

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: P270563

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270563  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)  
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-5MQ-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22478.9 lumens  
Efficiency: N/A  
Efficacy: 107.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G3

Input Watts (W): 210  
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

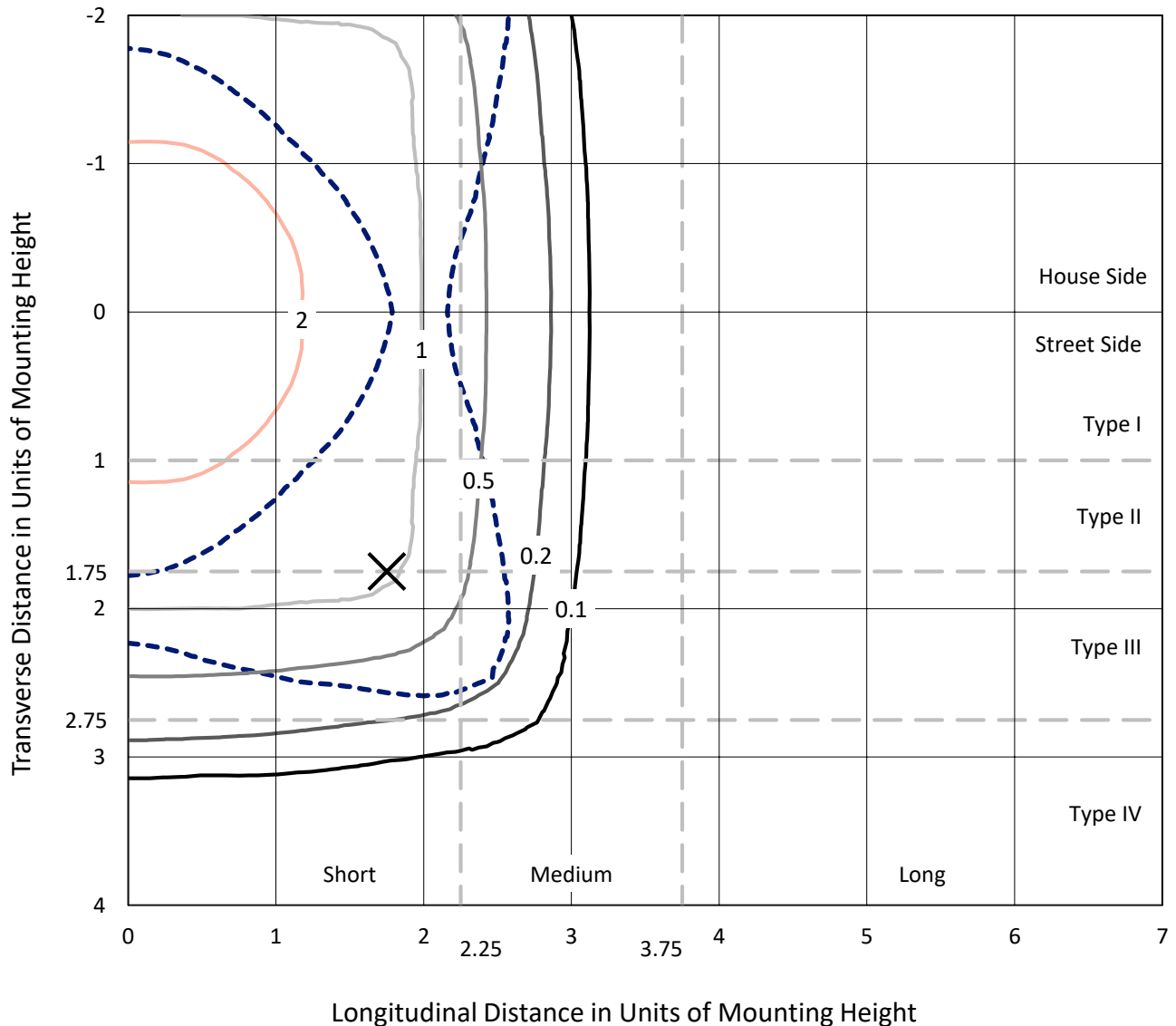


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### Iso-Footcandle Lines of Horizontal Illumination

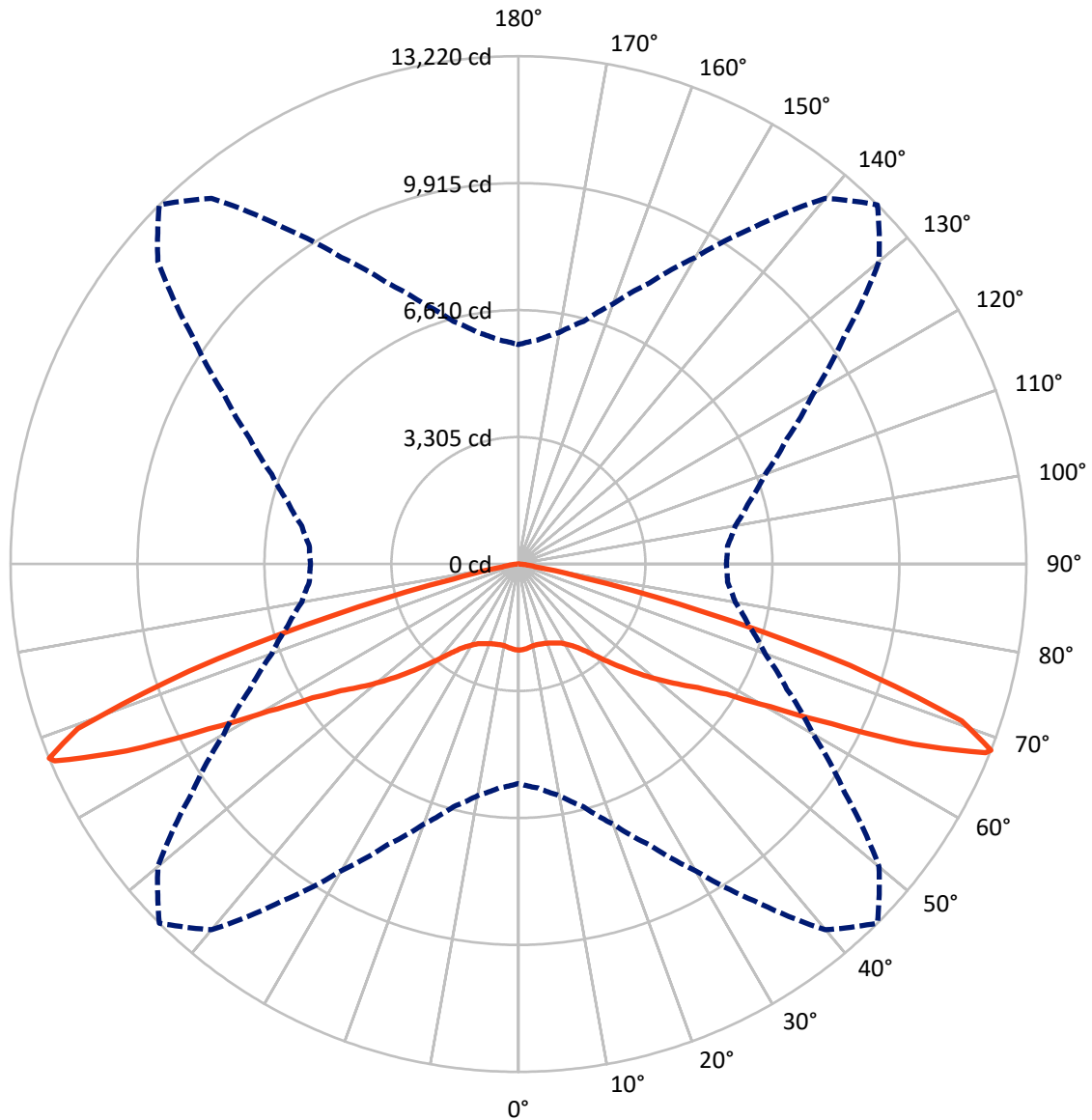
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11239.4	0.0	11239.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	11239.4	0.0	11239.4
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	22478.9	0.0	22478.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.8	0.9
10°-20°	608.5	2.7
20°-30°	1034.6	4.6
30°-40°	1693.0	7.5
40°-50°	3025.6	13.5
50°-60°	5109.8	22.7
60°-70°	7923.5	35.2
70°-80°	2724.3	12.1
80°-90°	149.7	0.7
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°	22478.9	100.0
0°-180°	22478.9	100.0



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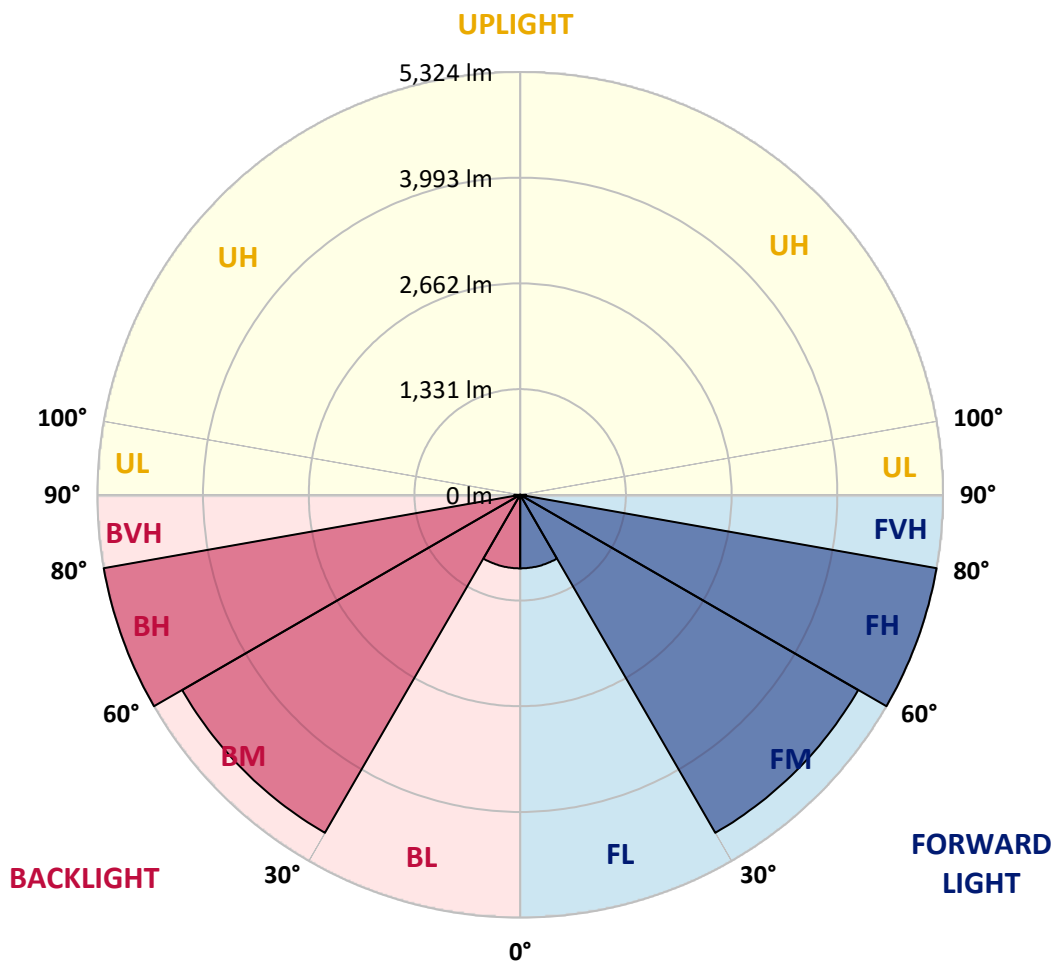
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	926.5	4.1			
FM	(30°-60°)	4914.3	21.9			
FH	(60°-80°)	5323.9	23.7			G3/7500
FVH	(80°-90°)	74.9	0.3			G1/100
BL	(0°-30°)	926.5	4.1	B2/1000		
BM	(30°-60°)	4914.3	21.9	B3/5000		
BH	(60°-80°)	5323.9	23.7	B5		G3/7500
BVH	(80°-90°)	74.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3
2.5°	2252.1	2252.1	2254.7	2253.4	2249.3	2245.0	2240.9	2236.8	2234.1	2231.3	2228.5
5°	2228.5	2228.5	2232.6	2230.0	2227.2	2223.0	2220.3	2216.2	2213.5	2210.6	2212.0
7.5°	2198.3	2201.0	2203.8	2202.5	2197.0	2195.5	2191.4	2190.0	2187.3	2183.2	2184.5
10°	2172.1	2173.4	2176.2	2174.8	2173.4	2169.3	2168.0	2166.6	2165.3	2159.7	2158.4
12.5°	2146.1	2148.7	2151.5	2152.9	2151.5	2152.9	2154.2	2155.7	2154.2	2151.5	2151.5
15°	2125.3	2128.1	2132.1	2136.3	2137.7	2146.1	2151.5	2157.0	2161.1	2162.5	2158.4
17.5°	2114.3	2118.5	2124.0	2132.1	2139.1	2148.7	2158.4	2166.6	2173.4	2174.8	2170.8
20°	2113.0	2117.0	2125.3	2134.9	2147.4	2159.7	2174.8	2187.3	2194.2	2198.3	2194.2
22.5°	2122.5	2128.1	2139.1	2151.5	2166.6	2183.2	2202.5	2216.2	2230.0	2235.4	2231.3
25°	2150.2	2155.7	2168.0	2183.2	2199.7	2220.3	2239.6	2257.5	2271.3	2278.1	2272.6
27.5°	2207.9	2209.3	2223.0	2239.6	2258.9	2276.8	2301.5	2309.8	2320.9	2327.7	2320.9
30°	2289.2	2291.8	2304.3	2330.5	2348.3	2371.7	2385.4	2393.8	2406.1	2413.0	2404.8
32.5°	2413.0	2415.8	2426.9	2451.6	2468.1	2486.0	2502.5	2508.0	2520.4	2528.6	2518.9
35°	2587.8	2593.3	2603.0	2619.5	2633.2	2647.0	2659.4	2655.3	2663.6	2674.6	2664.9
37.5°	2827.3	2826.0	2828.8	2841.1	2854.9	2863.2	2882.4	2872.8	2881.0	2890.7	2885.1
40°	3106.8	3106.8	3105.4	3127.4	3132.8	3141.3	3161.9	3149.5	3160.4	3171.5	3161.9
42.5°	3424.8	3430.3	3437.2	3455.1	3470.2	3472.9	3482.5	3477.1	3490.9	3500.4	3490.9
45°	3790.8	3799.1	3807.5	3848.7	3855.6	3861.2	3868.0	3850.0	3865.2	3873.5	3870.7
47.5°	4170.8	4185.9	4203.9	4246.6	4274.0	4286.4	4291.9	4271.4	4272.7	4285.1	4286.4
50°	4600.3	4616.7	4634.7	4682.9	4709.1	4731.1	4737.9	4714.6	4717.3	4726.9	4729.7
52.5°	4996.7	5016.0	5054.6	5119.3	5156.5	5195.0	5197.8	5168.8	5181.2	5188.2	5182.5
55°	5369.8	5394.5	5445.4	5532.2	5599.7	5675.3	5709.7	5678.0	5678.0	5672.5	5669.8
57.5°	5804.8	5832.2	5884.5	5985.0	6078.7	6187.4	6280.9	6312.7	6370.5	6389.7	6359.6
60°	6459.9	6488.8	6542.5	6674.6	6793.1	6951.4	7105.6	7230.7	7434.6	7544.7	7445.5
62.5°	7058.7	7102.8	7229.4	7460.7	7716.7	8009.8	8349.9	8592.2	8962.5	9146.9	8897.7
65°	6922.5	7011.9	7259.7	7623.0	8151.7	8787.6	9480.1	10144.9	10910.3	11302.6	10796.0
67.5°	6047.0	6122.7	6389.7	6812.3	7471.7	8348.6	9424.9	10801.5	12380.4	13115.3	12219.3
68°	5712.5	5854.3	6120.0	6539.8	7204.6	8066.3	9215.7	10702.3	12425.7	13219.9	12252.3
70°	4380.0	4431.0	4685.6	5062.8	5780.0	6625.1	7785.5	9480.1	11427.8	12245.4	11250.3
72.5°	2081.4	2111.6	2276.8	2648.5	3104.1	3792.3	4816.4	6414.5	8169.5	9020.3	8027.9
75°	762.7	769.5	808.0	896.1	1066.7	1325.5	1817.0	2810.8	4161.2	4962.2	4177.7
77.5°	411.6	413.0	428.1	450.1	480.5	514.8	589.2	790.1	1274.7	1734.4	1346.2
80°	258.8	257.5	272.5	290.4	311.2	327.6	334.4	357.9	403.2	472.1	433.6
82.5°	132.1	144.5	178.9	198.3	228.4	234.0	227.1	225.7	239.5	258.8	267.1
85°	72.9	64.7	95.0	126.7	137.6	141.8	143.2	134.8	132.1	129.4	136.3
87.5°	37.2	34.5	41.3	63.3	67.5	55.1	56.5	48.1	33.1	33.1	34.5
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°	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3	2242.3
2.5°	2225.8	2227.2	2224.5	2224.5	2224.5	2225.8	2224.5	2223.0
5°	2207.9	2210.6	2210.6	2212.0	2213.5	2213.5	2213.5	2213.5
7.5°	2181.8	2183.2	2185.8	2185.8	2185.8	2185.8	2185.8	2185.8
10°	2157.0	2154.2	2152.9	2150.2	2150.2	2146.1	2147.4	2148.7
12.5°	2144.7	2139.1	2136.3	2132.1	2129.4	2125.3	2125.3	2126.6
15°	2150.2	2141.9	2133.6	2130.8	2128.1	2125.3	2122.5	2124.0
17.5°	2161.1	2151.5	2141.9	2136.3	2130.8	2126.6	2125.3	2126.6
20°	2184.5	2170.8	2155.7	2146.1	2134.9	2132.1	2128.1	2132.1
22.5°	2216.2	2199.7	2180.4	2162.5	2150.2	2144.7	2139.1	2143.3
25°	2254.7	2236.8	2217.6	2197.0	2183.2	2179.0	2172.1	2172.1
27.5°	2308.5	2293.3	2276.8	2257.5	2243.6	2239.6	2228.5	2228.5
30°	2393.8	2378.6	2363.5	2346.9	2333.2	2329.0	2315.3	2315.3
32.5°	2506.6	2490.1	2480.5	2466.7	2455.6	2448.8	2432.3	2431.0
35°	2658.1	2643.0	2641.6	2631.9	2620.8	2622.2	2605.8	2603.0
37.5°	2875.6	2863.2	2867.3	2859.0	2849.3	2857.7	2847.9	2847.9
40°	3153.6	3149.5	3153.6	3148.1	3149.5	3150.9	3142.6	3145.3
42.5°	3489.5	3478.4	3503.2	3500.4	3496.4	3507.3	3488.1	3474.4
45°	3876.2	3872.1	3896.8	3901.0	3892.7	3899.6	3865.2	3863.9
47.5°	4296.1	4296.1	4318.2	4315.4	4307.2	4308.5	4267.2	4241.0
50°	4733.8	4731.1	4753.1	4747.6	4736.6	4735.1	4692.6	4666.3
52.5°	5189.5	5189.5	5221.0	5205.9	5179.7	5167.4	5115.0	5080.8
55°	5693.3	5686.5	5696.1	5646.4	5595.5	5558.4	5493.7	5467.5
57.5°	6330.5	6250.8	6181.9	6118.5	6047.0	6003.0	5927.2	5899.7
60°	7234.9	7021.6	6929.3	6802.8	6684.4	6625.1	6524.7	6471.0
62.5°	8487.5	8133.9	7883.3	7603.9	7334.0	7144.1	6991.2	6923.9
65°	9935.7	9164.8	8527.5	7928.7	7420.8	7017.5	6793.1	6722.8
67.5°	10486.3	9071.3	7971.4	7112.4	6495.7	6015.3	5746.9	5690.6
68°	10369.2	8856.5	7713.9	6834.3	6215.0	5730.4	5463.3	5412.5
70°	9146.9	7471.7	6265.9	5390.4	4812.3	4351.1	4162.6	4081.4
72.5°	6235.6	4798.6	3680.7	2944.4	2512.1	2220.3	2046.9	1987.7
75°	2870.1	1939.5	1295.3	967.7	821.8	751.6	698.0	684.1
77.5°	837.0	608.4	523.1	484.5	455.6	430.8	413.0	411.6
80°	397.8	373.1	362.0	337.3	311.2	287.6	271.2	274.0
82.5°	267.1	260.1	260.1	235.4	194.0	166.5	137.6	123.8
85°	141.8	147.3	155.5	147.3	128.0	95.0	62.0	67.5
87.5°	48.1	55.1	57.9	56.5	50.9	38.5	28.9	28.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)