

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: P196398

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196398
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24445.6 lumens
Efficiency: N/A
Efficacy: 126.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

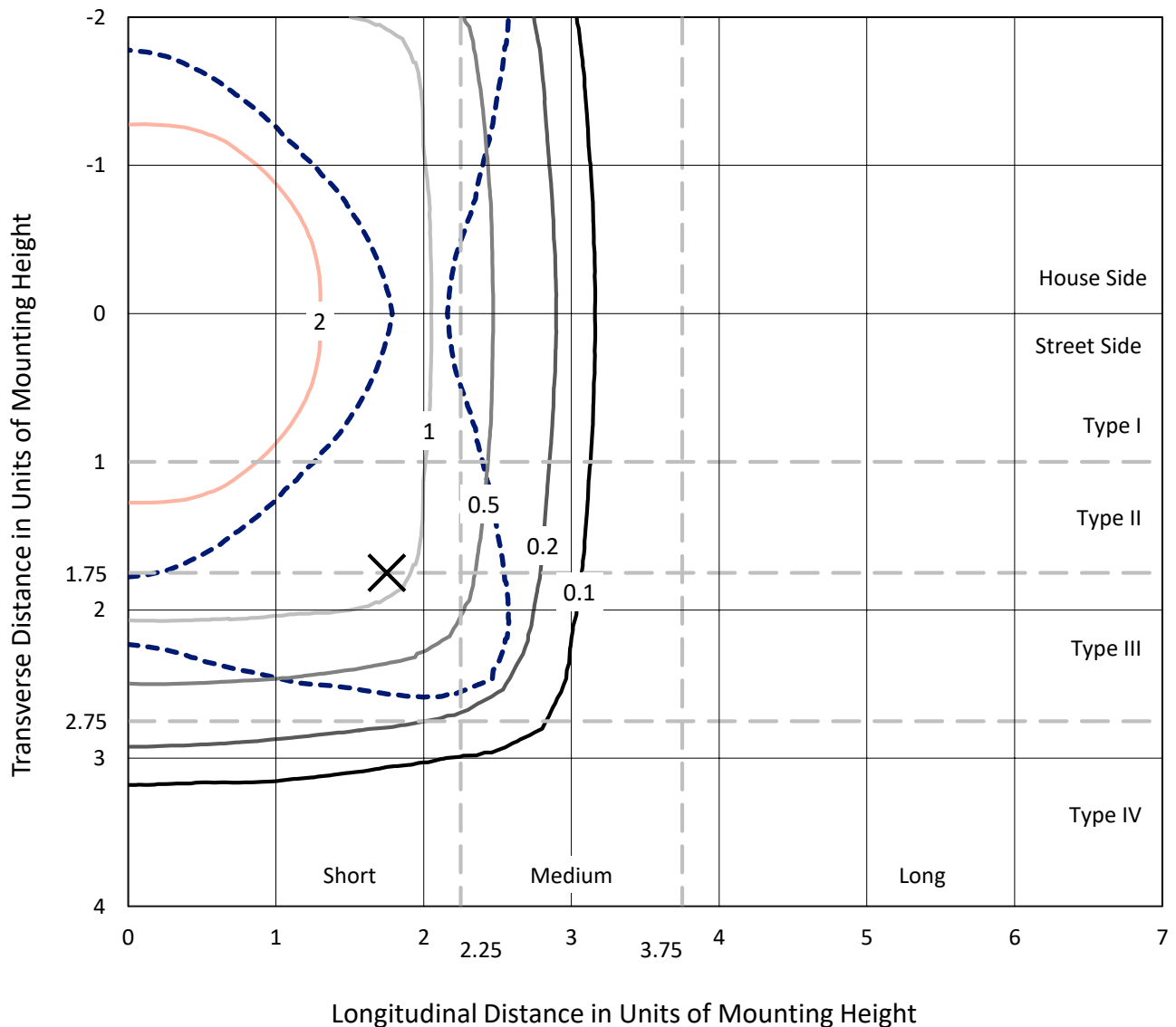
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

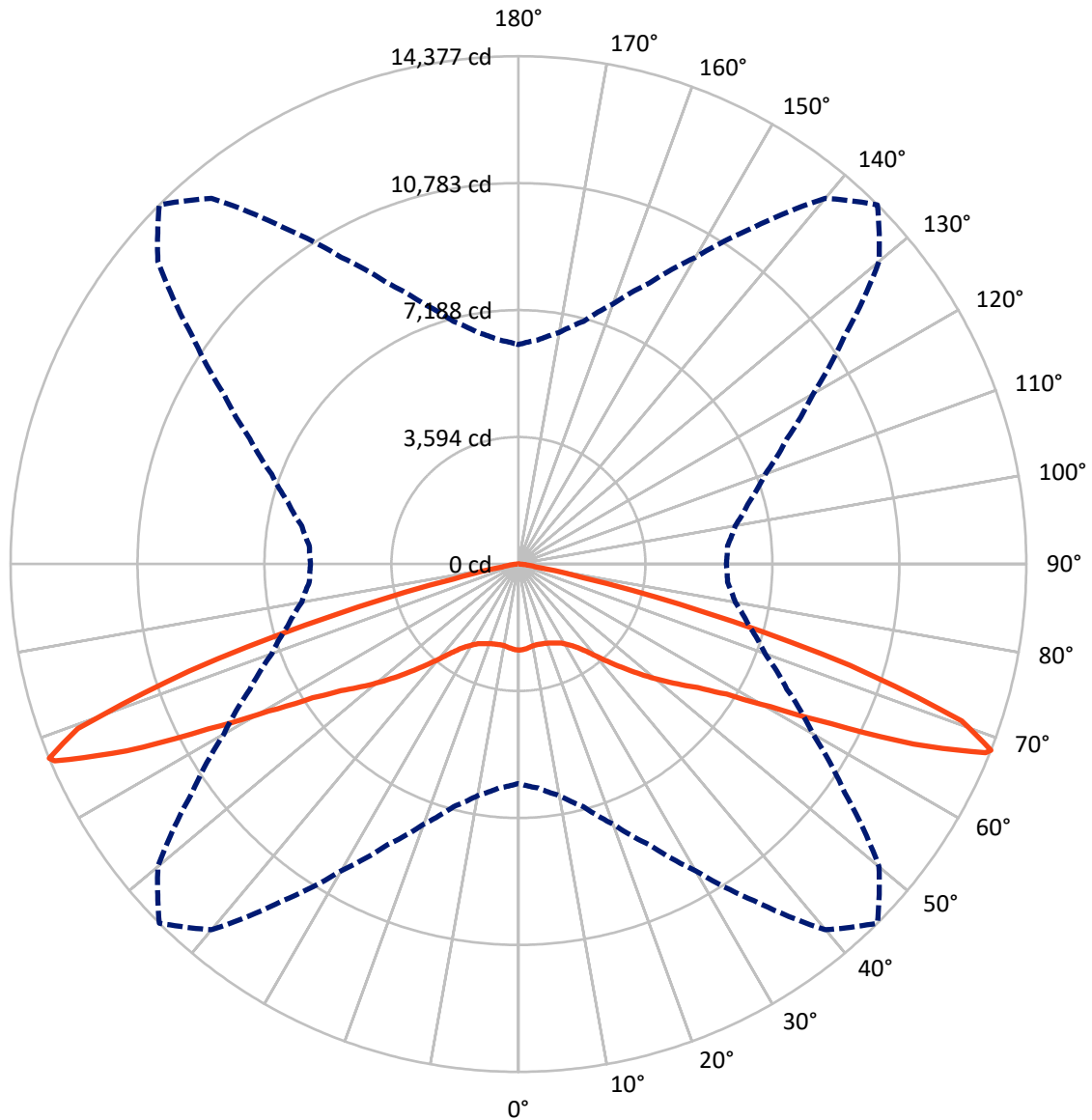
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12222.8	0.0	12222.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12222.8	0.0	12222.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	24445.6	0.0	24445.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.2	0.9
10°-20°	661.8	2.7
20°-30°	1125.1	4.6
30°-40°	1841.2	7.5
40°-50°	3290.4	13.5
50°-60°	5556.9	22.7
60°-70°	8616.7	35.2
70°-80°	2962.6	12.1
80°-90°	162.8	0.7
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°	24445.6	100.0
0°-180°	24445.6	100.0



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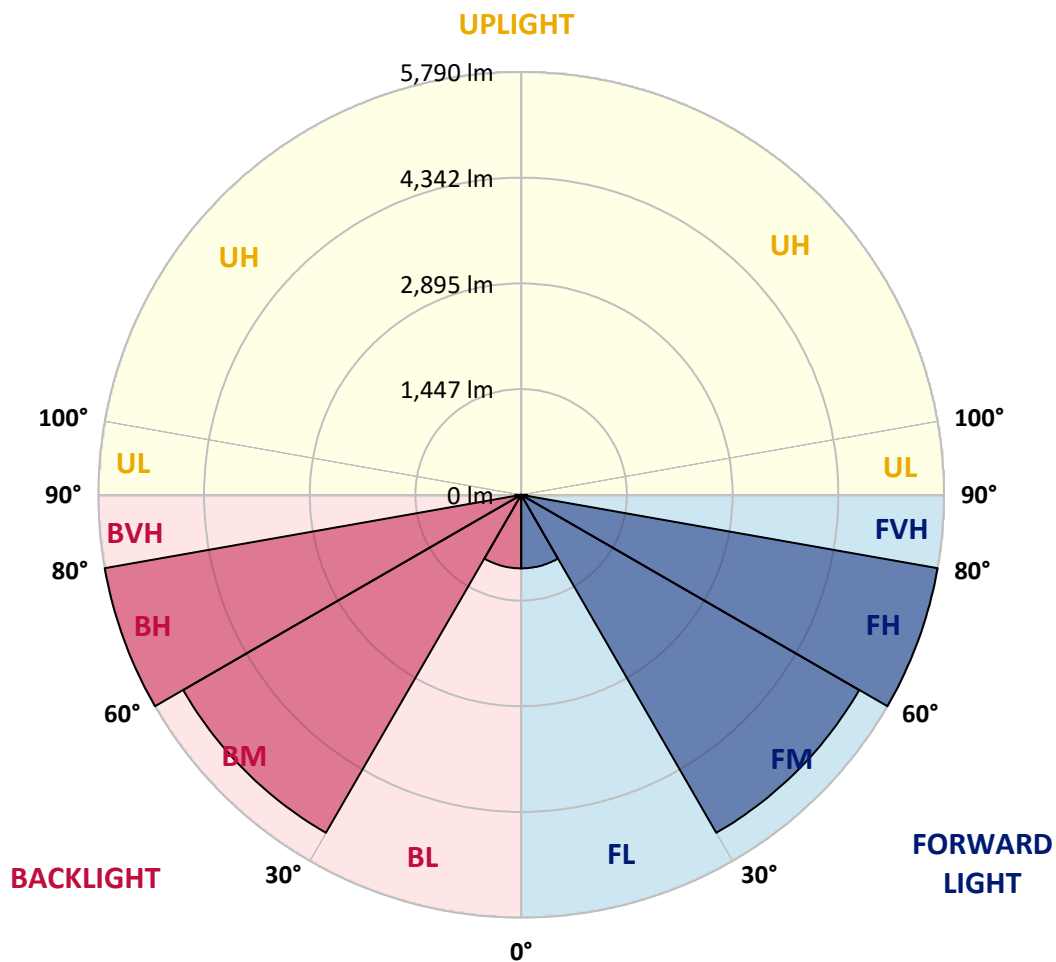
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1007.5	4.1			
FM	(30°-60°)	5344.2	21.9			
FH	(60°-80°)	5789.7	23.7			G3/7500
FVH	(80°-90°)	81.4	0.3			G1/100
BL	(0°-30°)	1007.5	4.1	B3/2500		
BM	(30°-60°)	5344.2	21.9	B4/8500		
BH	(60°-80°)	5789.7	23.7	B5		G3/7500
BVH	(80°-90°)	81.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5
2.5°	2449.0	2449.0	2452.0	2450.4	2446.0	2441.5	2437.0	2432.5	2429.6	2426.5	2423.6
5°	2423.6	2423.6	2428.1	2425.0	2422.1	2417.6	2414.6	2410.0	2407.1	2404.1	2405.6
7.5°	2390.6	2393.7	2396.6	2395.1	2389.2	2387.7	2383.2	2381.7	2378.7	2374.2	2375.7
10°	2362.1	2363.8	2366.7	2365.1	2363.8	2359.2	2357.7	2356.1	2354.6	2348.7	2347.2
12.5°	2333.8	2336.7	2339.7	2341.2	2339.7	2341.2	2342.7	2344.2	2342.7	2339.7	2339.7
15°	2311.3	2314.3	2318.8	2323.3	2324.7	2333.8	2339.7	2345.7	2350.1	2351.7	2347.2
17.5°	2299.4	2303.8	2309.7	2318.8	2326.2	2336.7	2347.2	2356.1	2363.8	2365.1	2360.6
20°	2297.8	2302.3	2311.3	2321.8	2335.2	2348.7	2365.1	2378.7	2386.1	2390.6	2386.1
22.5°	2308.3	2314.3	2326.2	2339.7	2356.1	2374.2	2395.1	2410.0	2425.0	2431.0	2426.5
25°	2338.2	2344.2	2357.7	2374.2	2392.1	2414.6	2435.5	2454.9	2470.0	2477.5	2471.5
27.5°	2401.1	2402.6	2417.6	2435.5	2456.4	2476.0	2502.9	2511.9	2523.9	2531.3	2523.9
30°	2489.5	2492.4	2505.9	2534.4	2553.8	2579.3	2594.3	2603.2	2616.6	2624.2	2615.1
32.5°	2624.2	2627.1	2639.1	2666.0	2684.1	2703.5	2721.4	2727.4	2740.9	2749.9	2739.4
35°	2814.3	2820.2	2830.7	2848.7	2863.6	2878.7	2892.1	2887.6	2896.6	2908.6	2898.1
37.5°	3074.8	3073.3	3076.2	3089.8	3104.7	3113.7	3134.6	3124.2	3133.1	3143.6	3137.6
40°	3378.7	3378.7	3377.1	3401.0	3407.0	3416.0	3438.5	3425.1	3437.0	3449.0	3438.5
42.5°	3724.4	3730.4	3737.9	3757.3	3773.9	3776.8	3787.3	3781.3	3796.2	3806.7	3796.2
45°	4122.6	4131.5	4140.6	4185.5	4193.0	4199.0	4206.4	4187.0	4203.4	4212.4	4209.4
47.5°	4535.8	4552.2	4571.6	4618.1	4648.0	4661.5	4667.4	4645.0	4646.6	4660.0	4661.5
50°	5002.8	5020.8	5040.2	5092.6	5121.1	5145.0	5152.4	5127.1	5130.0	5140.5	5143.5
52.5°	5433.9	5454.9	5496.9	5567.2	5607.5	5649.5	5652.5	5621.1	5634.5	5642.0	5636.0
55°	5839.6	5866.5	5922.0	6016.3	6089.6	6171.9	6209.3	6174.9	6174.9	6168.9	6165.9
57.5°	6312.7	6342.6	6399.5	6508.7	6610.5	6728.7	6830.6	6865.0	6927.9	6948.8	6915.9
60°	7025.2	7056.6	7115.0	7258.7	7387.4	7559.5	7727.3	7863.5	8084.9	8204.9	8096.9
62.5°	7676.3	7724.3	7862.0	8113.5	8391.8	8710.7	9080.5	9344.0	9746.6	9947.2	9676.2
65°	7528.2	7625.4	7894.8	8290.0	8865.0	9556.5	10309.4	11032.5	11864.8	12291.4	11740.6
67.5°	6576.1	6658.5	6948.8	7408.5	8125.4	9079.0	10249.6	11746.6	13463.6	14262.9	13288.4
68°	6212.4	6366.5	6655.4	7112.0	7835.0	8772.1	10022.1	11638.8	13512.9	14376.7	13324.3
70°	4763.2	4818.7	5095.7	5505.8	6285.6	7204.8	8466.7	10309.4	12427.7	13316.8	12234.6
72.5°	2263.5	2296.3	2476.0	2880.1	3375.6	4124.1	5237.8	6975.7	8884.4	9809.6	8730.3
75°	829.3	836.8	878.7	974.5	1160.2	1441.5	1976.0	3056.7	4525.3	5396.6	4543.2
77.5°	447.6	449.0	465.6	489.5	522.5	559.9	640.7	859.3	1386.2	1886.2	1464.0
80°	281.5	279.9	296.4	315.9	338.2	356.3	363.8	389.2	438.5	513.4	471.6
82.5°	143.6	157.3	194.6	215.6	248.4	254.5	247.0	245.5	260.5	281.5	290.4
85°	79.3	70.4	103.2	137.6	149.6	154.2	155.7	146.7	143.6	140.7	148.1
87.5°	40.4	37.4	44.9	68.9	73.3	59.9	61.4	52.5	35.9	35.9	37.4
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°	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5	2438.5
2.5°	2420.5	2422.1	2419.1	2419.1	2419.1	2420.5	2419.1	2417.6
5°	2401.1	2404.1	2404.1	2405.6	2407.1	2407.1	2407.1	2407.1
7.5°	2372.7	2374.2	2377.2	2377.2	2377.2	2377.2	2377.2	2377.2
10°	2345.7	2342.7	2341.2	2338.2	2338.2	2333.8	2335.2	2336.7
12.5°	2332.2	2326.2	2323.3	2318.8	2315.8	2311.3	2311.3	2312.8
15°	2338.2	2329.3	2320.2	2317.3	2314.3	2311.3	2308.3	2309.7
17.5°	2350.1	2339.7	2329.3	2323.3	2317.3	2312.8	2311.3	2312.8
20°	2375.7	2360.6	2344.2	2333.8	2321.8	2318.8	2314.3	2318.8
22.5°	2410.0	2392.1	2371.2	2351.7	2338.2	2332.2	2326.2	2330.7
25°	2452.0	2432.5	2411.6	2389.2	2374.2	2369.7	2362.1	2362.1
27.5°	2510.3	2494.0	2476.0	2454.9	2440.0	2435.5	2423.6	2423.6
30°	2603.2	2586.7	2570.3	2552.3	2537.3	2532.8	2517.9	2517.9
32.5°	2725.9	2708.0	2697.5	2682.6	2670.6	2663.0	2645.0	2643.6
35°	2890.6	2874.2	2872.7	2862.1	2850.1	2851.6	2833.7	2830.7
37.5°	3127.1	3113.7	3118.2	3109.2	3098.7	3107.7	3097.2	3097.2
40°	3429.5	3425.1	3429.5	3423.5	3425.1	3426.5	3417.5	3420.6
42.5°	3794.8	3782.8	3809.8	3806.7	3802.2	3814.2	3793.3	3778.3
45°	4215.4	4211.0	4237.8	4242.3	4233.4	4240.9	4203.4	4201.9
47.5°	4671.9	4671.9	4696.0	4692.9	4684.0	4685.5	4640.6	4612.1
50°	5148.0	5145.0	5168.9	5162.9	5151.0	5149.5	5103.1	5074.6
52.5°	5643.5	5643.5	5677.8	5661.5	5633.0	5619.5	5562.6	5525.2
55°	6191.4	6183.8	6194.4	6140.5	6085.0	6044.7	5974.3	5945.9
57.5°	6884.4	6797.7	6722.8	6653.9	6576.1	6528.2	6445.9	6415.9
60°	7868.0	7635.9	7535.6	7398.0	7269.1	7204.8	7095.6	7037.2
62.5°	9230.2	8845.4	8573.0	8269.2	7975.7	7769.2	7603.1	7529.6
65°	10804.9	9966.6	9273.6	8622.4	8070.0	7631.4	7387.4	7311.1
67.5°	11403.7	9864.9	8668.8	7734.7	7064.0	6541.7	6249.7	6188.3
68°	11276.5	9631.3	8388.9	7432.4	6758.7	6231.8	5941.4	5886.1
70°	9947.2	8125.4	6814.1	5862.1	5233.3	4731.8	4526.7	4438.4
72.5°	6781.1	5218.3	4002.8	3202.0	2731.9	2414.6	2225.9	2161.5
75°	3121.1	2109.2	1408.7	1052.3	893.6	817.4	759.0	743.9
77.5°	910.1	661.7	568.8	526.9	495.5	468.5	449.0	447.6
80°	432.6	405.7	393.7	366.8	338.2	312.8	294.9	297.8
82.5°	290.4	282.9	282.9	256.0	211.1	181.2	149.6	134.7
85°	154.2	160.2	169.2	160.2	139.2	103.2	67.4	73.3
87.5°	52.5	59.9	62.9	61.4	55.4	41.9	31.4	31.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)