

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: P195077

Luminaire Tested: **NAV-AF-05-D-UNV-RW-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195077
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20245 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

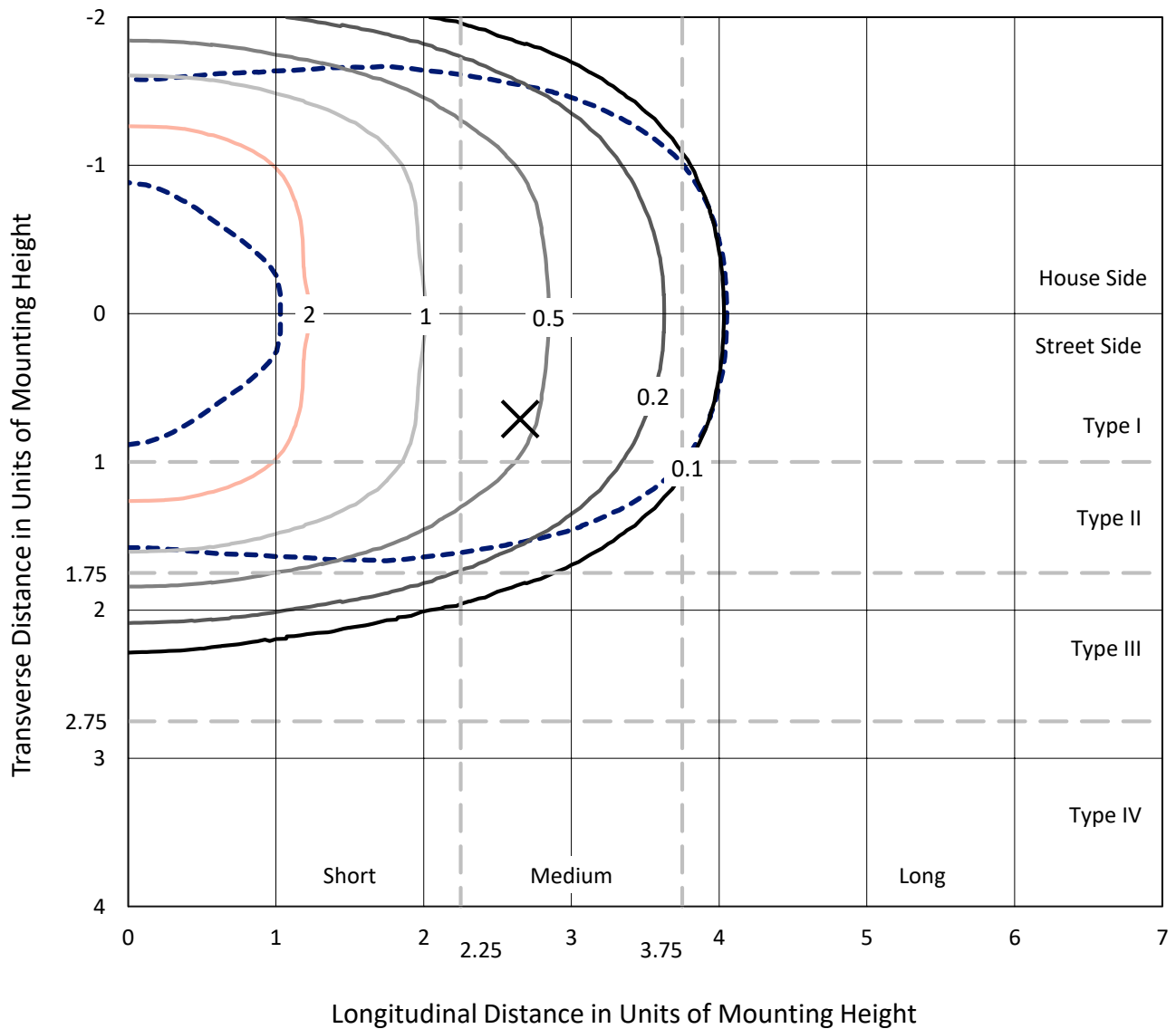
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

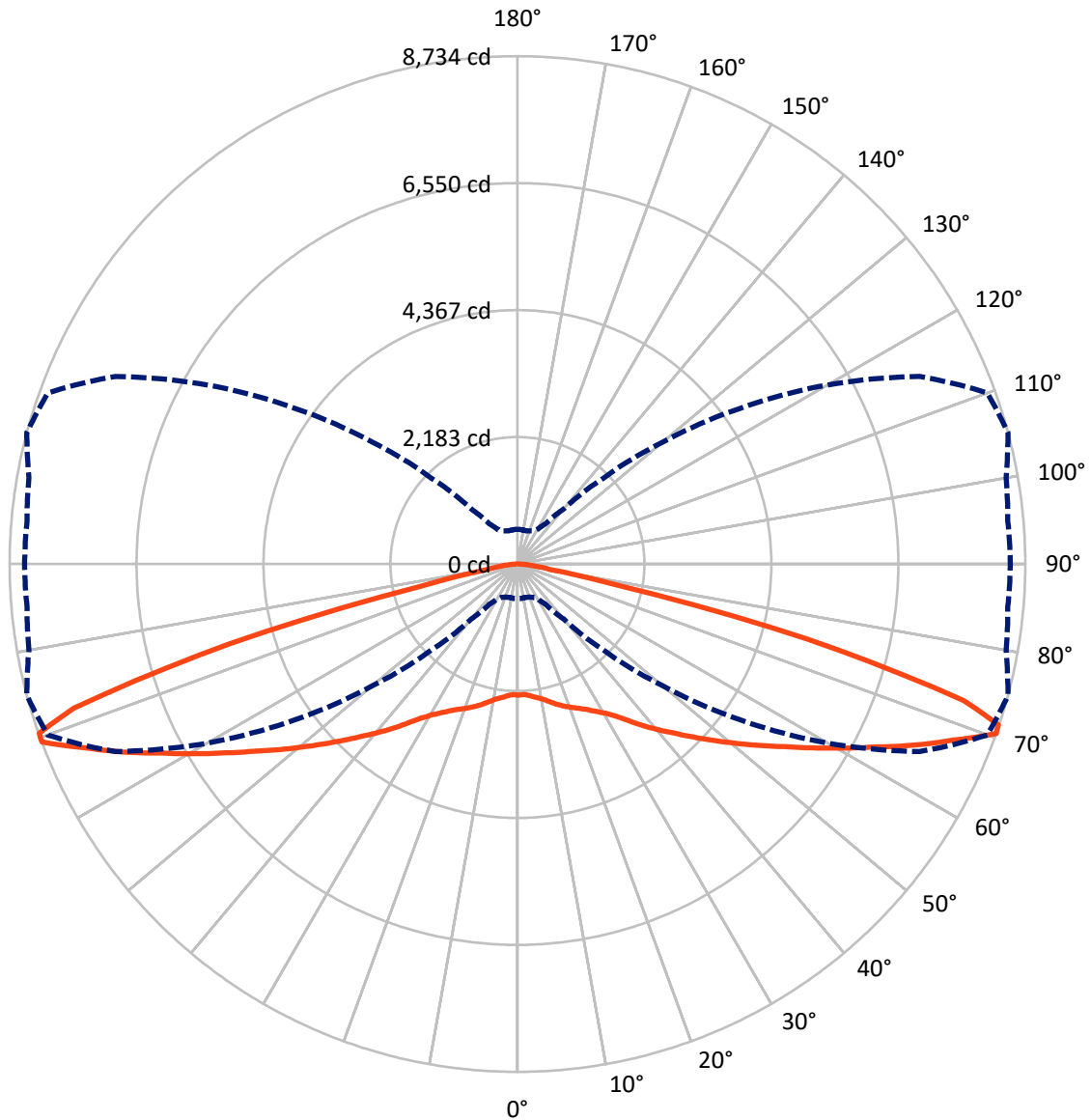
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10122.5	0.0	10122.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10122.5	0.0	10122.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	20245.0	0.0	20245.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.2	1.1
10°-20°	670.7	3.3
20°-30°	1259.6	6.2
30°-40°	2218.8	11.0
40°-50°	3677.3	18.2
50°-60°	5115.6	25.3
60°-70°	4829.3	23.9
70°-80°	2062.6	10.2
80°-90°	194.9	1.0
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°	20245.0	100.0
0°-180°	20245.0	100.0



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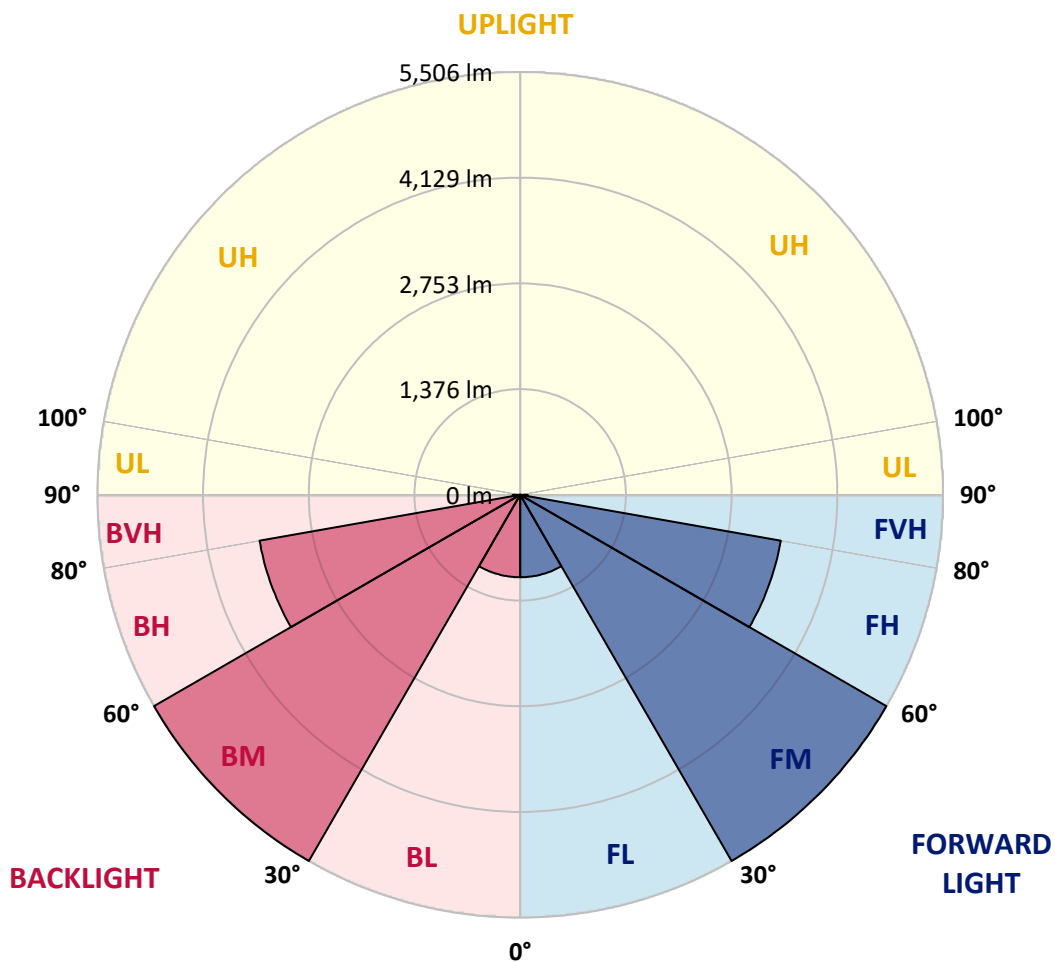
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1073.2	5.3			
FM	(30°-60°)	5505.9	27.2			
FH	(60°-80°)	3445.9	17.0			G2/5000
FVH	(80°-90°)	97.5	0.5			G1/100
BL	(0°-30°)	1073.2	5.3	B3/2500		
BM	(30°-60°)	5505.9	27.2	B4/8500		
BH	(60°-80°)	3445.9	17.0	B4/5000		G4/5000
BVH	(80°-90°)	97.5	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5
2.5°	2268.4	2267.2	2268.4	2264.6	2265.9	2264.6	2264.6	2259.6	2259.6	2257.0	2253.2
5°	2243.1	2245.6	2245.6	2245.6	2249.4	2249.4	2254.5	2255.7	2259.6	2263.4	2265.9
7.5°	2201.2	2202.5	2206.3	2208.8	2216.4	2226.6	2236.7	2248.1	2258.3	2271.0	2284.9
10°	2165.7	2168.2	2174.6	2180.9	2194.8	2207.5	2225.3	2243.1	2260.8	2282.4	2304.0
12.5°	2146.6	2150.4	2160.6	2170.7	2192.3	2208.8	2232.9	2260.8	2284.9	2305.2	2329.3
15°	2149.2	2150.4	2164.4	2178.4	2208.8	2231.6	2265.9	2298.9	2328.1	2350.9	2378.8
17.5°	2186.0	2188.5	2202.5	2222.8	2251.9	2281.1	2317.9	2352.2	2391.5	2418.1	2451.1
20°	2258.3	2262.1	2277.3	2298.9	2330.6	2361.0	2399.1	2434.6	2475.2	2506.9	2539.9
22.5°	2352.2	2358.5	2375.0	2401.6	2433.4	2470.2	2509.5	2546.3	2584.3	2616.1	2644.0
25°	2477.8	2485.4	2503.1	2529.8	2561.5	2600.8	2641.4	2679.5	2718.8	2742.9	2765.8
27.5°	2646.5	2659.2	2678.2	2699.8	2727.7	2769.6	2807.6	2839.3	2877.4	2904.1	2919.3
30°	2873.6	2891.4	2906.6	2929.4	2949.7	2994.1	3024.6	3050.0	3079.1	3094.4	3098.2
32.5°	3151.4	3167.9	3183.2	3199.7	3227.6	3268.2	3297.3	3311.3	3326.5	3324.0	3310.0
35°	3464.8	3477.5	3486.4	3515.6	3561.2	3587.9	3609.4	3614.5	3617.1	3590.4	3563.8
37.5°	3794.7	3809.9	3817.5	3863.2	3906.3	3936.8	3946.9	3958.3	3950.7	3906.3	3858.1
40°	4151.2	4167.7	4190.5	4229.8	4280.6	4309.8	4322.5	4321.2	4314.8	4262.8	4184.2
42.5°	4501.3	4521.6	4540.7	4609.2	4651.1	4700.5	4706.9	4705.6	4691.6	4632.0	4540.7
45°	4798.2	4822.3	4861.7	4937.8	5005.0	5064.6	5088.8	5097.6	5083.7	5020.2	4916.2
47.5°	5043.1	5059.6	5109.1	5201.7	5287.9	5375.5	5423.7	5457.9	5456.7	5411.0	5300.6
50°	5210.5	5229.6	5290.5	5394.5	5502.3	5605.1	5700.3	5777.7	5814.4	5781.5	5678.7
52.5°	5258.8	5282.9	5362.8	5487.1	5612.7	5751.0	5893.1	6030.1	6112.6	6132.9	6053.0
55°	5055.8	5082.4	5199.1	5371.7	5578.5	5782.7	5998.4	6193.8	6363.8	6442.5	6410.7
57.5°	4464.6	4483.6	4632.0	4855.3	5150.9	5510.0	5872.8	6230.6	6522.4	6726.6	6762.2
60°	3530.8	3554.9	3717.3	3953.3	4289.5	4743.7	5251.1	5837.3	6409.5	6877.6	7109.8
62.5°	2382.6	2399.1	2555.2	2770.8	3138.8	3576.5	4142.3	4884.5	5700.3	6536.3	7191.0
65°	1250.9	1250.9	1356.2	1507.2	1800.3	2192.3	2772.1	3533.3	4503.9	5548.0	6642.9
67.5°	725.7	724.4	748.5	782.8	875.4	1034.0	1353.7	1913.2	2831.7	4047.1	5293.0
70°	598.8	595.0	591.2	591.2	605.2	629.3	690.2	843.7	1234.4	2087.0	3256.8
71°	572.2	569.6	559.5	555.7	562.0	574.7	601.4	672.4	876.7	1423.5	2432.1
72.5°	540.5	534.1	518.9	512.6	513.8	518.9	526.5	554.4	616.6	809.4	1386.7
75°	492.3	477.0	458.0	449.1	445.3	444.0	444.0	451.7	465.6	488.4	568.4
77.5°	436.4	414.9	394.6	385.7	379.3	375.5	373.0	367.9	365.4	375.5	404.7
80°	369.2	346.4	329.9	324.8	321.0	313.4	303.2	293.1	286.7	291.8	309.6
82.5°	285.5	262.6	265.2	266.4	260.1	247.4	237.2	225.8	214.4	211.9	220.8
85°	227.1	215.7	208.1	224.6	210.6	195.4	181.4	162.4	135.8	111.6	121.8
87.5°	97.7	99.0	142.1	214.4	187.8	151.0	125.6	101.5	64.7	48.2	49.5
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°	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5	2254.5
2.5°	2251.9	2251.9	2248.1	2245.6	2245.6	2245.6	2243.1	2244.3
5°	2267.2	2269.7	2272.2	2271.0	2274.8	2278.6	2277.3	2276.0
7.5°	2292.5	2300.2	2307.8	2311.6	2316.6	2321.7	2323.0	2319.2
10°	2317.9	2333.1	2344.6	2354.7	2361.0	2366.1	2369.9	2368.7
12.5°	2349.6	2371.2	2391.5	2411.8	2425.8	2433.4	2441.0	2438.4
15°	2401.6	2425.8	2451.1	2477.8	2499.3	2510.8	2522.2	2519.6
17.5°	2472.7	2494.3	2514.6	2541.2	2567.8	2580.5	2593.2	2592.0
20°	2561.5	2578.0	2589.4	2604.6	2630.0	2644.0	2655.4	2651.6
22.5°	2663.0	2668.1	2669.3	2674.4	2694.7	2711.2	2726.4	2730.2
25°	2773.4	2769.6	2762.0	2758.2	2772.1	2789.9	2808.9	2814.0
27.5°	2910.4	2897.7	2878.7	2863.5	2867.3	2890.1	2911.7	2916.7
30°	3082.9	3053.8	3013.2	2984.0	2978.9	3003.0	3025.8	3033.5
32.5°	3279.6	3240.3	3184.4	3140.0	3121.0	3142.6	3162.9	3174.3
35°	3513.0	3469.9	3402.7	3345.6	3315.1	3329.1	3364.6	3377.3
37.5°	3789.6	3730.0	3655.1	3582.8	3532.1	3534.6	3572.7	3587.9
40°	4095.4	4009.1	3913.9	3823.9	3750.3	3745.2	3779.5	3790.9
42.5°	4413.8	4303.4	4191.8	4073.8	3982.4	3966.0	4010.4	4011.6
45°	4756.4	4614.3	4476.0	4339.0	4243.8	4214.6	4257.8	4262.8
47.5°	5121.7	4944.1	4780.5	4632.0	4529.3	4483.6	4525.4	4533.1
50°	5502.3	5318.4	5128.1	4963.2	4842.6	4786.8	4836.3	4841.4
52.5°	5879.2	5705.3	5516.3	5327.3	5181.4	5117.9	5176.3	5194.1
55°	6258.5	6091.0	5913.4	5724.4	5540.4	5484.6	5548.0	5567.1
57.5°	6653.1	6491.9	6330.8	6140.5	5961.6	5876.6	5945.1	5971.8
60°	7088.2	6946.1	6793.9	6602.3	6426.0	6327.0	6385.4	6415.8
62.5°	7515.8	7486.6	7348.3	7149.1	6925.8	6826.9	6876.3	6897.9
65°	7551.3	8024.5	8018.2	7820.3	7508.2	7342.0	7355.9	7366.1
67.5°	6590.9	7676.9	8370.9	8433.0	8085.4	7825.3	7794.9	7801.2
70°	4666.3	6157.0	7630.0	8596.7	8733.7	8532.0	8466.0	8476.2
71°	3738.9	5282.9	6904.3	8204.7	8723.6	8665.2	8628.4	8655.1
72.5°	2386.4	3892.4	5470.6	7026.1	8022.0	8307.4	8349.3	8365.8
75°	866.5	1674.7	2834.3	4061.1	5147.1	5894.4	6305.4	6338.4
77.5°	465.6	600.1	927.4	1385.4	1740.7	1931.0	1953.8	1962.7
80°	342.5	397.1	454.2	518.9	559.5	567.1	553.2	524.0
82.5°	242.3	274.0	296.9	319.7	336.2	322.2	267.7	204.3
85°	140.8	154.8	167.5	178.9	181.4	171.3	112.9	92.6
87.5°	55.8	60.9	59.6	67.2	64.7	59.6	44.4	38.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)