

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: P197014

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197014
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-04-D-UNV-RW-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22317 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

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

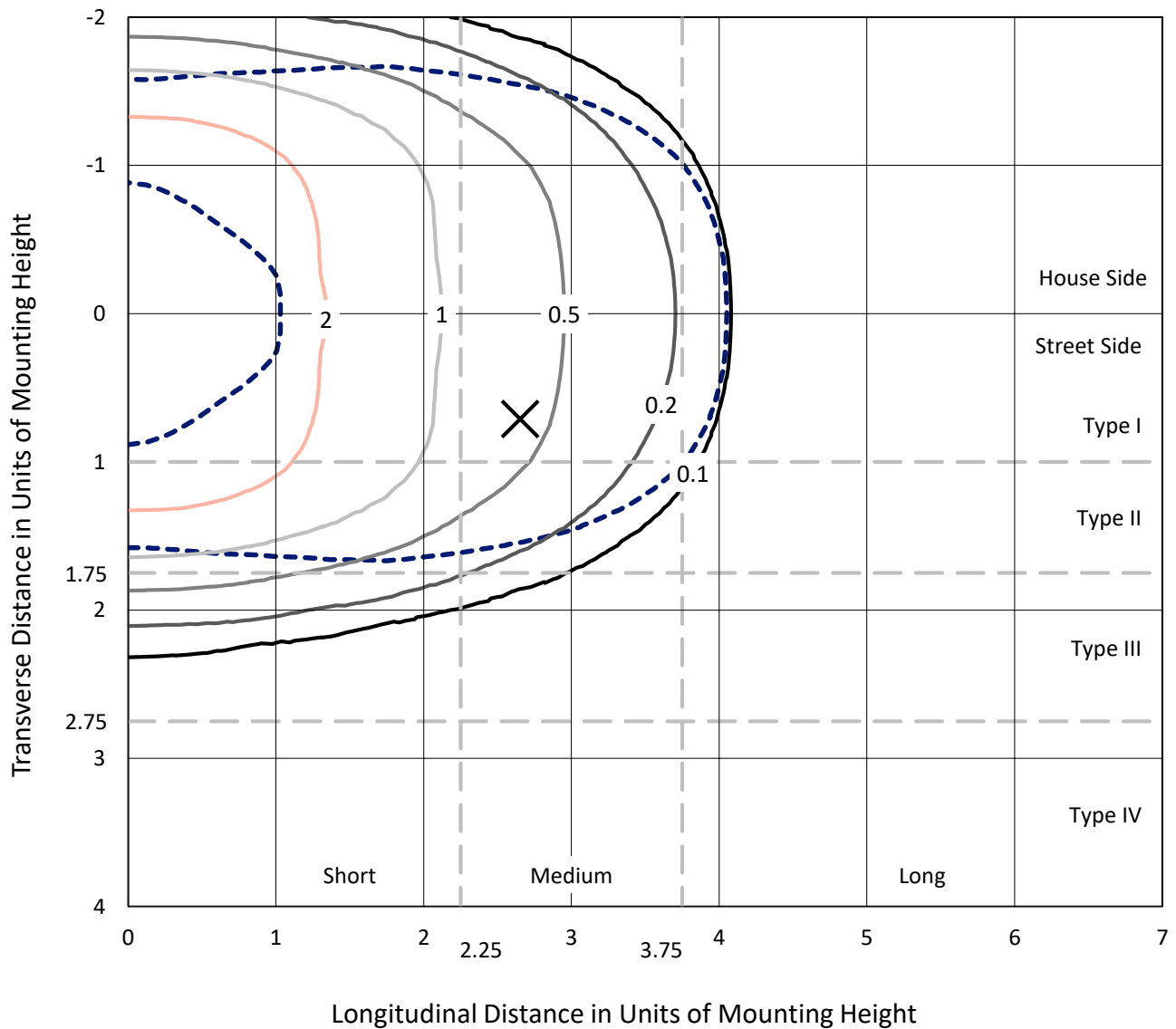


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Iso-Footcandle Lines of Horizontal Illumination

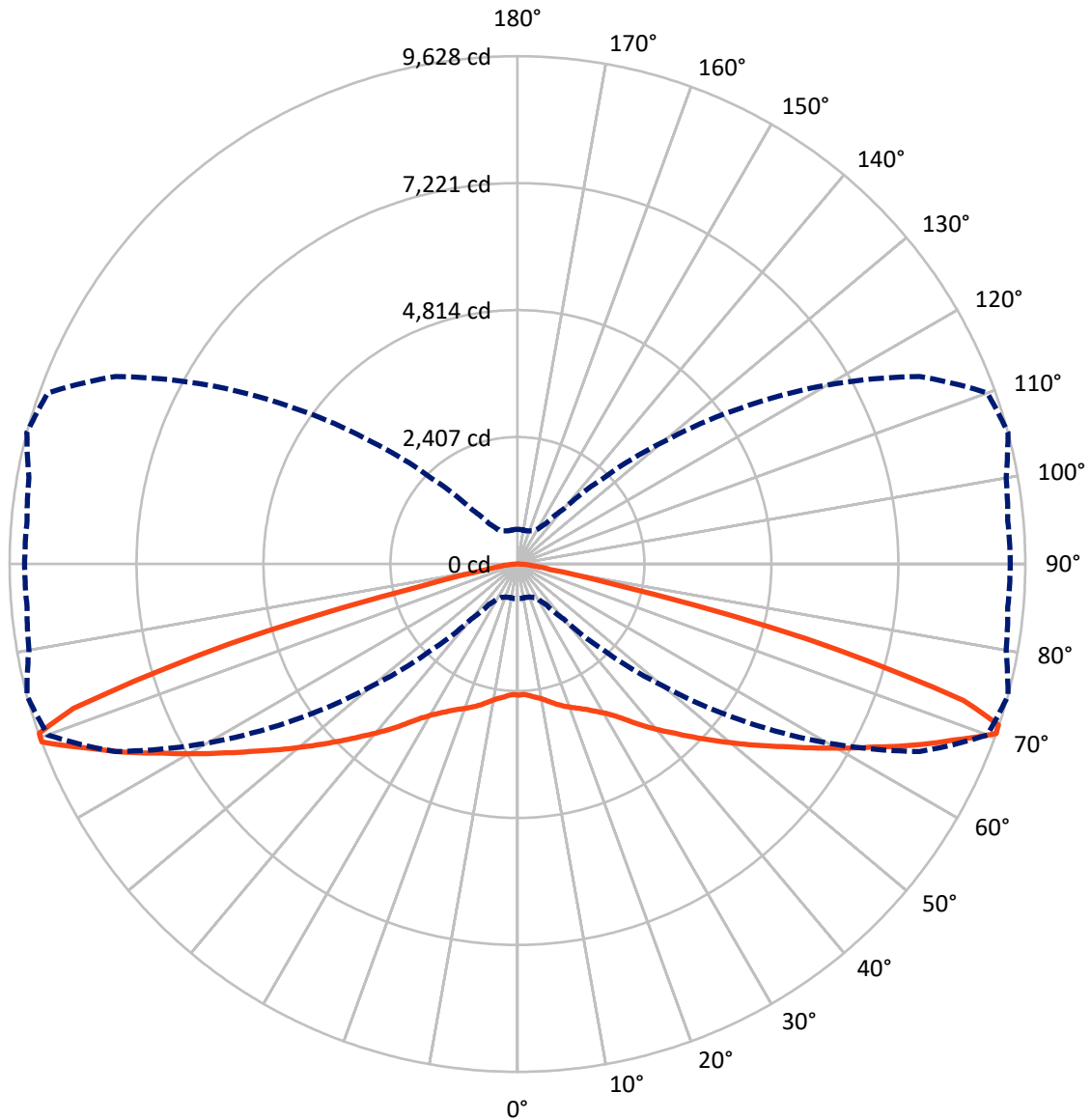
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 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	11158.5	0.0	11158.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	11158.5	0.0	11158.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	22317.0	0.0	22317.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.4	1.1
10°-20°	739.3	3.3
20°-30°	1388.5	6.2
30°-40°	2445.9	11.0
40°-50°	4053.6	18.2
50°-60°	5639.2	25.3
60°-70°	5323.5	23.9
70°-80°	2273.7	10.2
80°-90°	214.8	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°	22317.0	100.0
0°-180°	22317.0	100.0

Coefficient of Utilization



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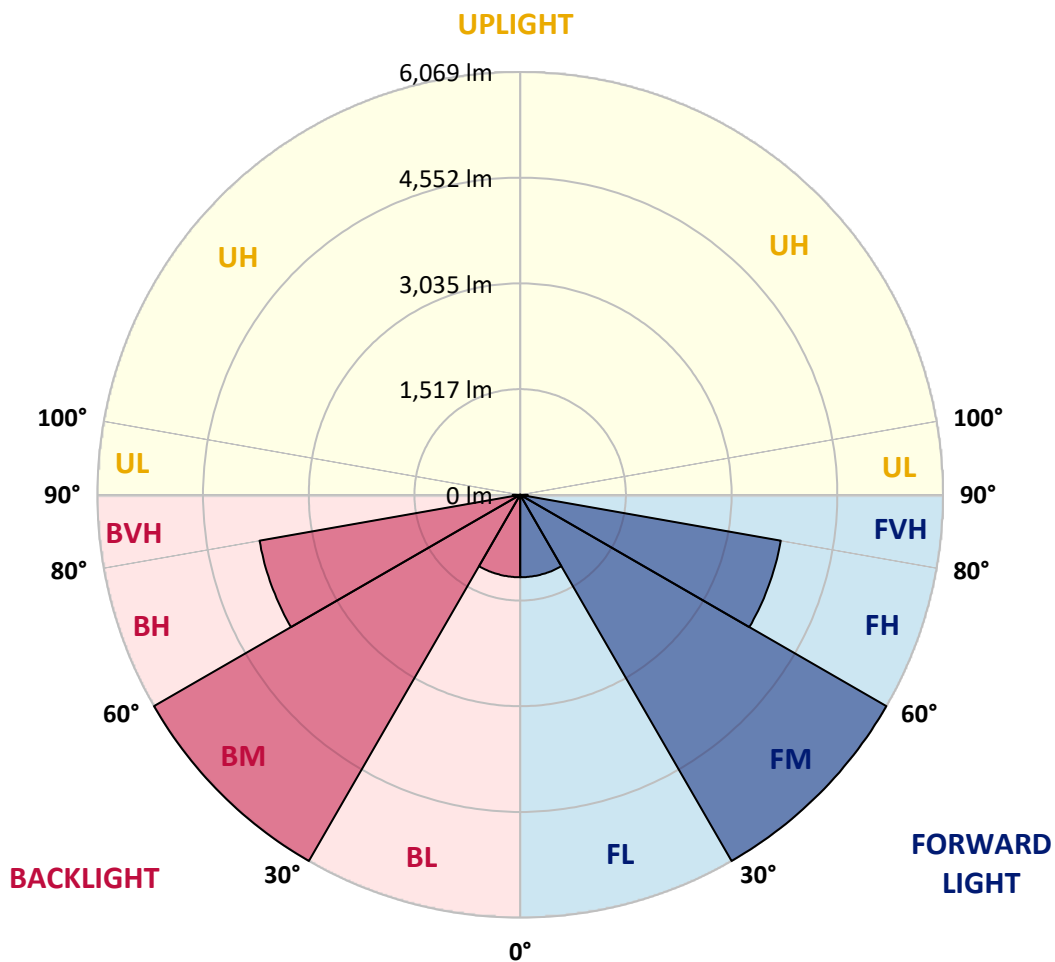
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1183.1	5.3			
FM	(30°-60°)	6069.4	27.2			
FH	(60°-80°)	3798.6	17.0			G2/5000
FVH	(80°-90°)	107.4	0.5			G2/225
BL	(0°-30°)	1183.1	5.3	B3/2500		
BM	(30°-60°)	6069.4	27.2	B4/8500		
BH	(60°-80°)	3798.6	17.0	B4/5000		G4/5000
BVH	(80°-90°)	107.4	0.5			G2/225
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°	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2
2.5°	2500.6	2499.2	2500.6	2496.4	2497.8	2496.4	2496.4	2490.8	2490.8	2488.0	2483.8
5°	2472.6	2475.4	2475.4	2475.4	2479.6	2479.6	2485.2	2486.6	2490.8	2495.0	2497.8
7.5°	2426.5	2427.9	2432.1	2434.9	2443.3	2454.4	2465.6	2478.2	2489.4	2503.4	2518.8
10°	2387.3	2390.1	2397.1	2404.1	2419.5	2433.5	2453.0	2472.6	2492.2	2516.0	2539.8
12.5°	2366.3	2370.5	2381.7	2392.9	2416.7	2434.9	2461.4	2492.2	2518.8	2541.2	2567.7
15°	2369.1	2370.5	2385.9	2401.3	2434.9	2460.0	2497.8	2534.2	2566.3	2591.5	2622.3
17.5°	2409.7	2412.5	2427.9	2450.3	2482.4	2514.6	2555.1	2592.9	2636.3	2665.6	2702.0
20°	2489.4	2493.6	2510.4	2534.2	2569.1	2602.7	2644.6	2683.8	2728.6	2763.5	2799.9
22.5°	2592.9	2599.9	2618.1	2647.4	2682.4	2723.0	2766.3	2806.9	2848.8	2883.8	2914.6
25°	2731.4	2739.8	2759.3	2788.7	2823.7	2867.0	2911.8	2953.7	2997.1	3023.7	3048.8
27.5°	2917.4	2931.4	2952.3	2976.1	3006.9	3053.0	3095.0	3129.9	3171.9	3201.3	3218.1
30°	3167.7	3187.3	3204.1	3229.2	3251.6	3300.6	3334.1	3362.1	3394.3	3411.1	3415.2
32.5°	3474.0	3492.2	3509.0	3527.1	3557.9	3602.7	3634.8	3650.2	3667.0	3664.2	3648.8
35°	3819.4	3833.4	3843.2	3875.4	3925.7	3955.1	3978.9	3984.5	3987.3	3957.9	3928.5
37.5°	4183.1	4199.8	4208.2	4258.6	4306.1	4339.7	4350.9	4363.5	4355.1	4306.1	4253.0
40°	4576.0	4594.2	4619.4	4662.8	4718.7	4750.9	4764.8	4763.4	4756.5	4699.1	4612.4
42.5°	4962.0	4984.4	5005.4	5080.9	5127.1	5181.6	5188.6	5187.2	5171.8	5106.1	5005.4
45°	5289.3	5315.9	5359.2	5443.1	5517.3	5583.0	5609.6	5619.4	5604.0	5534.0	5419.4
47.5°	5559.2	5577.4	5631.9	5734.0	5829.1	5925.6	5978.8	6016.5	6015.1	5964.8	5843.1
50°	5743.8	5764.8	5831.9	5946.6	6065.5	6178.8	6283.7	6369.0	6409.5	6373.2	6259.9
52.5°	5797.0	5823.5	5911.7	6048.7	6187.2	6339.6	6496.2	6647.3	6738.2	6760.6	6672.5
55°	5573.2	5602.6	5731.2	5921.4	6149.4	6374.6	6612.3	6827.7	7015.1	7101.8	7066.9
57.5°	4921.5	4942.5	5106.1	5352.2	5678.1	6073.9	6473.9	6868.3	7189.9	7415.1	7454.2
60°	3892.2	3918.7	4097.7	4357.9	4728.5	5229.2	5788.6	6434.7	7065.5	7581.5	7837.4
62.5°	2626.5	2644.6	2816.7	3054.4	3460.0	3942.5	4566.3	5384.4	6283.7	7205.3	7927.0
65°	1379.0	1379.0	1495.0	1661.5	1984.5	2416.7	3055.8	3894.9	4964.8	6115.8	7322.8
67.5°	800.0	798.6	825.1	862.9	965.0	1139.8	1492.2	2109.0	3121.6	4461.4	5834.7
70°	660.1	655.9	651.7	651.7	667.1	693.7	760.8	930.0	1360.8	2300.6	3590.1
71°	630.7	627.9	616.8	612.6	619.6	633.5	662.9	741.2	966.4	1569.2	2681.0
72.5°	595.8	588.8	572.0	565.0	566.4	572.0	580.4	611.2	679.7	892.3	1528.6
75°	542.6	525.9	504.9	495.1	490.9	489.5	489.5	497.9	513.3	538.4	626.5
77.5°	481.1	457.3	434.9	425.2	418.2	414.0	411.2	405.6	402.8	414.0	446.1
80°	407.0	381.8	363.6	358.0	353.8	345.4	334.3	323.1	316.1	321.7	341.2
82.5°	314.7	289.5	292.3	293.7	286.7	272.7	261.5	248.9	236.4	233.6	243.3
85°	250.3	237.8	229.4	247.5	232.2	215.4	200.0	179.0	149.6	123.1	134.3
87.5°	107.7	109.1	156.6	236.4	207.0	166.4	138.5	111.9	71.3	53.1	54.5
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°	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2	2485.2
2.5°	2482.4	2482.4	2478.2	2475.4	2475.4	2475.4	2472.6	2474.0
5°	2499.2	2502.0	2504.8	2503.4	2507.6	2511.8	2510.4	2509.0
7.5°	2527.2	2535.6	2544.0	2548.2	2553.7	2559.3	2560.7	2556.5
10°	2555.1	2571.9	2584.5	2595.7	2602.7	2608.3	2612.5	2611.1
12.5°	2590.1	2613.9	2636.3	2658.6	2674.0	2682.4	2690.8	2688.0
15°	2647.4	2674.0	2702.0	2731.4	2755.1	2767.7	2780.3	2777.5
17.5°	2725.8	2749.5	2771.9	2801.3	2830.7	2844.6	2858.6	2857.2
20°	2823.7	2841.8	2854.4	2871.2	2899.2	2914.6	2927.2	2923.0
22.5°	2935.5	2941.1	2942.5	2948.1	2970.5	2988.7	3005.5	3009.7
25°	3057.2	3053.0	3044.6	3040.4	3055.8	3075.4	3096.4	3102.0
27.5°	3208.3	3194.3	3173.3	3156.5	3160.7	3185.9	3209.7	3215.3
30°	3398.5	3366.3	3321.5	3289.4	3283.8	3310.4	3335.5	3343.9
32.5°	3615.2	3571.9	3510.3	3461.4	3440.4	3464.2	3486.6	3499.2
35°	3872.6	3825.0	3750.9	3688.0	3654.4	3669.8	3708.9	3722.9
37.5°	4177.5	4111.7	4029.2	3949.5	3893.6	3896.3	3938.3	3955.1
40°	4514.5	4419.4	4314.5	4215.2	4134.1	4128.5	4166.3	4178.9
42.5°	4865.5	4743.9	4620.8	4490.7	4390.0	4371.9	4420.8	4422.2
45°	5243.1	5086.5	4934.1	4783.0	4678.1	4646.0	4693.5	4699.1
47.5°	5645.9	5450.1	5269.7	5106.1	4992.8	4942.5	4988.6	4997.0
50°	6065.5	5862.7	5652.9	5471.1	5338.2	5276.7	5331.3	5336.9
52.5°	6480.9	6289.3	6080.9	5872.5	5711.7	5641.7	5706.1	5725.6
55°	6899.0	6714.4	6518.6	6310.2	6107.4	6045.9	6115.8	6136.8
57.5°	7334.0	7156.4	6978.7	6769.0	6571.8	6478.1	6553.6	6583.0
60°	7813.7	7657.0	7489.2	7278.0	7083.6	6974.5	7038.9	7072.4
62.5°	8285.0	8252.8	8100.4	7880.8	7634.7	7525.6	7580.1	7603.9
65°	8324.1	8845.8	8838.8	8620.6	8276.6	8093.4	8108.8	8120.0
67.5°	7265.4	8462.6	9227.6	9296.1	8912.9	8626.2	8592.7	8599.7
70°	5143.9	6787.1	8410.9	9476.5	9627.6	9405.2	9332.5	9343.7
71°	4121.5	5823.5	7610.9	9044.4	9616.4	9552.1	9511.5	9540.9
72.5°	2630.7	4290.7	6030.5	7745.1	8843.0	9157.7	9203.8	9222.0
75°	955.2	1846.1	3124.4	4476.7	5673.9	6497.6	6950.8	6987.1
77.5°	513.3	661.5	1022.3	1527.2	1918.8	2128.6	2153.8	2163.6
80°	377.6	437.7	500.7	572.0	616.8	625.1	609.8	577.6
82.5°	267.1	302.1	327.3	352.4	370.6	355.2	295.1	225.2
85°	155.2	170.6	184.6	197.2	200.0	188.8	124.5	102.1
87.5°	61.5	67.1	65.7	74.1	71.3	65.7	48.9	42.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)