

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: P270572

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270572
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29815.4 lumens
Efficiency: N/A
Efficacy: 93.2 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): 320
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

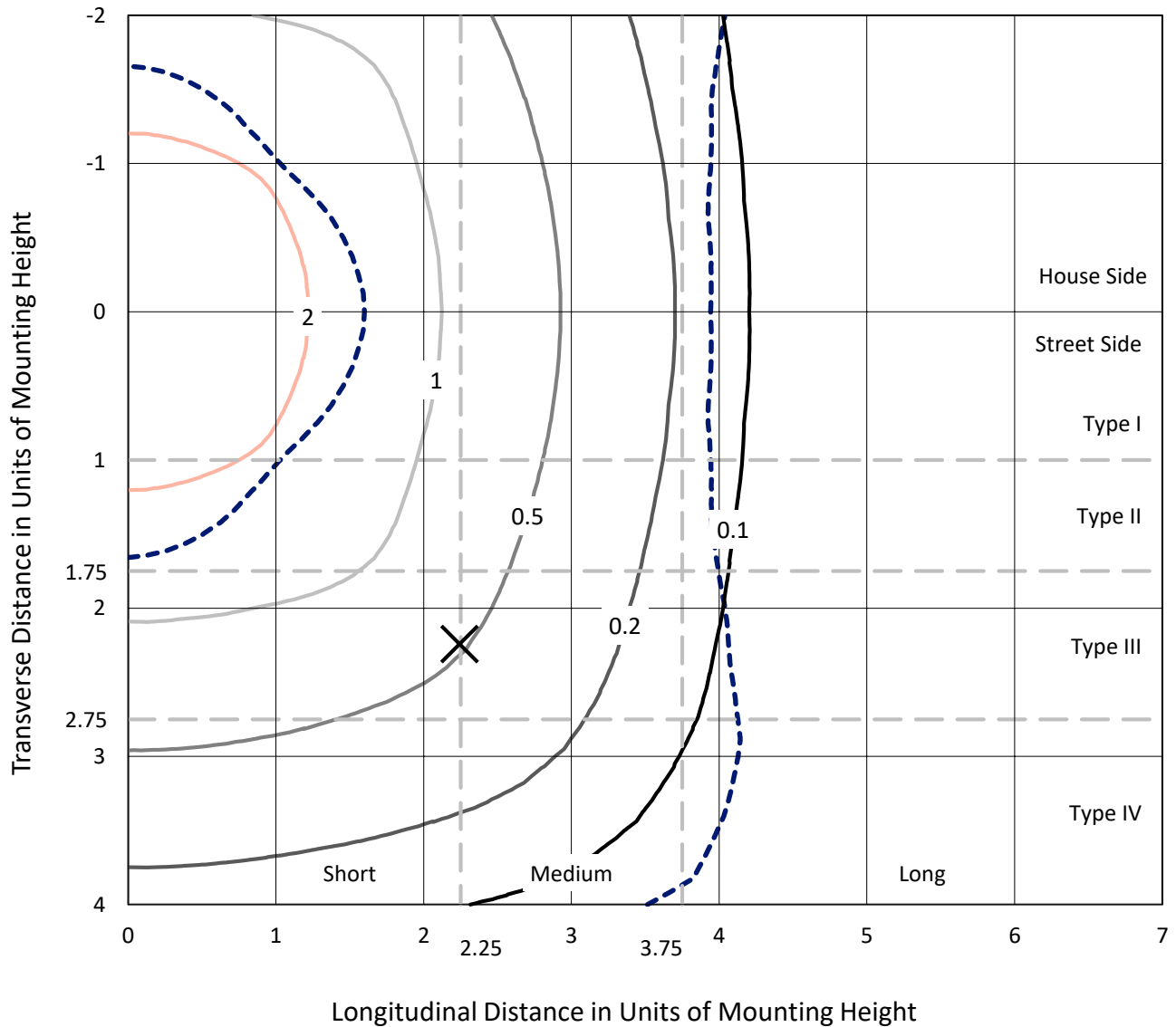


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Iso-Footcandle Lines of Horizontal Illumination

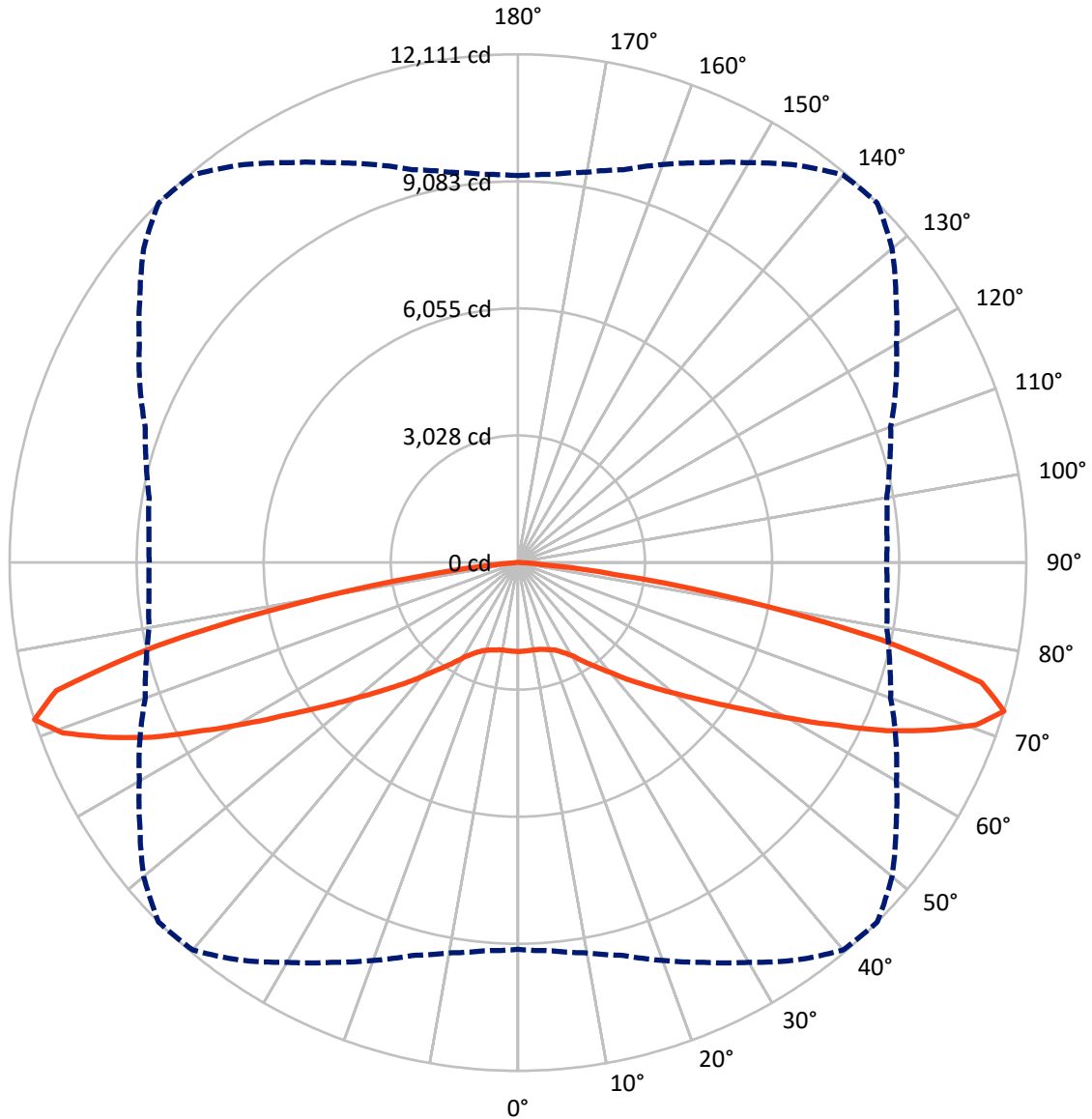
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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	14907.7	0.0	14907.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	14907.7	0.0	14907.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	29815.4	0.0	29815.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.3	0.7
10°-20°	612.3	2.1
20°-30°	1105.4	3.7
30°-40°	1885.5	6.3
40°-50°	3210.0	10.8
50°-60°	5166.1	17.3
60°-70°	8591.3	28.8
70°-80°	8311.1	27.9
80°-90°	731.5	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°	29815.4	100.0
0°-180°	29815.4	100.0



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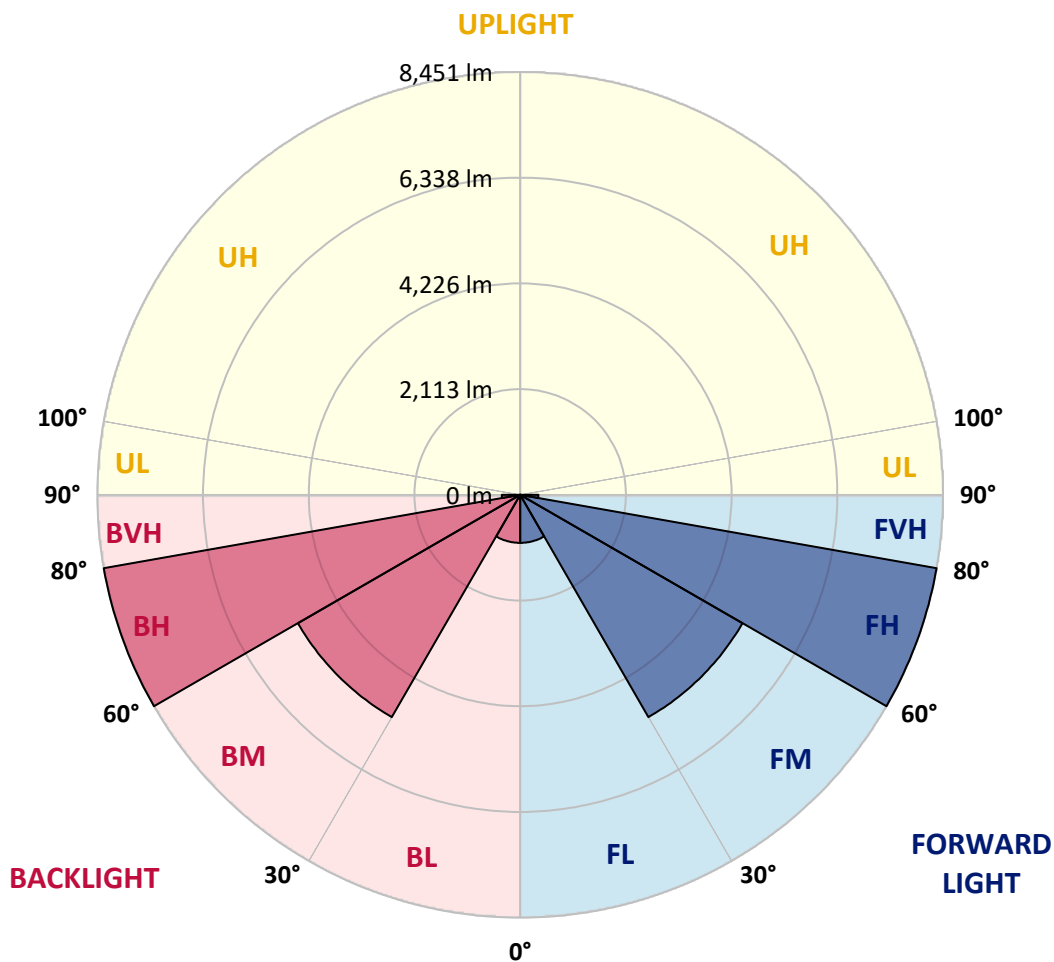
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	960.0	3.2			
FM	(30°-60°)	5130.8	17.2			
FH	(60°-80°)	8451.2	28.3			G4/12000
FVH	(80°-90°)	365.7	1.2			G3/500
BL	(0°-30°)	960.0	3.2	B2/1000		
BM	(30°-60°)	5130.8	17.2	B4/8500		
BH	(60°-80°)	8451.2	28.3	B5		G4/12000
BVH	(80°-90°)	365.7	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°	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6
2.5°	2136.2	2136.2	2138.0	2136.2	2132.4	2130.7	2125.2	2121.4	2117.8	2116.0	2112.4
5°	2138.0	2138.0	2139.9	2138.0	2134.4	2130.7	2126.9	2121.4	2117.8	2114.2	2112.4
7.5°	2145.3	2147.2	2149.0	2147.2	2139.9	2136.2	2130.7	2125.2	2117.8	2114.2	2110.5
10°	2160.1	2160.1	2160.1	2158.2	2152.7	2145.3	2138.0	2132.4	2123.4	2114.2	2108.6
12.5°	2171.1	2172.9	2172.9	2169.1	2162.0	2152.7	2145.3	2139.9	2132.4	2125.2	2119.6
15°	2187.6	2187.6	2185.8	2178.4	2167.4	2160.1	2156.3	2154.6	2152.7	2149.0	2143.5
17.5°	2220.6	2218.8	2213.2	2202.3	2189.3	2183.9	2180.2	2180.2	2180.2	2178.4	2174.6
20°	2268.3	2268.3	2260.9	2242.6	2231.6	2226.1	2220.6	2220.6	2220.6	2215.1	2209.7
22.5°	2345.4	2347.2	2336.2	2314.2	2299.5	2288.5	2281.2	2275.6	2270.1	2266.5	2257.4
25°	2449.9	2448.2	2435.3	2407.7	2396.8	2385.8	2371.0	2362.0	2354.5	2349.1	2338.1
27.5°	2560.1	2558.3	2543.6	2519.7	2512.4	2495.9	2484.8	2472.0	2462.9	2453.7	2442.6
30°	2701.5	2692.2	2681.3	2662.8	2659.3	2646.3	2631.7	2613.3	2598.6	2584.0	2571.0
32.5°	2828.0	2828.0	2811.5	2802.4	2809.7	2804.1	2806.0	2794.9	2785.9	2780.3	2767.5
35°	3004.2	3004.2	2996.8	2985.8	2987.8	2974.8	2973.0	2974.8	2982.3	2982.3	2967.6
37.5°	3239.1	3242.8	3218.9	3215.3	3206.1	3187.7	3178.6	3182.2	3198.8	3207.9	3187.7
40°	3530.9	3538.2	3530.9	3507.1	3496.1	3464.9	3446.4	3446.4	3459.4	3468.5	3461.2
42.5°	3819.1	3831.9	3819.1	3800.6	3791.6	3767.8	3758.5	3765.9	3782.4	3793.4	3782.4
45°	4140.2	4149.5	4132.8	4110.9	4099.9	4087.0	4081.4	4087.0	4105.3	4116.4	4112.7
47.5°	4455.9	4468.7	4448.5	4439.3	4439.3	4426.5	4441.2	4455.9	4472.4	4498.1	4487.0
50°	4764.3	4780.7	4767.8	4769.7	4784.4	4808.2	4835.8	4865.1	4894.4	4922.1	4925.6
52.5°	5039.4	5065.2	5067.0	5099.9	5145.9	5182.6	5259.7	5324.0	5393.7	5417.5	5406.4
55°	5329.5	5364.3	5410.1	5461.5	5534.9	5610.3	5740.4	5856.1	5947.9	6004.8	5995.6
57.5°	5744.2	5779.1	5826.8	5911.1	6021.2	6124.0	6302.1	6481.9	6621.3	6707.6	6665.5
60°	6281.8	6318.6	6381.0	6470.9	6614.0	6753.5	6997.5	7256.4	7472.9	7572.1	7495.0
62.5°	6993.9	7028.8	7069.2	7188.4	7348.1	7527.9	7834.5	8166.6	8441.9	8537.3	8429.1
65°	8008.7	8051.0	8063.8	8161.1	8317.0	8484.1	8814.4	9188.9	9502.7	9658.7	9442.1
67.5°	9152.1	9168.6	9220.1	9333.7	9493.5	9643.9	9904.5	10258.7	10559.8	10646.1	10414.8
70°	9822.0	9855.0	9945.0	10102.8	10293.6	10530.4	10814.9	11196.6	11537.9	11578.3	11284.7
72.5°	9216.4	9284.3	9443.9	9689.8	10089.9	10510.2	11000.1	11563.6	12053.5	12110.5	11638.8
75°	7392.2	7469.2	7660.0	7929.9	8403.4	9027.3	9735.7	10581.8	11315.8	11409.5	10785.5
77.5°	3940.1	4035.5	4312.8	4676.0	5351.5	6177.3	7030.7	7996.0	8620.0	8831.0	8381.4
80°	992.8	1044.2	1178.1	1391.0	1848.1	2514.3	3250.2	4288.9	5063.2	5391.7	5063.2
82.5°	385.5	423.9	460.7	486.3	530.4	622.2	858.9	1400.3	1886.6	2323.3	2011.3
85°	148.7	157.8	227.6	258.7	258.7	284.5	326.7	385.5	477.2	521.1	436.8
87.5°	58.7	64.1	79.0	121.1	124.8	110.1	117.5	132.1	100.9	84.4	95.4
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°	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6	2119.6
2.5°	2110.5	2108.6	2105.0	2106.9	2105.0	2105.0	2105.0	2105.0
5°	2108.6	2108.6	2105.0	2105.0	2105.0	2106.9	2105.0	2105.0
7.5°	2106.9	2105.0	2101.2	2099.5	2099.5	2097.6	2097.6	2097.6
10°	2103.1	2099.5	2095.7	2093.9	2093.9	2090.3	2090.3	2090.3
12.5°	2112.4	2106.9	2103.1	2101.2	2101.2	2101.2	2103.1	2103.1
15°	2138.0	2126.9	2121.4	2119.6	2121.4	2125.2	2126.9	2128.9
17.5°	2165.5	2154.6	2145.3	2141.6	2143.5	2149.0	2154.6	2158.2
20°	2200.4	2191.2	2180.2	2176.6	2176.6	2183.9	2187.6	2193.0
22.5°	2250.0	2242.6	2233.5	2227.9	2224.3	2233.5	2238.9	2242.6
25°	2328.9	2321.5	2314.2	2308.6	2306.8	2316.0	2319.8	2321.5
27.5°	2433.5	2426.1	2422.5	2420.7	2415.2	2418.7	2424.3	2422.5
30°	2569.3	2574.8	2569.3	2569.3	2560.1	2563.8	2560.1	2556.4
32.5°	2751.0	2745.5	2729.0	2717.9	2705.1	2705.1	2699.5	2694.0
35°	2932.6	2914.3	2905.1	2910.6	2905.1	2908.8	2899.5	2890.4
37.5°	3147.3	3136.3	3134.5	3151.1	3147.3	3151.1	3151.1	3138.1
40°	3431.9	3424.5	3437.4	3464.9	3475.8	3474.0	3477.7	3461.2
42.5°	3758.5	3745.7	3751.1	3774.9	3787.9	3791.6	3789.7	3774.9
45°	4085.1	4088.8	4088.8	4114.4	4127.4	4134.7	4121.9	4116.4
47.5°	4454.1	4459.5	4446.7	4463.1	4466.9	4479.7	4468.7	4459.5
50°	4879.9	4859.7	4830.2	4835.8	4835.8	4832.1	4819.2	4808.2
52.5°	5355.1	5309.3	5254.1	5235.9	5215.6	5195.4	5169.7	5149.5
55°	5896.5	5817.6	5718.5	5672.5	5634.1	5588.1	5529.4	5509.2
57.5°	6524.1	6388.3	6256.2	6173.6	6074.5	6014.0	5938.8	5935.0
60°	7269.3	7085.7	6852.6	6729.7	6630.6	6559.1	6502.1	6480.2
62.5°	8129.9	7814.3	7562.8	7430.7	7315.1	7271.1	7199.5	7208.7
65°	9012.6	8691.6	8447.4	8341.0	8232.6	8203.3	8137.2	8161.1
67.5°	9968.9	9704.5	9436.5	9337.5	9238.3	9209.1	9141.2	9161.4
70°	10825.8	10490.0	10185.3	9990.8	9822.0	9686.2	9599.9	9565.1
72.5°	10996.5	10414.8	9935.8	9449.5	9168.6	8922.8	8821.7	8783.3
75°	9880.6	8977.8	8295.0	7724.3	7408.7	7050.8	7012.3	6959.1
77.5°	7685.8	6658.1	5832.2	5098.2	4674.2	4237.5	4087.0	3973.3
80°	4584.3	3523.6	2730.8	1914.1	1561.8	1257.1	1181.9	1102.9
82.5°	1640.7	1051.6	708.5	552.4	493.7	455.1	425.7	387.2
85°	396.4	334.0	315.7	286.3	282.6	240.3	170.7	152.4
87.5°	126.7	115.6	117.5	112.0	117.5	88.2	71.5	64.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)