

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: P195957

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195957
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-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 4000K, 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: 20896.8 lumens
Efficiency: N/A
Efficacy: 109.4 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

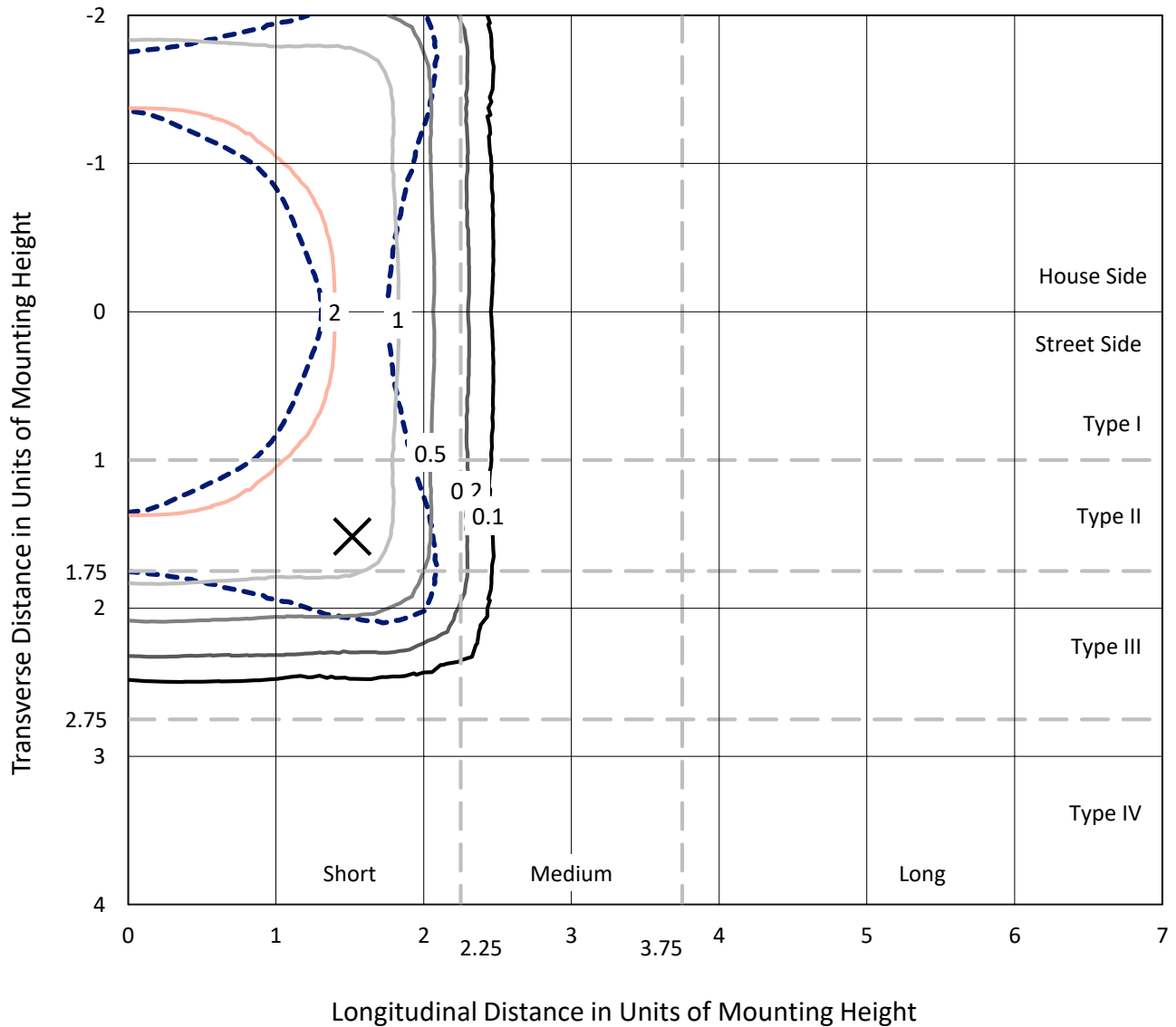
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

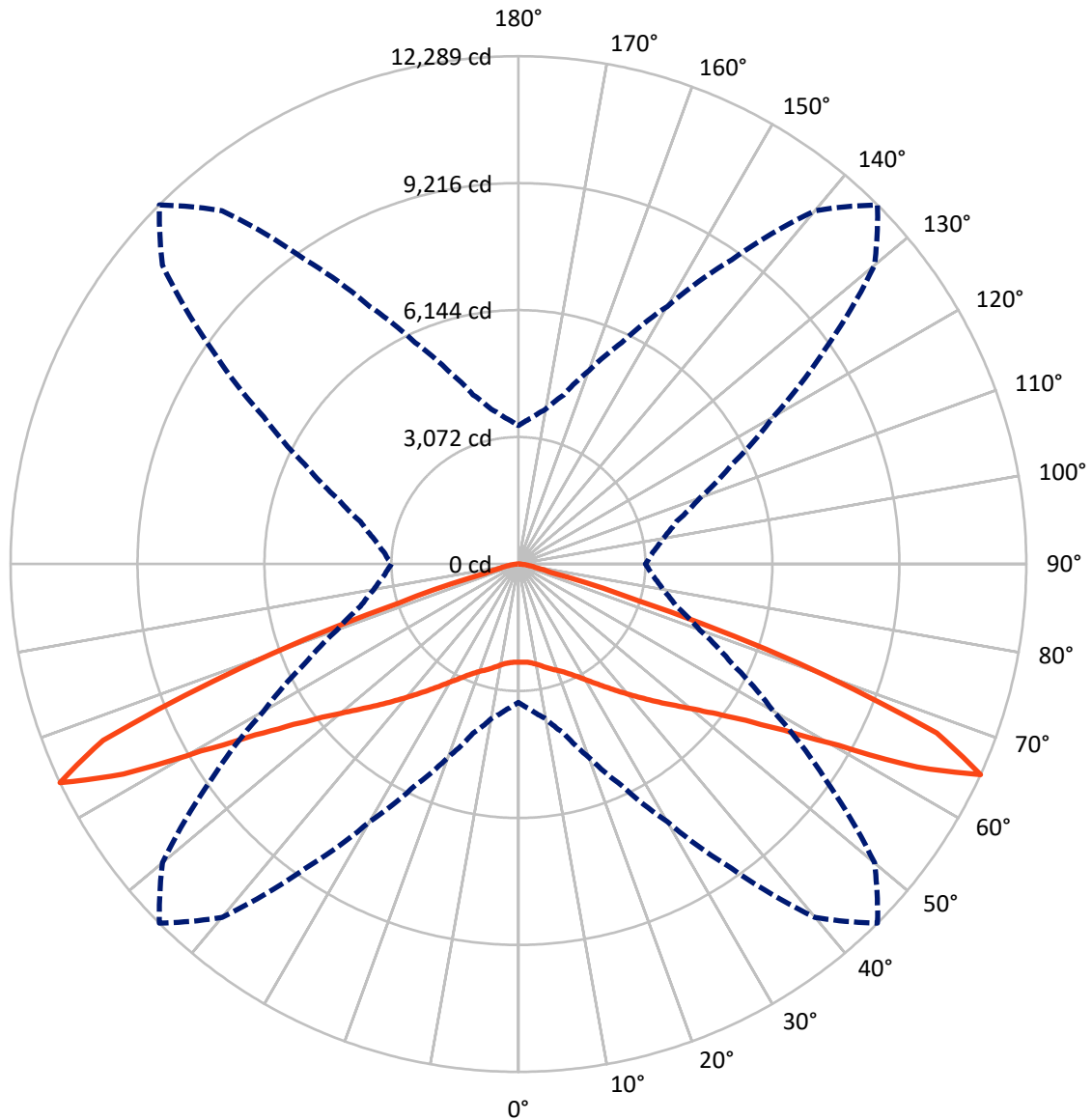
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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
House Side	Lumens	10448.4	0.0	10448.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10448.4	0.0	10448.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	20896.8	0.0	20896.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.5	1.1
10°-20°	741.9	3.6
20°-30°	1384.0	6.6
30°-40°	2333.6	11.2
40°-50°	3790.4	18.1
50°-60°	5938.9	28.4
60°-70°	5606.0	26.8
70°-80°	755.5	3.6
80°-90°	115.1	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°	20896.8	100.0
0°-180°	20896.8	100.0

Coefficient of Utilization



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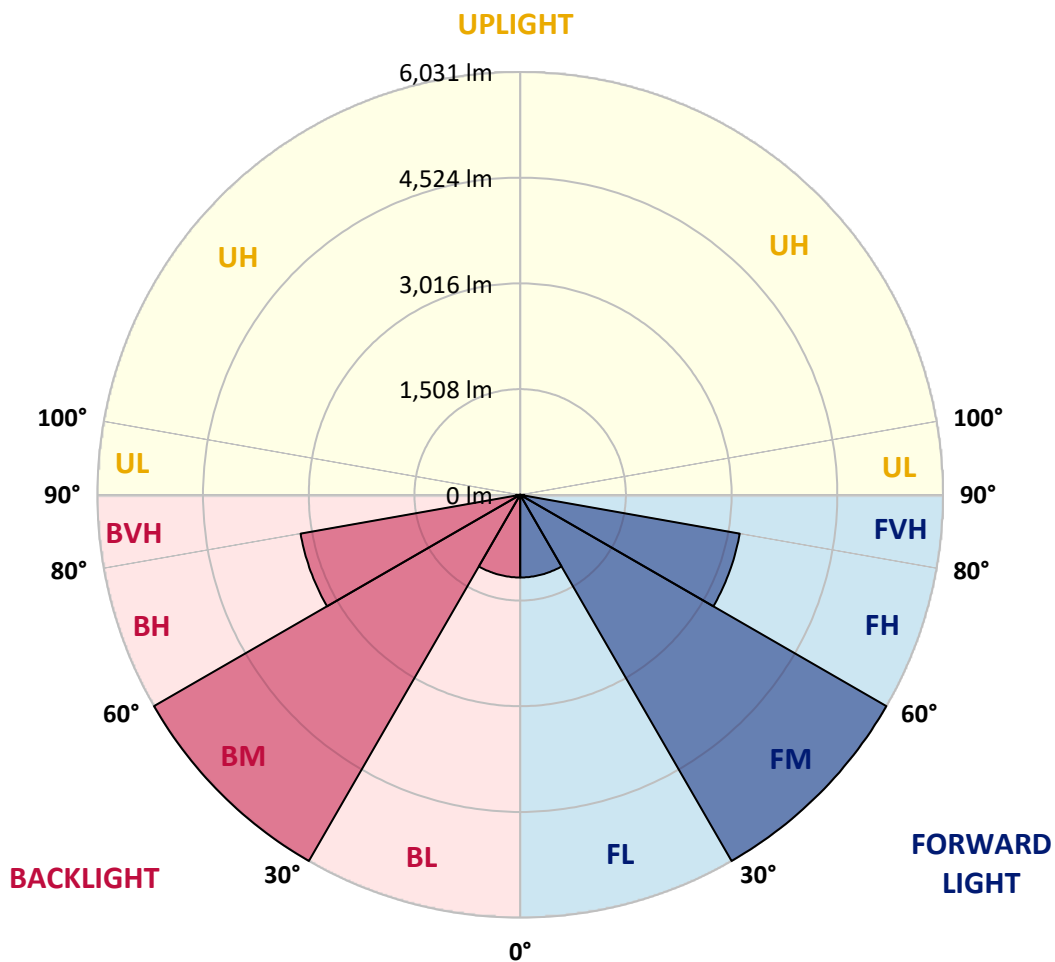
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1178.7	5.6			
FM	(30°-60°)	6031.4	28.9			
FH	(60°-80°)	3180.8	15.2			G2/5000
FVH	(80°-90°)	57.5	0.3			G1/100
BL	(0°-30°)	1178.7	5.6	B3/2500		
BM	(30°-60°)	6031.4	28.9	B4/8500		
BH	(60°-80°)	3180.8	15.2	B4/5000		G2/5000
BVH	(80°-90°)	57.5	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°	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0
2.5°	2396.5	2396.5	2400.5	2399.1	2393.9	2390.0	2386.1	2380.9	2378.3	2375.7	2374.4
5°	2409.6	2409.6	2413.4	2412.1	2408.2	2403.0	2400.5	2396.5	2392.6	2390.0	2391.4
7.5°	2442.1	2443.4	2444.6	2443.4	2439.4	2435.5	2430.3	2429.1	2423.9	2420.0	2422.6
10°	2491.5	2491.5	2492.8	2494.2	2491.5	2482.4	2482.4	2479.8	2474.6	2469.4	2470.7
12.5°	2546.2	2546.2	2547.6	2547.6	2547.6	2542.3	2543.6	2542.3	2535.8	2533.2	2535.8
15°	2599.6	2600.9	2600.9	2603.5	2603.5	2604.8	2610.0	2610.0	2607.4	2606.1	2606.1
17.5°	2662.0	2664.7	2666.0	2669.9	2671.2	2673.8	2679.0	2680.3	2681.6	2677.7	2679.0
20°	2745.4	2746.7	2750.6	2751.9	2757.1	2757.1	2759.7	2758.4	2755.8	2750.6	2750.6
22.5°	2839.1	2841.8	2849.5	2849.5	2856.1	2852.1	2853.4	2849.5	2843.0	2840.4	2837.8
25°	2961.4	2965.3	2971.9	2969.3	2971.9	2965.3	2965.3	2965.3	2961.4	2957.6	2956.2
27.5°	3116.4	3109.9	3116.4	3111.2	3109.9	3104.7	3106.0	3103.3	3099.4	3098.1	3093.0
30°	3277.8	3270.0	3273.9	3275.2	3272.6	3271.3	3266.1	3262.2	3255.6	3257.0	3253.1
32.5°	3462.7	3454.8	3458.7	3460.0	3457.5	3460.0	3458.7	3449.6	3441.8	3447.0	3447.0
35°	3682.6	3677.4	3687.8	3691.7	3684.0	3680.1	3674.8	3664.4	3652.8	3660.5	3661.9
37.5°	3946.9	3940.4	3948.2	3958.6	3944.3	3936.5	3915.7	3900.0	3892.2	3896.1	3901.3
40°	4221.6	4222.8	4245.0	4247.6	4231.9	4222.8	4202.1	4178.7	4156.5	4156.5	4163.0
42.5°	4510.6	4514.5	4540.5	4549.6	4544.4	4527.5	4498.8	4470.2	4441.6	4446.8	4454.5
45°	4837.3	4832.1	4859.4	4881.5	4877.6	4872.4	4845.1	4793.0	4767.0	4765.7	4778.7
47.5°	5180.9	5191.4	5220.0	5257.8	5256.4	5243.4	5208.3	5160.2	5112.0	5115.9	5131.5
50°	5581.9	5596.3	5644.3	5682.1	5687.3	5683.4	5641.8	5585.8	5518.1	5522.0	5542.9
52.5°	5941.2	5962.0	6018.0	6096.1	6144.3	6166.3	6139.0	6087.0	6018.0	6021.9	6044.0
55°	6266.6	6299.1	6382.5	6489.2	6585.6	6675.4	6715.7	6714.4	6663.6	6675.4	6704.0
57.5°	6471.0	6516.5	6642.8	6814.7	7006.0	7186.9	7343.2	7490.3	7522.8	7584.0	7584.0
60°	6196.3	6303.0	6471.0	6765.2	7141.4	7547.5	7987.5	8415.8	8691.8	8909.2	8792.0
62.5°	5174.5	5331.9	5567.6	5955.5	6541.3	7266.3	8150.3	9146.1	10184.9	10820.2	10354.1
65°	3348.1	3546.0	3802.4	4238.5	4976.6	5909.9	7197.4	8987.2	11161.2	12288.5	11247.1
67.5°	1326.5	1460.6	1616.8	1926.6	2567.1	3483.5	4928.4	7136.2	9855.5	10919.1	9751.4
70°	633.9	656.1	686.0	752.4	912.6	1231.4	1979.9	3516.0	6044.0	7164.8	5899.6
72.5°	458.2	462.2	476.5	498.6	545.4	610.5	741.9	1075.2	2084.1	3030.5	2086.7
75°	347.6	352.8	360.6	372.3	397.0	428.3	477.7	572.8	713.4	822.7	712.1
77.5°	264.2	269.4	276.0	287.7	300.7	322.8	341.1	378.8	438.6	462.2	459.5
80°	192.6	201.7	212.2	222.6	231.7	242.1	243.5	261.7	295.5	317.6	311.1
82.5°	122.3	130.2	157.5	169.2	170.5	173.1	171.9	173.1	191.4	206.9	201.7
85°	78.2	83.3	97.6	110.7	108.0	113.2	113.2	110.7	102.8	88.5	105.5
87.5°	39.1	40.3	46.9	58.6	56.0	49.5	48.2	48.2	35.2	30.0	32.5
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°	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0
2.5°	2370.5	2373.0	2369.2	2369.2	2367.9	2370.5	2366.6	2366.6
5°	2388.7	2392.6	2391.4	2391.4	2393.9	2396.5	2395.2	2393.9
7.5°	2421.2	2423.9	2426.4	2427.8	2430.3	2429.1	2431.7	2430.3
10°	2470.7	2468.1	2472.1	2468.1	2469.4	2466.8	2468.1	2468.1
12.5°	2533.2	2529.2	2526.7	2524.1	2524.1	2518.9	2518.9	2520.1
15°	2604.8	2598.3	2593.1	2590.5	2587.9	2587.9	2584.0	2586.5
17.5°	2675.1	2668.6	2659.5	2659.5	2655.6	2652.9	2650.4	2656.9
20°	2749.3	2742.7	2737.6	2736.3	2728.4	2725.9	2727.2	2735.0
22.5°	2835.2	2831.3	2831.3	2828.7	2823.4	2819.6	2819.6	2828.7
25°	2951.1	2943.2	2944.6	2945.9	2943.2	2943.2	2940.7	2947.1
27.5°	3093.0	3086.4	3090.3	3093.0	3090.3	3094.2	3090.3	3095.6
30°	3259.5	3255.6	3259.5	3263.5	3257.0	3257.0	3254.4	3258.3
32.5°	3458.7	3453.6	3456.1	3456.1	3447.0	3439.3	3428.8	3436.6
35°	3677.4	3671.0	3676.2	3680.1	3669.6	3661.9	3646.2	3652.8
37.5°	3918.2	3920.9	3927.4	3944.3	3941.7	3928.6	3917.0	3922.2
40°	4187.8	4200.7	4229.4	4241.1	4238.5	4225.5	4209.9	4212.4
42.5°	4492.3	4509.3	4539.2	4558.7	4549.6	4531.4	4511.8	4519.7
45°	4824.2	4850.3	4889.4	4908.9	4897.2	4877.6	4850.3	4864.6
47.5°	5175.7	5227.8	5279.9	5305.9	5302.1	5274.6	5239.6	5243.4
50°	5596.3	5665.2	5731.6	5757.7	5738.1	5696.4	5647.0	5645.7
52.5°	6119.5	6193.8	6248.4	6241.8	6193.8	6128.6	6072.6	6070.1
55°	6773.0	6797.7	6789.9	6734.0	6649.3	6547.8	6476.2	6464.4
57.5°	7563.2	7479.8	7357.5	7188.3	6998.2	6805.5	6675.4	6627.2
60°	8529.1	8152.8	7715.5	7254.7	6834.1	6519.2	6320.0	6198.9
62.5°	9327.1	8237.4	7259.9	6459.3	5804.5	5415.3	5143.2	4975.3
65°	9053.6	7116.7	5700.4	4668.0	3953.4	3551.2	3263.5	3072.1
67.5°	6994.3	4755.3	3309.0	2293.7	1739.1	1472.2	1286.2	1165.0
70°	3526.4	1823.7	1105.2	779.8	666.5	619.6	588.4	570.2
72.5°	1034.9	691.2	574.1	507.7	467.3	438.6	420.4	411.3
75°	572.8	467.3	412.7	374.9	348.8	329.4	317.6	309.9
77.5°	394.4	339.7	312.4	287.7	266.9	252.6	243.5	235.6
80°	276.0	248.7	236.9	223.9	208.3	196.6	183.5	178.3
82.5°	183.5	171.9	169.2	158.9	149.7	136.7	113.2	105.5
85°	108.0	106.7	106.7	102.8	96.4	84.6	67.7	67.7
87.5°	37.7	39.1	40.3	43.0	41.6	35.2	28.6	27.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)