

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: P196457

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196457
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30257.2 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 279
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

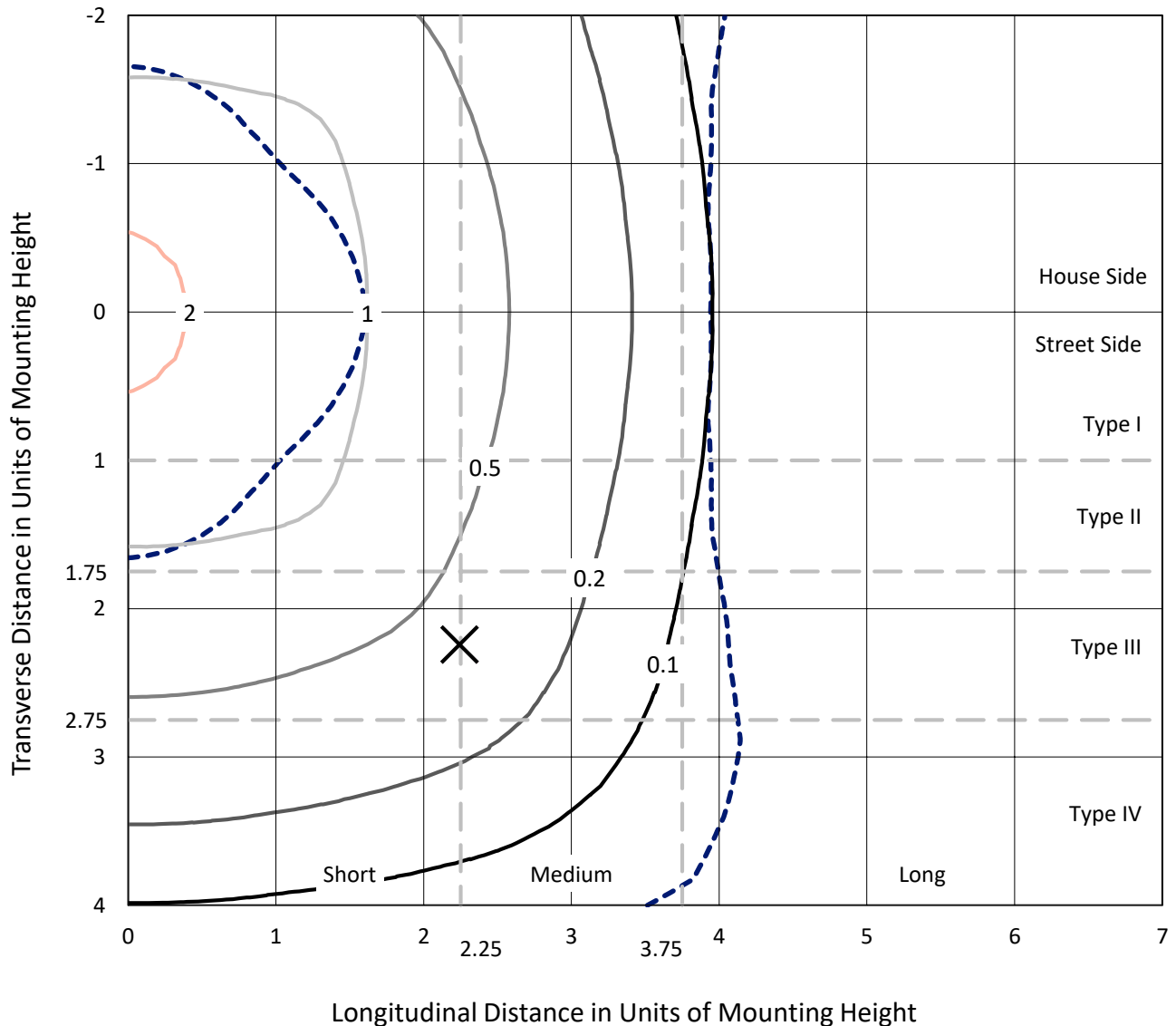


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

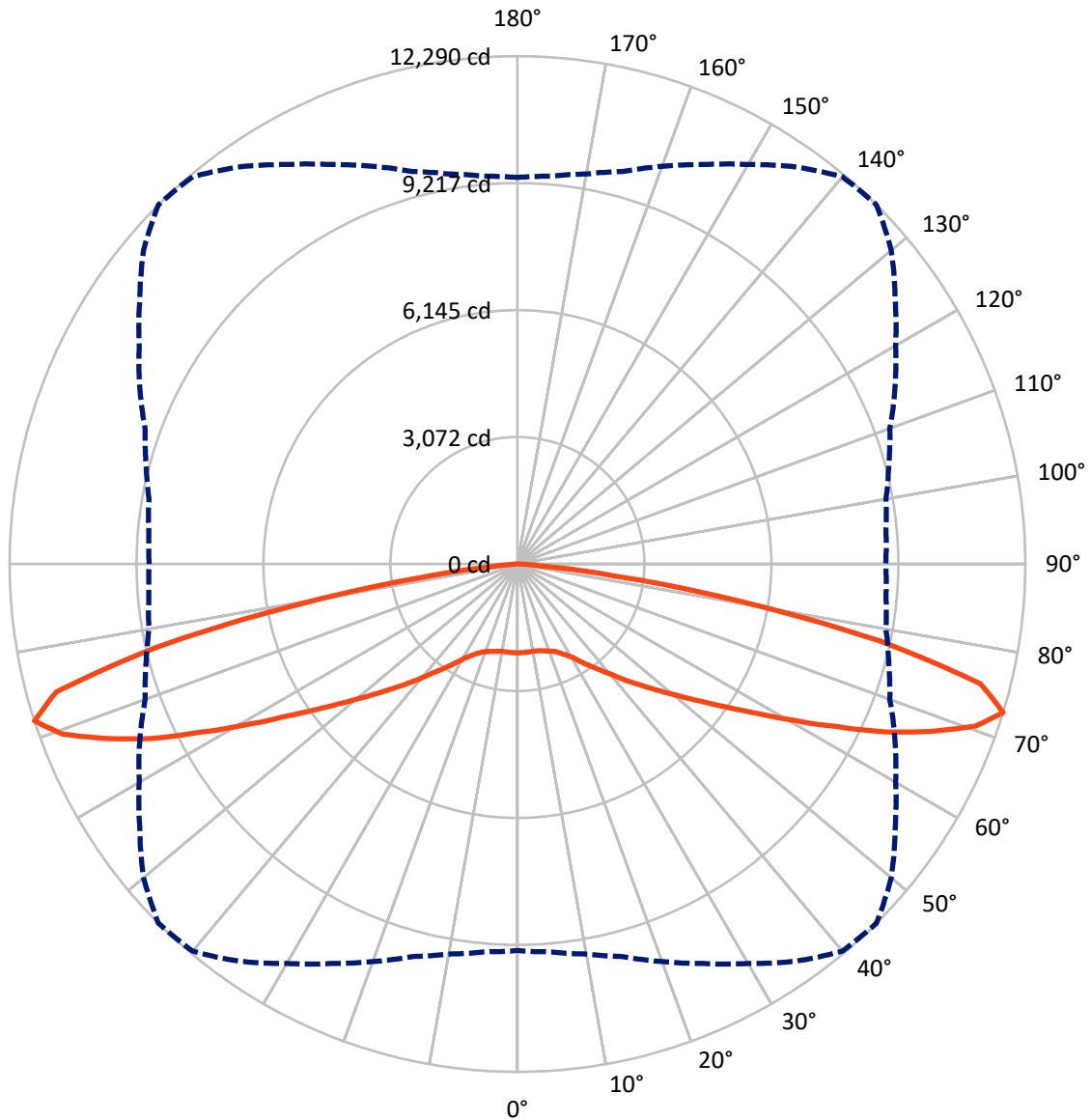


Based on 30 foot mounting height. Maximum calculated value = 2.4 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15128.6	0.0	15128.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15128.6	0.0	15128.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	30257.2	0.0	30257.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.3	0.7
10°-20°	621.4	2.1
20°-30°	1121.8	3.7
30°-40°	1913.4	6.3
40°-50°	3257.6	10.8
50°-60°	5242.6	17.3
60°-70°	8718.6	28.8
70°-80°	8434.2	27.9
80°-90°	742.3	2.5
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°	30257.2	100.0
0°-180°	30257.2	100.0



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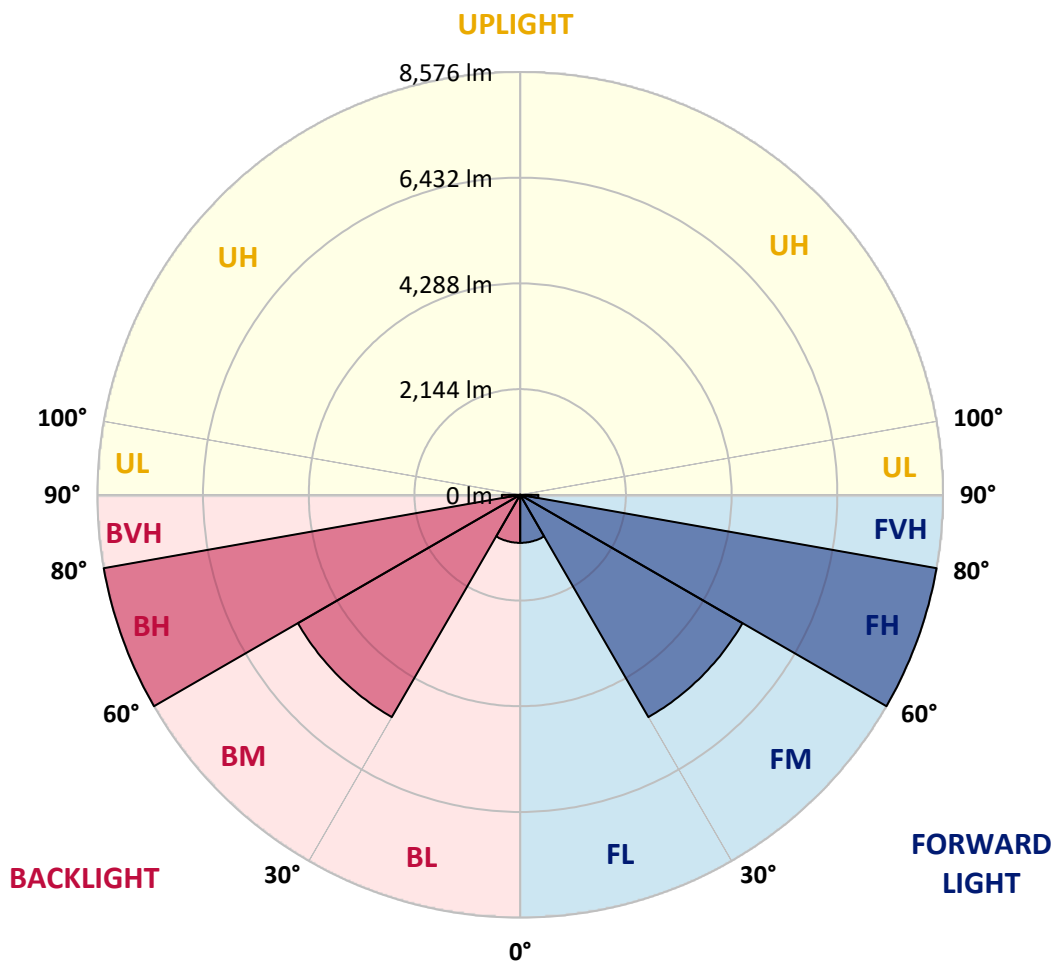
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	974.2	3.2			
FM	(30°-60°)	5206.8	17.2			
FH	(60°-80°)	8576.4	28.3			G4/12000
FVH	(80°-90°)	371.2	1.2			G3/500
BL	(0°-30°)	974.2	3.2	B2/1000		
BM	(30°-60°)	5206.8	17.2	B4/8500		
BH	(60°-80°)	8576.4	28.3	B5		G4/12000
BVH	(80°-90°)	371.2	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1
2.5°	2167.8	2167.8	2169.7	2167.8	2164.1	2162.2	2156.7	2153.0	2149.2	2147.4	2143.5
5°	2169.7	2169.7	2171.5	2169.7	2165.9	2162.2	2158.5	2153.0	2149.2	2145.6	2143.5
7.5°	2177.1	2178.9	2180.9	2178.9	2171.5	2167.8	2162.2	2156.7	2149.2	2145.6	2141.7
10°	2192.1	2192.1	2192.1	2190.2	2184.5	2177.1	2169.7	2164.1	2154.8	2145.6	2139.9
12.5°	2203.2	2205.1	2205.1	2201.3	2193.9	2184.5	2177.1	2171.5	2164.1	2156.7	2151.1
15°	2219.9	2219.9	2218.1	2210.7	2199.5	2192.1	2188.4	2186.5	2184.5	2180.9	2175.3
17.5°	2253.5	2251.7	2246.1	2234.9	2221.8	2216.3	2212.5	2212.5	2212.5	2210.7	2206.9
20°	2301.9	2301.9	2294.5	2275.9	2264.6	2259.1	2253.5	2253.5	2253.5	2247.9	2242.3
22.5°	2380.1	2382.0	2370.8	2348.4	2333.6	2322.5	2314.9	2309.4	2303.7	2300.0	2290.7
25°	2486.3	2484.4	2471.3	2443.5	2432.3	2421.0	2406.2	2396.9	2389.4	2383.8	2372.7
27.5°	2598.0	2596.2	2581.2	2557.1	2549.6	2532.8	2521.7	2508.6	2499.3	2490.0	2478.9
30°	2741.5	2732.1	2721.0	2702.3	2698.6	2685.6	2670.7	2652.0	2637.2	2622.2	2609.2
32.5°	2869.9	2869.9	2853.2	2843.9	2851.3	2845.7	2847.7	2836.4	2827.1	2821.5	2808.5
35°	3048.8	3048.8	3041.2	3030.1	3032.0	3019.0	3017.0	3019.0	3026.4	3026.4	3011.5
37.5°	3287.1	3290.9	3266.7	3262.9	3253.6	3234.9	3225.7	3229.3	3246.1	3255.5	3234.9
40°	3583.2	3590.7	3583.2	3559.0	3547.8	3516.2	3497.6	3497.6	3510.6	3519.9	3512.4
42.5°	3875.7	3888.6	3875.7	3857.0	3847.7	3823.5	3814.1	3821.7	3838.4	3849.5	3838.4
45°	4201.6	4210.9	4194.1	4171.7	4160.6	4147.6	4141.9	4147.6	4166.2	4177.3	4173.6
47.5°	4521.9	4535.0	4514.4	4505.1	4505.1	4492.0	4507.0	4521.9	4538.6	4564.8	4553.5
50°	4834.7	4851.5	4838.4	4840.3	4855.3	4879.4	4907.4	4937.2	4967.0	4994.9	4998.6
52.5°	5114.1	5140.2	5142.1	5175.6	5222.1	5259.4	5337.7	5402.8	5473.6	5497.8	5486.6
55°	5408.4	5443.8	5490.3	5542.5	5616.9	5693.3	5825.6	5942.8	6036.0	6093.7	6084.4
57.5°	5829.3	5864.7	5913.1	5998.8	6110.6	6214.7	6395.5	6578.0	6719.5	6807.1	6764.2
60°	6374.9	6412.2	6475.5	6566.8	6712.1	6853.7	7101.3	7363.8	7583.6	7684.2	7606.0
62.5°	7097.6	7133.0	7174.0	7295.0	7457.0	7639.5	7950.6	8287.7	8567.0	8663.8	8553.9
65°	8127.5	8170.3	8183.3	8282.1	8440.4	8609.8	8945.0	9324.9	9643.4	9801.7	9582.0
67.5°	9287.7	9304.5	9356.6	9472.1	9634.2	9786.9	10051.3	10410.8	10716.1	10803.7	10569.0
70°	9967.5	10001.0	10092.3	10252.5	10446.2	10686.4	10975.1	11362.4	11708.9	11749.8	11451.8
72.5°	9352.9	9421.9	9583.9	9833.5	10239.4	10665.9	11163.1	11734.9	12232.1	12289.9	11811.3
75°	7501.7	7580.0	7773.6	8047.4	8527.9	9161.1	9880.0	10738.5	11483.4	11578.4	10945.3
77.5°	3998.6	4095.4	4376.6	4745.3	5430.7	6268.7	7134.8	8114.4	8747.7	8961.8	8505.5
80°	1007.6	1059.7	1195.7	1411.7	1875.4	2551.4	3298.3	4352.5	5138.4	5471.7	5138.4
82.5°	391.1	430.3	467.4	493.6	538.2	631.3	871.6	1421.0	1914.5	2357.9	2041.2
85°	150.9	160.2	231.0	262.6	262.6	288.7	331.5	391.1	484.2	529.0	443.3
87.5°	59.5	65.2	80.1	122.9	126.6	111.8	119.2	134.1	102.4	85.7	96.8
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°	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1	2151.1
2.5°	2141.7	2139.9	2136.1	2137.9	2136.1	2136.1	2136.1	2136.1
5°	2139.9	2139.9	2136.1	2136.1	2136.1	2137.9	2136.1	2136.1
7.5°	2137.9	2136.1	2132.4	2130.5	2130.5	2128.7	2128.7	2128.7
10°	2134.3	2130.5	2126.8	2125.0	2125.0	2121.3	2121.3	2121.3
12.5°	2143.5	2137.9	2134.3	2132.4	2132.4	2132.4	2134.3	2134.3
15°	2169.7	2158.5	2153.0	2151.1	2153.0	2156.7	2158.5	2160.4
17.5°	2197.6	2186.5	2177.1	2173.3	2175.3	2180.9	2186.5	2190.2
20°	2233.0	2223.7	2212.5	2208.7	2208.7	2216.3	2219.9	2225.5
22.5°	2283.3	2275.9	2266.5	2260.9	2257.2	2266.5	2272.1	2275.9
25°	2363.4	2355.9	2348.4	2342.8	2341.0	2350.3	2354.1	2355.9
27.5°	2469.5	2462.0	2458.4	2456.4	2450.9	2454.6	2460.2	2458.4
30°	2607.4	2612.9	2607.4	2607.4	2598.0	2601.8	2598.0	2594.3
32.5°	2791.7	2786.1	2769.4	2758.2	2745.1	2745.1	2739.5	2734.0
35°	2976.1	2957.4	2948.2	2953.8	2948.2	2951.8	2942.6	2933.3
37.5°	3193.9	3182.8	3181.0	3197.7	3193.9	3197.7	3197.7	3184.7
40°	3482.6	3475.2	3488.2	3516.2	3527.3	3525.5	3529.2	3512.4
42.5°	3814.1	3801.1	3806.7	3830.9	3844.0	3847.7	3845.8	3830.9
45°	4145.7	4149.4	4149.4	4175.5	4188.6	4196.0	4182.9	4177.3
47.5°	4520.0	4525.6	4512.5	4529.4	4533.0	4546.1	4535.0	4525.6
50°	4952.0	4931.6	4901.8	4907.4	4907.4	4903.7	4890.7	4879.4
52.5°	5434.4	5387.9	5332.0	5313.4	5292.9	5272.5	5246.3	5225.9
55°	5983.8	5903.8	5803.2	5756.7	5717.5	5671.0	5611.3	5590.9
57.5°	6620.8	6483.0	6348.8	6265.0	6164.5	6103.0	6026.6	6022.9
60°	7376.9	7190.7	6954.2	6829.4	6728.8	6656.2	6598.3	6576.1
62.5°	8250.3	7930.0	7674.9	7540.8	7423.5	7378.9	7306.1	7315.5
65°	9146.2	8820.3	8572.6	8464.6	8354.6	8324.9	8257.9	8282.1
67.5°	10116.6	9848.3	9576.3	9475.8	9375.2	9345.5	9276.5	9297.1
70°	10986.2	10645.4	10336.3	10138.8	9967.5	9829.7	9742.1	9706.8
72.5°	11159.4	10569.0	10083.0	9589.4	9304.5	9055.0	8952.4	8913.4
75°	10027.0	9110.8	8418.0	7838.8	7518.4	7155.3	7116.2	7062.2
77.5°	7799.7	6756.7	5918.7	5173.8	4743.5	4300.2	4147.6	4032.1
80°	4652.3	3575.8	2771.3	1942.5	1585.0	1275.7	1199.3	1119.3
82.5°	1665.0	1067.1	718.9	560.6	501.0	461.8	432.1	393.0
85°	402.3	338.9	320.3	290.5	286.8	243.9	173.1	154.6
87.5°	128.5	117.4	119.2	113.6	119.2	89.4	72.6	65.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)