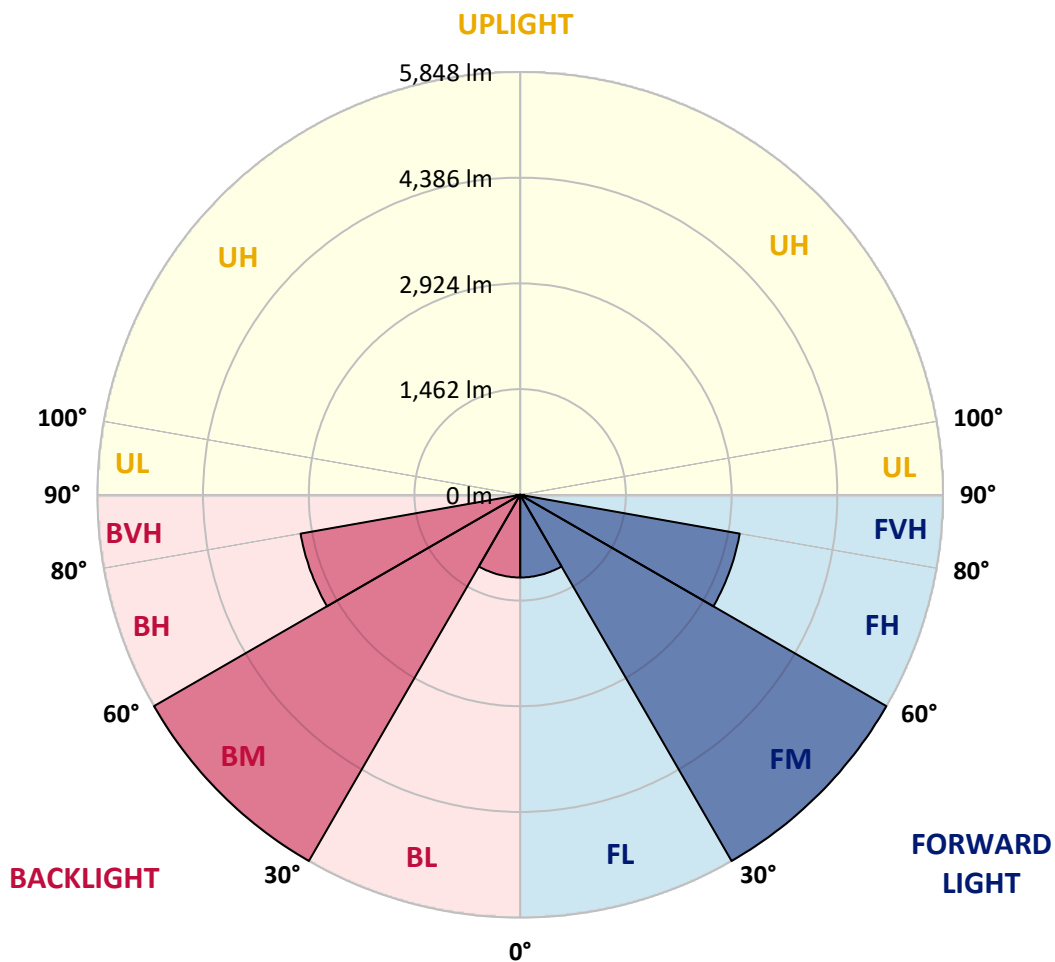
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1142.9	5.6			
FM	(30°-60°)	5848.5	28.9			
FH	(60°-80°)	3084.3	15.2			G2/5000
FVH	(80°-90°)	55.8	0.3			G1/100
BL	(0°-30°)	1142.9	5.6	B3/2500		
BM	(30°-60°)	5848.5	28.9	B4/8500		
BH	(60°-80°)	3084.3	15.2	B4/5000		G2/5000
BVH	(80°-90°)	55.8	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°	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9
2.5°	2323.8	2323.8	2327.6	2326.4	2321.3	2317.5	2313.7	2308.7	2306.2	2303.6	2302.4
5°	2336.4	2336.4	2340.2	2339.0	2335.2	2330.1	2327.6	2323.8	2320.0	2317.5	2318.8
7.5°	2368.0	2369.3	2370.5	2369.3	2365.5	2361.7	2356.6	2355.4	2350.3	2346.5	2349.1
10°	2416.0	2416.0	2417.2	2418.5	2416.0	2407.1	2407.1	2404.6	2399.6	2394.5	2395.8
12.5°	2469.0	2469.0	2470.2	2470.2	2470.2	2465.2	2466.5	2465.2	2458.9	2456.4	2458.9
15°	2520.7	2522.0	2522.0	2524.5	2524.5	2525.8	2530.8	2530.8	2528.3	2527.1	2527.1
17.5°	2581.3	2583.9	2585.1	2588.9	2590.2	2592.7	2597.7	2599.0	2600.3	2596.5	2597.7
20°	2662.1	2663.4	2667.2	2668.4	2673.5	2673.5	2676.0	2674.7	2672.2	2667.2	2667.2
22.5°	2753.0	2755.5	2763.1	2763.1	2769.4	2765.6	2766.9	2763.1	2756.8	2754.3	2751.7
25°	2871.6	2875.4	2881.7	2879.2	2881.7	2875.4	2875.4	2875.4	2871.6	2867.9	2866.6
27.5°	3021.9	3015.5	3021.9	3016.8	3015.5	3010.5	3011.8	3009.2	3005.4	3004.2	2999.1
30°	3178.4	3170.8	3174.6	3175.9	3173.3	3172.1	3167.0	3163.2	3156.9	3158.2	3154.4
32.5°	3357.6	3350.0	3353.8	3355.1	3352.6	3355.1	3353.8	3345.0	3337.4	3342.5	3342.5
35°	3570.9	3565.9	3576.0	3579.8	3572.2	3568.4	3563.4	3553.3	3541.9	3549.5	3550.7
37.5°	3827.2	3820.9	3828.4	3838.5	3824.7	3817.1	3796.9	3781.7	3774.2	3778.0	3783.0
40°	4093.5	4094.8	4116.2	4118.8	4103.6	4094.8	4074.6	4051.9	4030.4	4030.4	4036.7
42.5°	4373.7	4377.5	4402.8	4411.6	4406.6	4390.2	4362.4	4334.6	4306.8	4311.9	4319.5
45°	4690.6	4685.5	4712.0	4733.5	4729.7	4724.7	4698.1	4647.7	4622.4	4621.1	4633.8
47.5°	5023.8	5033.9	5061.7	5098.3	5097.0	5084.4	5050.3	5003.6	4956.9	4960.7	4975.8
50°	5412.6	5426.5	5473.2	5509.8	5514.8	5511.0	5470.6	5416.4	5350.7	5354.5	5374.7
52.5°	5761.0	5781.2	5835.4	5911.2	5957.9	5979.3	5952.8	5902.3	5835.4	5839.2	5860.7
55°	6076.5	6108.1	6188.9	6292.4	6385.8	6472.9	6512.0	6510.8	6461.5	6472.9	6500.7
57.5°	6274.7	6318.9	6441.3	6607.9	6793.5	6969.0	7120.4	7263.1	7294.6	7353.9	7353.9
60°	6008.4	6111.9	6274.7	6560.0	6924.8	7318.6	7745.2	8160.5	8428.1	8638.9	8525.3
62.5°	5017.5	5170.2	5398.7	5774.9	6342.9	7046.0	7903.0	8868.7	9875.9	10491.9	10040.0
65°	3246.5	3438.4	3687.1	4109.9	4825.6	5730.7	6979.1	8714.7	10822.6	11915.8	10906.0
67.5°	1286.2	1416.3	1567.7	1868.1	2489.2	3377.8	4778.9	6919.7	9556.6	10587.9	9455.6
70°	614.7	636.2	665.2	729.6	884.8	1194.1	1919.9	3409.4	5860.7	6947.5	5720.6
72.5°	444.3	448.1	462.0	483.4	528.9	592.0	719.5	1042.6	2020.9	2938.5	2023.4
75°	337.0	342.1	349.6	361.0	385.0	415.3	463.3	555.4	691.7	797.8	690.5
77.5°	256.2	261.3	267.6	279.0	291.6	313.0	330.7	367.3	425.4	448.1	445.6
80°	186.8	195.7	205.7	215.8	224.7	234.8	236.0	253.7	286.5	308.0	301.7
82.5°	118.7	126.2	152.7	164.1	165.4	167.9	166.6	167.9	185.6	200.7	195.7
85°	75.7	80.8	94.7	107.3	104.8	109.8	109.8	107.3	99.7	85.8	102.2
87.5°	37.9	39.1	45.4	56.8	54.3	48.0	46.7	46.7	34.1	29.0	31.6
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°	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9	2304.9
2.5°	2298.6	2301.1	2297.3	2297.3	2296.1	2298.6	2294.8	2294.8
5°	2316.3	2320.0	2318.8	2318.8	2321.3	2323.8	2322.6	2321.3
7.5°	2347.8	2350.3	2352.9	2354.1	2356.6	2355.4	2357.9	2356.6
10°	2395.8	2393.3	2397.0	2393.3	2394.5	2392.0	2393.3	2393.3
12.5°	2456.4	2452.6	2450.1	2447.5	2447.5	2442.5	2442.5	2443.7
15°	2525.8	2519.5	2514.4	2511.9	2509.4	2509.4	2505.6	2508.1
17.5°	2594.0	2587.6	2578.8	2578.8	2575.0	2572.5	2570.0	2576.3
20°	2665.9	2659.6	2654.5	2653.3	2645.7	2643.2	2644.4	2652.0
22.5°	2749.2	2745.4	2745.4	2742.9	2737.8	2734.1	2734.1	2742.9
25°	2861.5	2854.0	2855.2	2856.5	2854.0	2854.0	2851.5	2857.8
27.5°	2999.1	2992.8	2996.6	2999.1	2996.6	3000.4	2996.6	3001.7
30°	3160.7	3156.9	3160.7	3164.5	3158.2	3158.2	3155.7	3159.4
32.5°	3353.8	3348.8	3351.3	3351.3	3342.5	3334.9	3324.8	3332.4
35°	3565.9	3559.6	3564.6	3568.4	3558.3	3550.7	3535.6	3541.9
37.5°	3799.4	3801.9	3808.2	3824.7	3822.1	3809.5	3798.1	3803.2
40°	4060.7	4073.3	4101.1	4112.5	4109.9	4097.3	4082.2	4084.7
42.5°	4356.1	4372.5	4401.5	4420.4	4411.6	4393.9	4375.0	4382.6
45°	4677.9	4703.2	4741.1	4760.0	4748.6	4729.7	4703.2	4717.1
47.5°	5018.8	5069.2	5119.7	5145.0	5141.2	5114.7	5080.6	5084.4
50°	5426.5	5493.4	5557.7	5583.0	5564.1	5523.7	5475.7	5474.4
52.5°	5933.9	6005.8	6058.9	6052.6	6005.8	5942.7	5888.5	5885.9
55°	6567.6	6591.5	6584.0	6529.7	6447.6	6349.2	6279.8	6268.4
57.5°	7333.7	7253.0	7134.3	6970.2	6785.9	6599.1	6472.9	6426.2
60°	8270.3	7905.6	7481.4	7034.6	6626.9	6321.4	6128.3	6010.9
62.5°	9044.1	7987.6	7039.6	6263.3	5628.4	5251.0	4987.2	4824.4
65°	8779.0	6900.8	5527.4	4526.5	3833.5	3443.5	3164.5	2978.9
67.5°	6782.1	4611.0	3208.7	2224.1	1686.4	1427.6	1247.1	1129.7
70°	3419.5	1768.4	1071.7	756.1	646.3	600.8	570.5	552.9
72.5°	1003.5	670.3	556.7	492.3	453.2	425.4	407.7	398.9
75°	555.4	453.2	400.1	363.5	338.3	319.4	308.0	300.4
77.5°	382.5	329.5	302.9	279.0	258.8	244.9	236.0	228.5
80°	267.6	241.1	229.7	217.1	202.0	190.6	178.0	172.9
82.5°	178.0	166.6	164.1	154.0	145.2	132.5	109.8	102.2
85°	104.8	103.5	103.5	99.7	93.4	82.0	65.6	65.6
87.5°	36.6	37.9	39.1	41.7	40.4	34.1	27.8	26.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)