

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: P196527

Luminaire Tested: **NAV-AF-03-D-UNV-RW-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196527  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)  
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-RW-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17902.1 lumens  
Efficiency: N/A  
Efficacy: 107.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B4 - U0 - G4

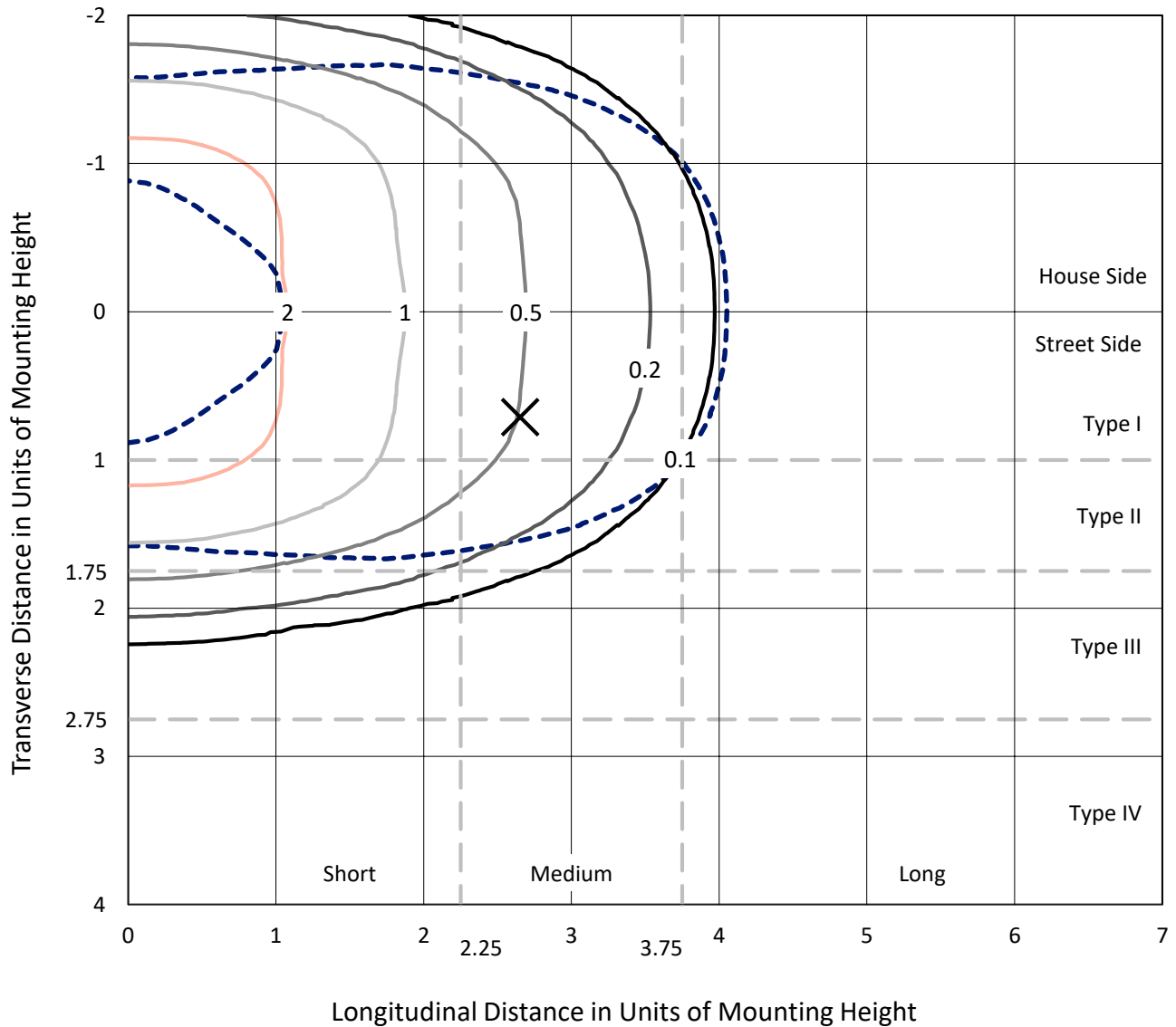
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

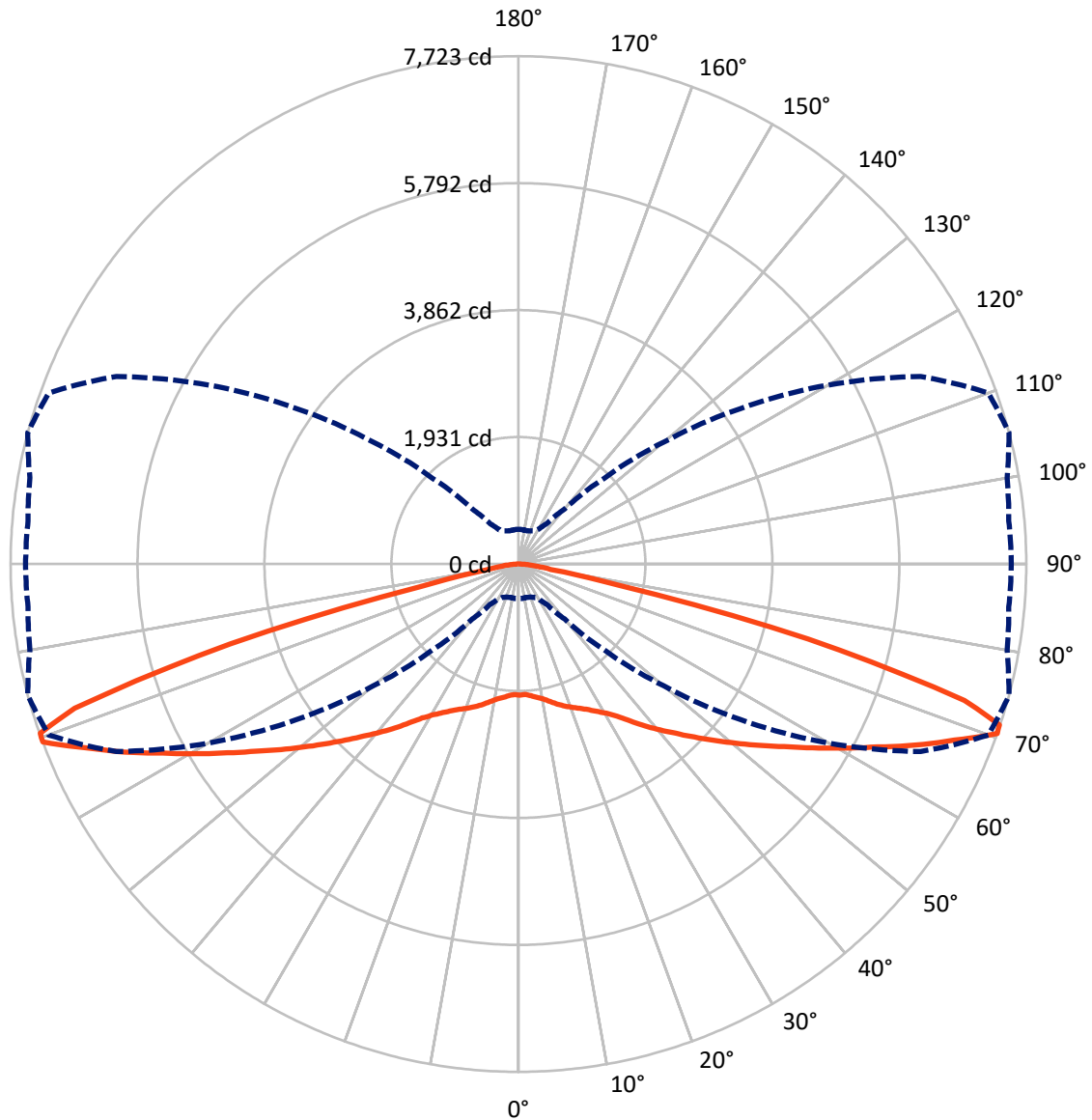
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8951.1	0.0	8951.1
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8951.1	0.0	8951.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	17902.1	0.0	17902.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	191.2	1.1
10°-20°	593.0	3.3
20°-30°	1113.8	6.2
30°-40°	1962.0	11.0
40°-50°	3251.7	18.2
50°-60°	4523.6	25.3
60°-70°	4270.4	23.9
70°-80°	1823.9	10.2
80°-90°	172.4	1.0
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°	17902.1	100.0
0°-180°	17902.1	100.0

**Coefficient of Utilization**



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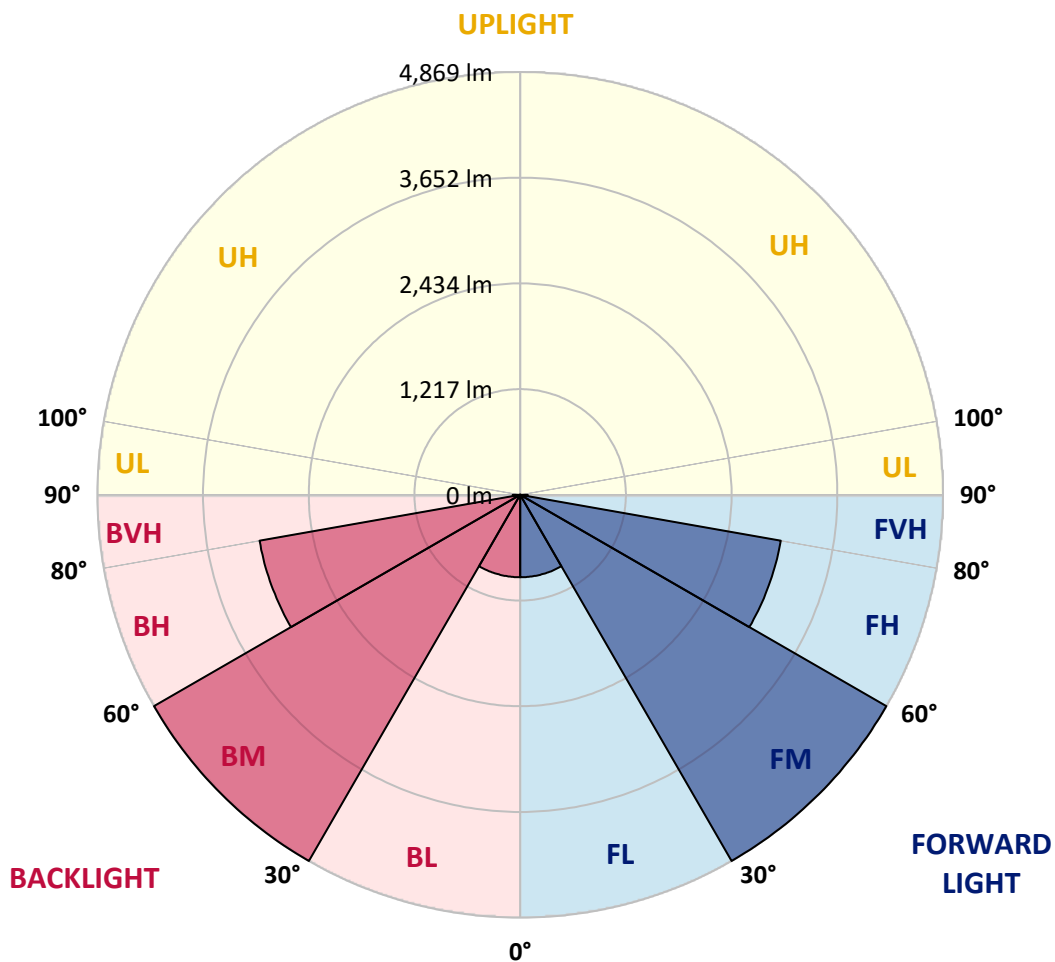
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	949.0	5.3			
FM	(30°-60°)	4868.7	27.2			
FH	(60°-80°)	3047.1	17.0			G2/5000
FVH	(80°-90°)	86.2	0.5			G1/100
BL	(0°-30°)	949.0	5.3	B2/1000		
BM	(30°-60°)	4868.7	27.2	B3/5000		
BH	(60°-80°)	3047.1	17.0	B4/5000		G4/5000
BVH	(80°-90°)	86.2	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6
2.5°	2005.9	2004.8	2005.9	2002.5	2003.7	2002.5	2002.5	1998.1	1998.1	1995.8	1992.5
5°	1983.5	1985.7	1985.7	1985.7	1989.1	1989.1	1993.6	1994.7	1998.1	2001.4	2003.7
7.5°	1946.5	1947.5	1951.0	1953.2	1959.9	1968.9	1977.9	1988.0	1996.9	2008.1	2020.5
10°	1915.1	1917.3	1922.9	1928.5	1940.9	1952.0	1967.8	1983.5	1999.2	2018.2	2037.3
12.5°	1898.3	1901.5	1910.5	1919.5	1938.6	1953.2	1974.6	1999.2	2020.5	2038.4	2059.7
15°	1900.4	1901.5	1913.9	1926.2	1953.2	1973.3	2003.7	2032.9	2058.7	2078.8	2103.6
17.5°	1933.1	1935.2	1947.5	1965.6	1991.4	2017.2	2049.7	2080.0	2114.7	2138.3	2167.4
20°	1996.9	2000.3	2013.7	2032.9	2060.8	2087.8	2121.5	2152.9	2188.8	2216.9	2246.1
22.5°	2080.0	2085.5	2100.2	2123.7	2151.8	2184.3	2219.0	2251.7	2285.2	2313.3	2338.0
25°	2190.9	2197.8	2213.5	2237.0	2265.1	2299.8	2335.8	2369.4	2404.1	2425.4	2445.7
27.5°	2340.3	2351.5	2368.3	2387.4	2412.0	2449.0	2482.7	2510.8	2544.4	2568.0	2581.5
30°	2541.1	2556.7	2570.3	2590.4	2608.3	2647.7	2674.5	2696.9	2722.8	2736.3	2739.6
32.5°	2786.7	2801.3	2814.7	2829.4	2854.1	2889.9	2915.8	2928.1	2941.6	2939.3	2926.9
35°	3063.8	3075.1	3083.0	3108.8	3149.1	3172.7	3191.8	3196.3	3198.4	3175.0	3151.4
37.5°	3355.6	3369.0	3375.8	3416.1	3454.2	3481.2	3490.2	3500.2	3493.6	3454.2	3411.6
40°	3670.8	3685.4	3705.5	3740.4	3785.2	3811.1	3822.2	3821.2	3815.6	3769.6	3699.9
42.5°	3980.5	3998.4	4015.2	4075.8	4112.8	4156.5	4162.1	4161.0	4148.7	4096.0	4015.2
45°	4243.0	4264.3	4299.1	4366.3	4425.8	4478.5	4499.9	4507.7	4495.4	4439.3	4347.3
47.5°	4459.4	4474.0	4517.8	4599.7	4676.0	4753.5	4796.1	4826.3	4825.2	4784.8	4687.2
50°	4607.6	4624.4	4678.3	4770.3	4865.6	4956.4	5040.5	5109.1	5141.5	5112.3	5021.5
52.5°	4650.2	4671.5	4742.2	4852.1	4963.2	5085.5	5211.1	5332.3	5405.2	5423.2	5352.5
55°	4470.7	4494.3	4597.4	4750.0	4932.9	5113.6	5304.2	5477.0	5627.3	5696.9	5668.8
57.5°	3947.9	3964.7	4096.0	4293.5	4554.8	4872.3	5193.2	5509.5	5767.6	5948.2	5979.6
60°	3122.2	3143.5	3287.1	3495.7	3793.1	4194.7	4643.4	5161.7	5667.8	6081.7	6287.0
62.5°	2106.8	2121.5	2259.5	2450.1	2775.5	3162.6	3662.9	4319.2	5040.5	5780.0	6358.8
65°	1106.1	1106.1	1199.3	1332.8	1591.9	1938.6	2451.3	3124.4	3982.7	4906.0	5874.1
67.5°	641.7	640.6	661.9	692.1	774.1	914.3	1197.1	1691.8	2504.0	3578.8	4680.4
70°	529.6	526.2	522.8	522.8	535.2	556.4	610.3	746.0	1091.6	1845.5	2879.8
71°	506.0	503.6	494.7	491.3	497.0	508.2	531.8	594.6	775.2	1258.7	2150.7
72.5°	477.9	472.3	458.9	453.2	454.4	458.9	465.6	490.2	545.2	715.7	1226.2
75°	435.3	421.8	405.1	397.1	393.8	392.7	392.7	399.4	411.7	431.9	502.6
77.5°	385.9	366.9	348.9	341.0	335.4	332.0	329.9	325.4	323.1	332.0	358.0
80°	326.4	306.3	291.7	287.3	283.8	277.1	268.1	259.2	253.6	258.1	273.7
82.5°	252.4	232.1	234.5	235.6	230.0	218.7	209.8	199.7	189.6	187.4	195.2
85°	200.8	190.7	184.0	198.6	186.2	172.7	160.4	143.5	120.0	98.8	107.7
87.5°	86.5	87.5	125.6	189.6	166.1	133.6	111.1	89.7	57.3	42.6	43.7
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°	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6	1993.6
2.5°	1991.4	1991.4	1988.0	1985.7	1985.7	1985.7	1983.5	1984.5
5°	2004.8	2007.1	2009.3	2008.1	2011.6	2014.8	2013.7	2012.7
7.5°	2027.2	2034.0	2040.8	2044.0	2048.5	2053.1	2054.2	2050.8
10°	2049.7	2063.2	2073.2	2082.2	2087.8	2092.4	2095.7	2094.5
12.5°	2077.7	2096.8	2114.7	2132.7	2145.0	2151.8	2158.5	2156.2
15°	2123.7	2145.0	2167.4	2190.9	2210.1	2220.1	2230.3	2228.1
17.5°	2186.5	2205.6	2223.5	2247.1	2270.6	2281.9	2293.2	2292.0
20°	2265.1	2279.7	2289.7	2303.1	2325.7	2338.0	2348.1	2344.7
22.5°	2354.9	2359.4	2360.4	2364.9	2382.8	2397.4	2411.0	2414.3
25°	2452.5	2449.0	2442.4	2439.0	2451.3	2467.0	2483.8	2488.3
27.5°	2573.6	2562.3	2545.5	2532.1	2535.5	2555.7	2574.7	2579.2
30°	2726.1	2700.4	2664.5	2638.6	2634.1	2655.4	2675.6	2682.5
32.5°	2900.1	2865.4	2815.9	2776.6	2759.8	2778.9	2796.8	2807.0
35°	3106.5	3068.3	3008.9	2958.4	2931.4	2943.8	2975.2	2986.5
37.5°	3351.1	3298.3	3232.1	3168.2	3123.2	3125.6	3159.2	3172.7
40°	3621.4	3545.1	3461.0	3381.3	3316.2	3311.7	3342.0	3352.2
42.5°	3903.0	3805.4	3706.7	3602.4	3521.5	3507.0	3546.2	3547.4
45°	4205.9	4080.3	3958.0	3836.8	3752.7	3726.9	3765.1	3769.6
47.5°	4529.1	4372.0	4227.2	4096.0	4005.1	3964.7	4001.7	4008.5
50°	4865.6	4702.9	4534.6	4388.8	4282.2	4232.8	4276.6	4281.1
52.5°	5198.8	5045.0	4877.9	4710.7	4581.8	4525.6	4577.3	4592.9
55°	5534.2	5386.2	5229.0	5061.9	4899.3	4849.9	4906.0	4922.7
57.5°	5883.2	5740.7	5598.1	5429.8	5271.6	5196.6	5257.1	5280.7
60°	6267.9	6142.2	6007.6	5838.3	5682.3	5594.8	5646.4	5673.3
62.5°	6646.0	6620.2	6497.8	6321.7	6124.3	6036.8	6080.6	6099.6
65°	6677.4	7095.9	7090.3	6915.2	6639.2	6492.3	6504.6	6513.6
67.5°	5828.1	6788.5	7402.1	7457.2	7149.7	6919.7	6892.8	6898.4
70°	4126.2	5444.5	6747.0	7601.8	7723.0	7544.7	7486.3	7495.3
71°	3306.1	4671.5	6105.3	7255.2	7714.0	7662.5	7629.9	7653.5
72.5°	2110.3	3441.8	4837.6	6212.9	7093.6	7346.0	7383.0	7397.6
75°	766.2	1480.9	2506.3	3591.2	4551.4	5212.2	5575.7	5604.9
77.5°	411.7	530.7	820.1	1225.2	1539.3	1707.5	1727.7	1735.6
80°	302.8	351.2	401.6	458.9	494.7	501.5	489.2	463.4
82.5°	214.2	242.3	262.6	282.8	297.3	284.9	236.8	180.6
85°	124.5	136.9	148.0	158.2	160.4	151.5	99.9	82.0
87.5°	49.3	53.9	52.8	59.4	57.3	52.8	39.3	33.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)