

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: P195946

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195946
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 4000K, 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: 20728.1 lumens
Efficiency: N/A
Efficacy: 121.2 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

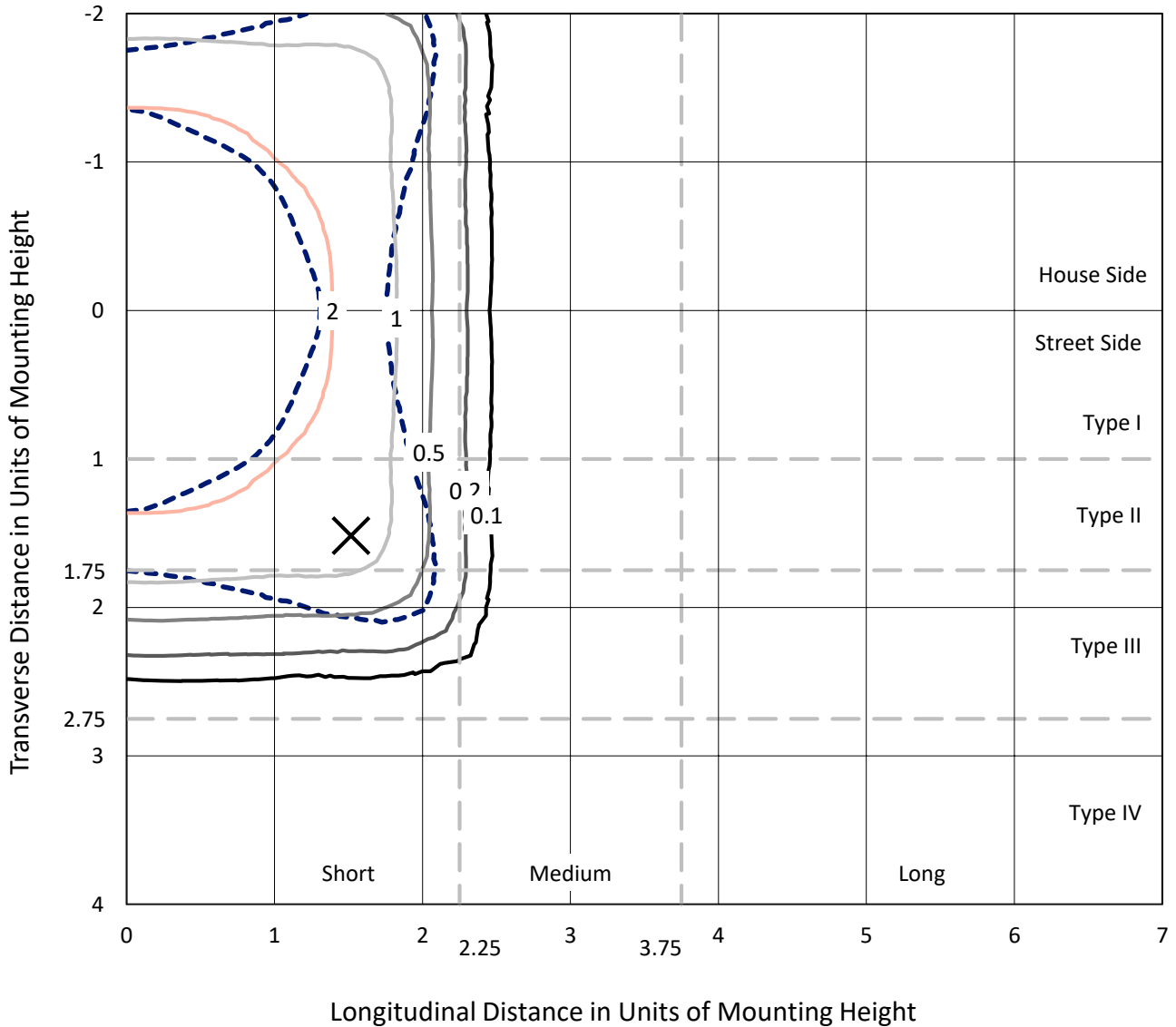
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

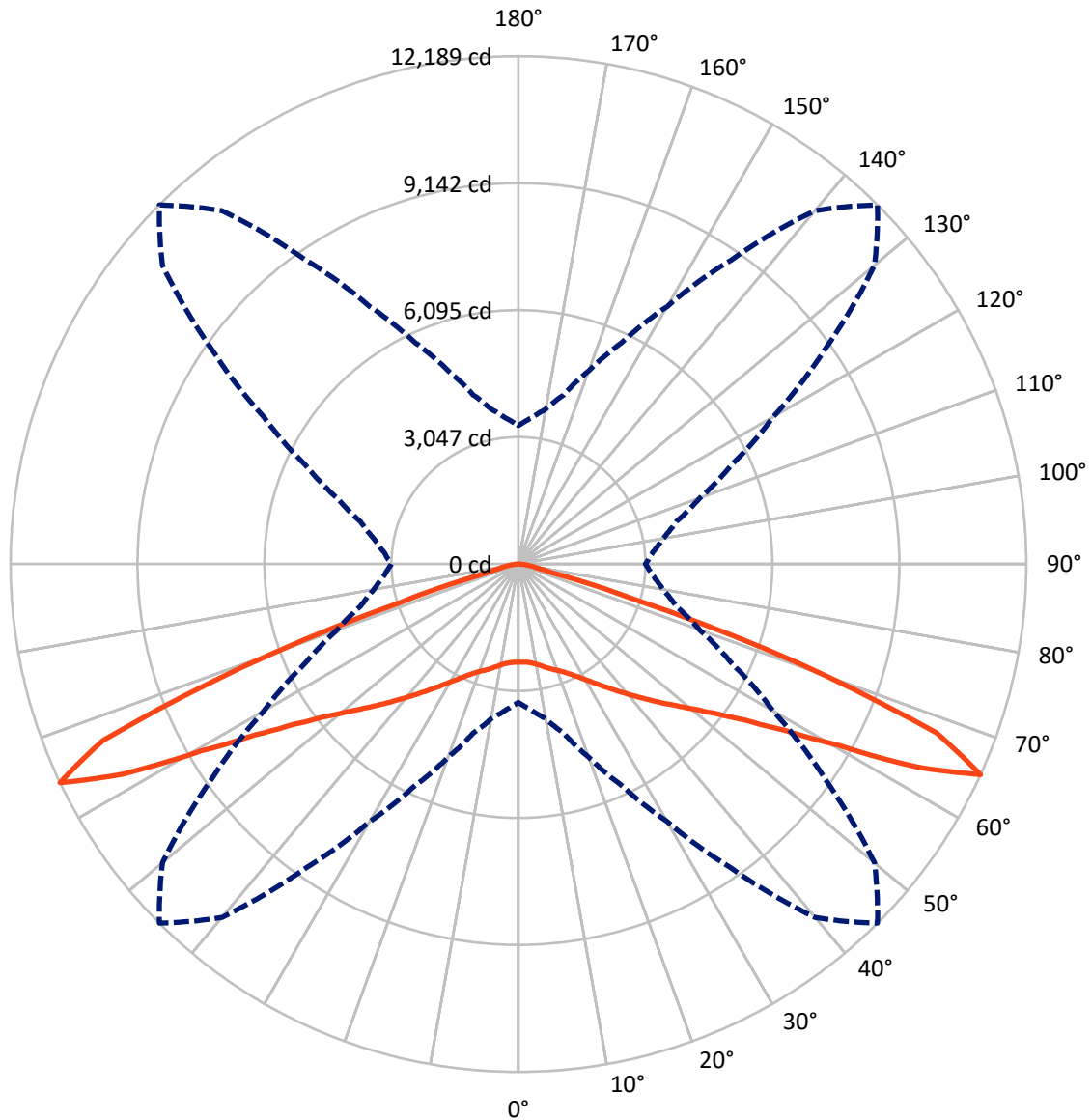
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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	10364.0	0.0	10364.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10364.0	0.0	10364.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	20728.1	0.0	20728.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.6	1.1
10°-20°	735.9	3.6
20°-30°	1372.8	6.6
30°-40°	2314.7	11.2
40°-50°	3759.8	18.1
50°-60°	5890.9	28.4
60°-70°	5560.8	26.8
70°-80°	749.4	3.6
80°-90°	114.2	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°	20728.1	100.0
0°-180°	20728.1	100.0

Coefficient of Utilization



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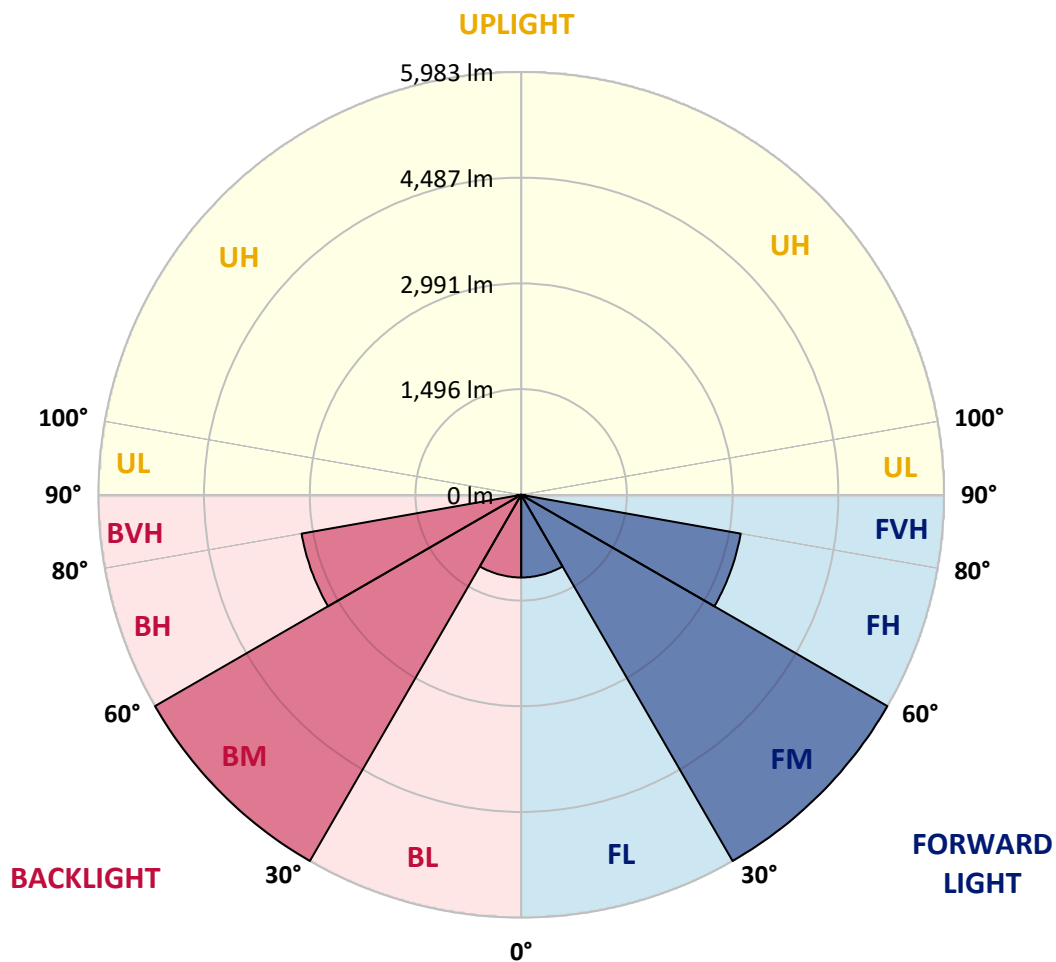
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1169.1	5.6			
FM	(30°-60°)	5982.7	28.9			
FH	(60°-80°)	3155.1	15.2			G2/5000
FVH	(80°-90°)	57.1	0.3			G1/100
BL	(0°-30°)	1169.1	5.6	B3/2500		
BM	(30°-60°)	5982.7	28.9	B4/8500		
BH	(60°-80°)	3155.1	15.2	B4/5000		G2/5000
BVH	(80°-90°)	57.1	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°	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8
2.5°	2377.1	2377.1	2381.0	2379.8	2374.6	2370.7	2366.8	2361.7	2359.1	2356.5	2355.2
5°	2390.0	2390.0	2393.9	2392.7	2388.8	2383.6	2381.0	2377.1	2373.2	2370.7	2372.0
7.5°	2422.3	2423.7	2424.9	2423.7	2419.8	2415.9	2410.7	2409.5	2404.2	2400.4	2403.0
10°	2471.4	2471.4	2472.7	2474.0	2471.4	2462.3	2462.3	2459.8	2454.7	2449.5	2450.8
12.5°	2525.7	2525.7	2526.9	2526.9	2526.9	2521.8	2523.1	2521.8	2515.3	2512.8	2515.3
15°	2578.6	2579.9	2579.9	2582.4	2582.4	2583.8	2588.9	2588.9	2586.3	2585.1	2585.1
17.5°	2640.5	2643.2	2644.4	2648.3	2649.6	2652.2	2657.3	2658.6	2660.0	2656.1	2657.3
20°	2723.2	2724.5	2728.4	2729.6	2734.9	2734.9	2737.4	2736.1	2733.5	2728.4	2728.4
22.5°	2816.2	2818.7	2826.5	2826.5	2833.0	2829.1	2830.4	2826.5	2820.1	2817.5	2814.9
25°	2937.5	2941.4	2947.8	2945.3	2947.8	2941.4	2941.4	2941.4	2937.5	2933.7	2932.4
27.5°	3091.3	3084.7	3091.3	3086.0	3084.7	3079.6	3080.9	3078.3	3074.4	3073.1	3067.9
30°	3251.3	3243.6	3247.5	3248.8	3246.1	3244.9	3239.7	3235.8	3229.4	3230.7	3226.8
32.5°	3434.7	3426.9	3430.8	3432.1	3429.5	3432.1	3430.8	3421.8	3414.0	3419.2	3419.2
35°	3652.9	3647.7	3658.1	3662.0	3654.2	3650.3	3645.2	3634.9	3623.2	3631.0	3632.2
37.5°	3915.0	3908.6	3916.3	3926.6	3912.5	3904.7	3884.0	3868.5	3860.8	3864.7	3869.8
40°	4187.4	4188.8	4210.7	4213.3	4197.8	4188.8	4168.1	4144.9	4122.9	4122.9	4129.3
42.5°	4474.1	4478.0	4503.8	4512.8	4507.7	4491.0	4462.5	4434.1	4405.6	4410.9	4418.6
45°	4798.3	4793.0	4820.1	4842.1	4838.3	4833.1	4805.9	4754.4	4728.5	4727.2	4740.1
47.5°	5139.1	5149.4	5177.9	5215.3	5214.0	5201.1	5166.2	5118.4	5070.7	5074.6	5090.0
50°	5536.8	5551.0	5598.8	5636.3	5641.4	5637.5	5596.2	5540.7	5473.5	5477.4	5498.1
52.5°	5893.2	5913.9	5969.3	6046.9	6094.6	6116.5	6089.4	6037.8	5969.3	5973.2	5995.2
55°	6216.0	6248.3	6330.9	6436.8	6532.4	6621.5	6661.5	6660.2	6609.8	6621.5	6649.9
57.5°	6418.7	6463.9	6589.1	6759.6	6949.4	7128.9	7283.8	7429.8	7462.0	7522.7	7522.7
60°	6146.3	6252.2	6418.7	6710.6	7083.7	7486.6	7923.0	8347.8	8621.5	8837.2	8721.0
62.5°	5132.7	5288.9	5522.6	5907.4	6488.5	7207.7	8084.4	9072.2	10102.6	10732.7	10270.4
65°	3321.0	3517.3	3771.7	4204.2	4936.4	5862.2	7139.3	8914.7	11071.0	12189.3	11156.3
67.5°	1315.7	1448.8	1603.7	1911.0	2546.3	3455.3	4888.6	7078.5	9775.9	10830.9	9672.6
70°	628.8	650.8	680.5	746.3	905.1	1221.5	1964.0	3487.6	5995.2	7107.0	5851.9
72.5°	454.5	458.4	472.6	494.5	541.0	605.6	736.0	1066.5	2067.3	3005.9	2069.8
75°	344.7	350.0	357.6	369.3	393.8	424.8	473.9	568.1	707.6	816.1	706.3
77.5°	262.1	267.3	273.7	285.4	298.3	320.2	338.3	375.7	435.2	458.4	455.8
80°	191.1	200.2	210.4	220.8	229.9	240.2	241.4	259.5	293.1	315.1	308.6
82.5°	121.4	129.1	156.2	167.9	169.2	171.8	170.4	171.8	189.9	205.3	200.2
85°	77.4	82.7	96.9	109.8	107.2	112.3	112.3	109.8	102.0	87.8	104.5
87.5°	38.8	40.0	46.4	58.1	55.5	49.1	47.8	47.8	34.9	29.7	32.3
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°	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8	2357.8
2.5°	2351.4	2353.9	2350.0	2350.0	2348.8	2351.4	2347.5	2347.5
5°	2369.5	2373.2	2372.0	2372.0	2374.6	2377.1	2375.9	2374.6
7.5°	2401.7	2404.2	2406.9	2408.1	2410.7	2409.5	2412.0	2410.7
10°	2450.8	2448.2	2452.0	2448.2	2449.5	2446.9	2448.2	2448.2
12.5°	2512.8	2508.9	2506.3	2503.7	2503.7	2498.6	2498.6	2499.8
15°	2583.8	2577.3	2572.1	2569.6	2567.0	2567.0	2563.1	2565.7
17.5°	2653.5	2647.0	2638.0	2638.0	2634.1	2631.5	2629.0	2635.4
20°	2727.1	2720.6	2715.4	2714.2	2706.4	2703.9	2705.1	2712.9
22.5°	2812.3	2808.4	2808.4	2805.9	2800.6	2796.8	2796.8	2805.9
25°	2927.2	2919.5	2920.7	2922.1	2919.5	2919.5	2916.9	2923.4
27.5°	3067.9	3061.5	3065.4	3067.9	3065.4	3069.3	3065.4	3070.6
30°	3233.2	3229.4	3233.2	3237.1	3230.7	3230.7	3228.1	3231.9
32.5°	3430.8	3425.7	3428.2	3428.2	3419.2	3411.4	3401.1	3408.9
35°	3647.7	3641.3	3646.4	3650.3	3640.0	3632.2	3616.7	3623.2
37.5°	3886.6	3889.2	3895.6	3912.5	3909.8	3896.9	3885.3	3890.5
40°	4153.9	4166.8	4195.2	4206.9	4204.2	4191.3	4175.9	4178.4
42.5°	4456.1	4472.9	4502.5	4521.9	4512.8	4494.7	4475.4	4483.2
45°	4785.3	4811.1	4849.9	4869.2	4857.6	4838.3	4811.1	4825.4
47.5°	5134.0	5185.5	5237.2	5263.1	5259.2	5232.1	5197.2	5201.1
50°	5551.0	5619.5	5685.3	5711.1	5691.8	5650.5	5601.4	5600.0
52.5°	6070.1	6143.6	6198.0	6191.5	6143.6	6079.1	6023.6	6021.0
55°	6718.3	6742.8	6735.1	6679.6	6595.6	6494.9	6423.9	6412.3
57.5°	7502.0	7419.5	7298.0	7130.2	6941.6	6750.6	6621.5	6573.7
60°	8460.1	8087.0	7653.1	7196.0	6779.0	6466.5	6268.9	6148.9
62.5°	9251.7	8170.9	7201.2	6407.0	5757.6	5371.5	5101.7	4935.1
65°	8980.5	7059.2	5654.3	4630.4	3921.5	3522.5	3237.1	3047.3
67.5°	6937.8	4716.8	3282.3	2275.1	1725.1	1460.4	1275.7	1155.6
70°	3498.0	1809.0	1096.3	773.5	661.1	614.6	583.6	565.6
72.5°	1026.5	685.7	569.5	503.6	463.6	435.2	417.1	408.1
75°	568.1	463.6	409.3	371.8	346.1	326.7	315.1	307.3
77.5°	391.3	337.1	309.9	285.4	264.7	250.5	241.4	233.7
80°	273.7	246.6	235.0	222.1	206.6	195.0	182.1	176.9
82.5°	182.1	170.4	167.9	157.5	148.5	135.5	112.3	104.5
85°	107.2	105.9	105.9	102.0	95.5	83.9	67.1	67.1
87.5°	37.4	38.8	40.0	42.7	41.3	34.9	28.4	27.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)