

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: P195087

Luminaire Tested: **NAV-AF-03-D-UNV-RW-7060**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195087  
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-7060  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18510 lumens  
Efficiency: N/A  
Efficacy: 111.5 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

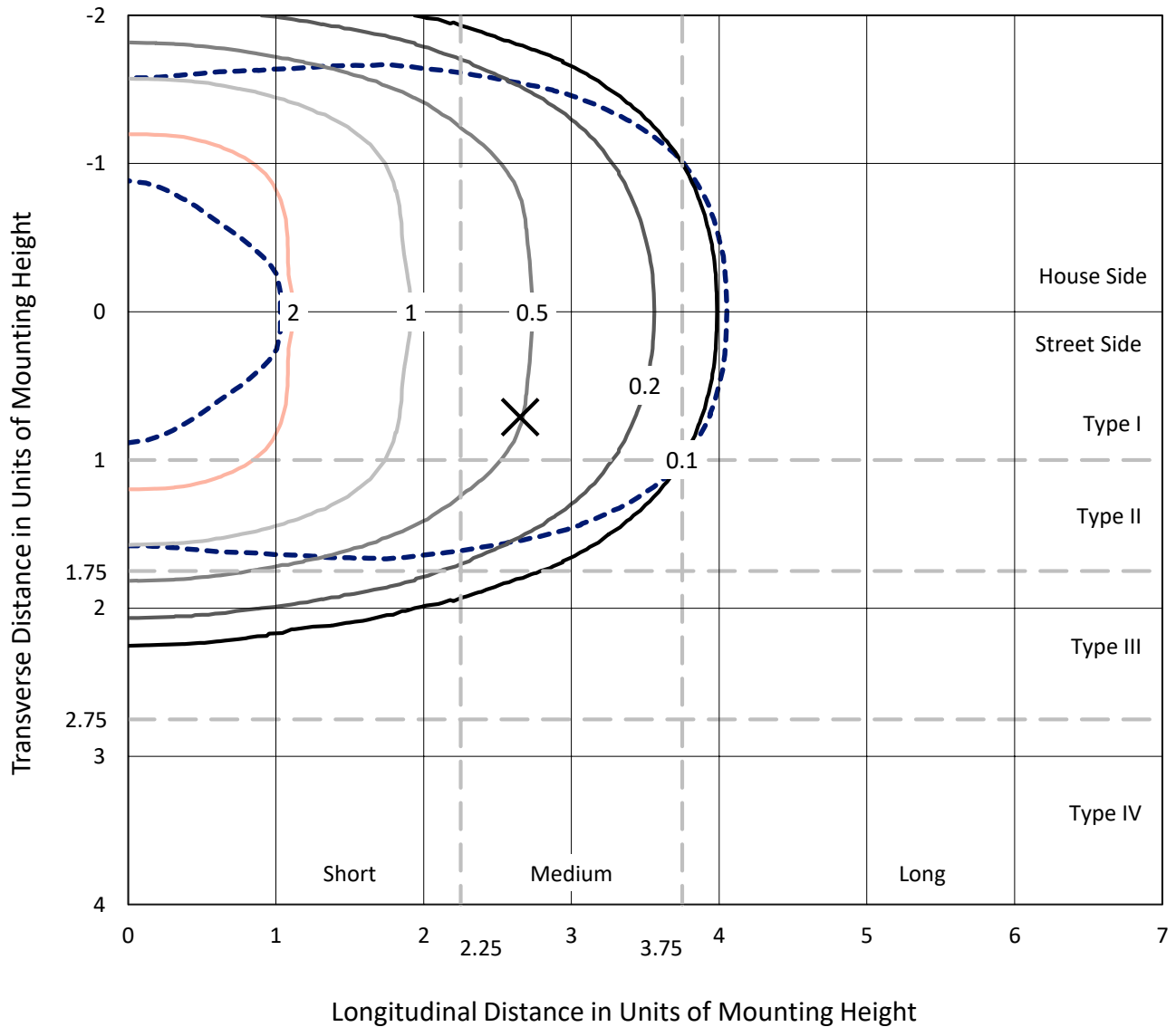
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

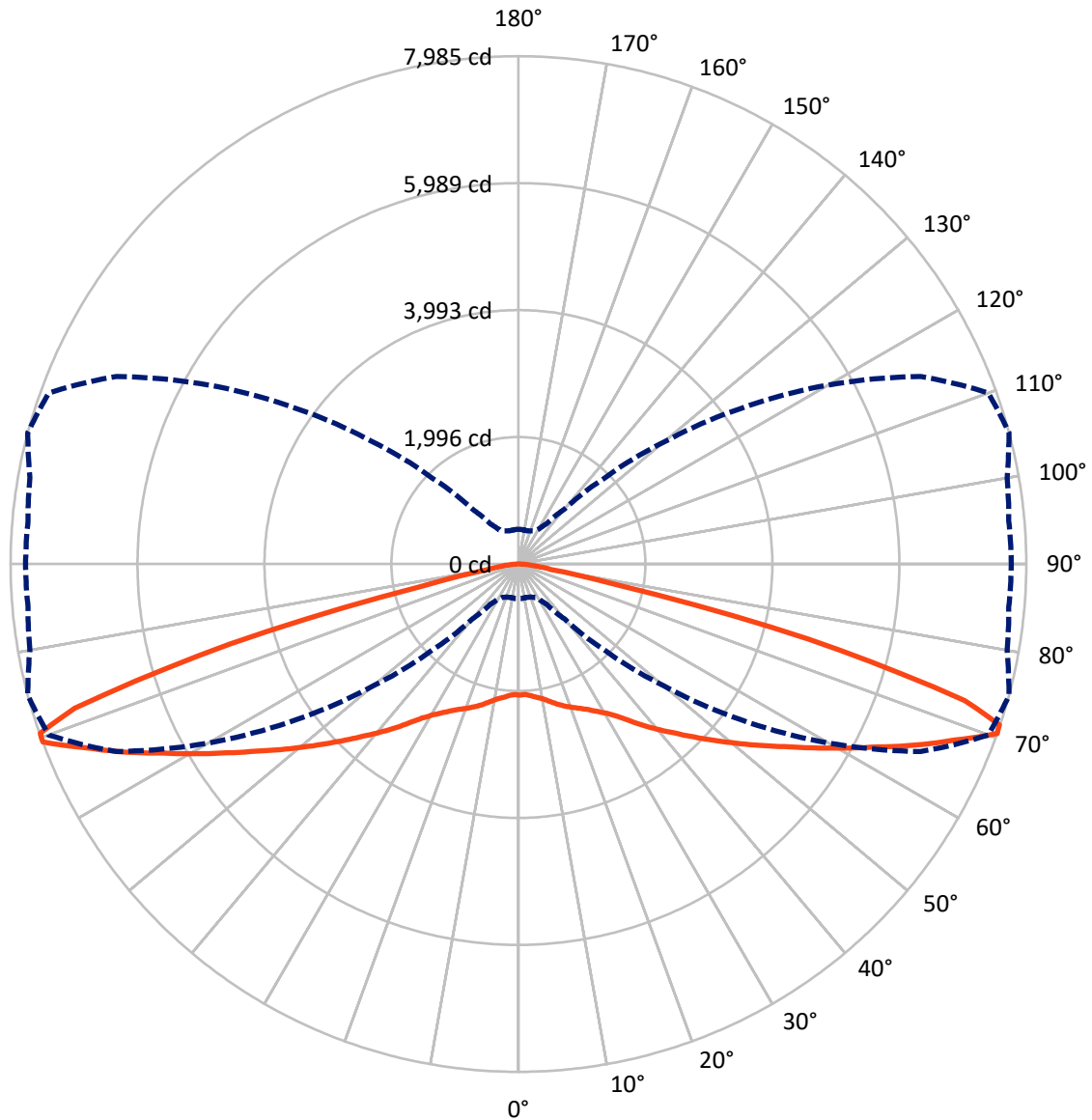
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 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	9255.0	0.0	9255.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	9255.0	0.0	9255.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	18510.0	0.0	18510.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	197.7	1.1
10°-20°	613.2	3.3
20°-30°	1151.7	6.2
30°-40°	2028.7	11.0
40°-50°	3362.1	18.2
50°-60°	4677.2	25.3
60°-70°	4415.4	23.9
70°-80°	1885.9	10.2
80°-90°	178.2	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°	18510.0	100.0
0°-180°	18510.0	100.0



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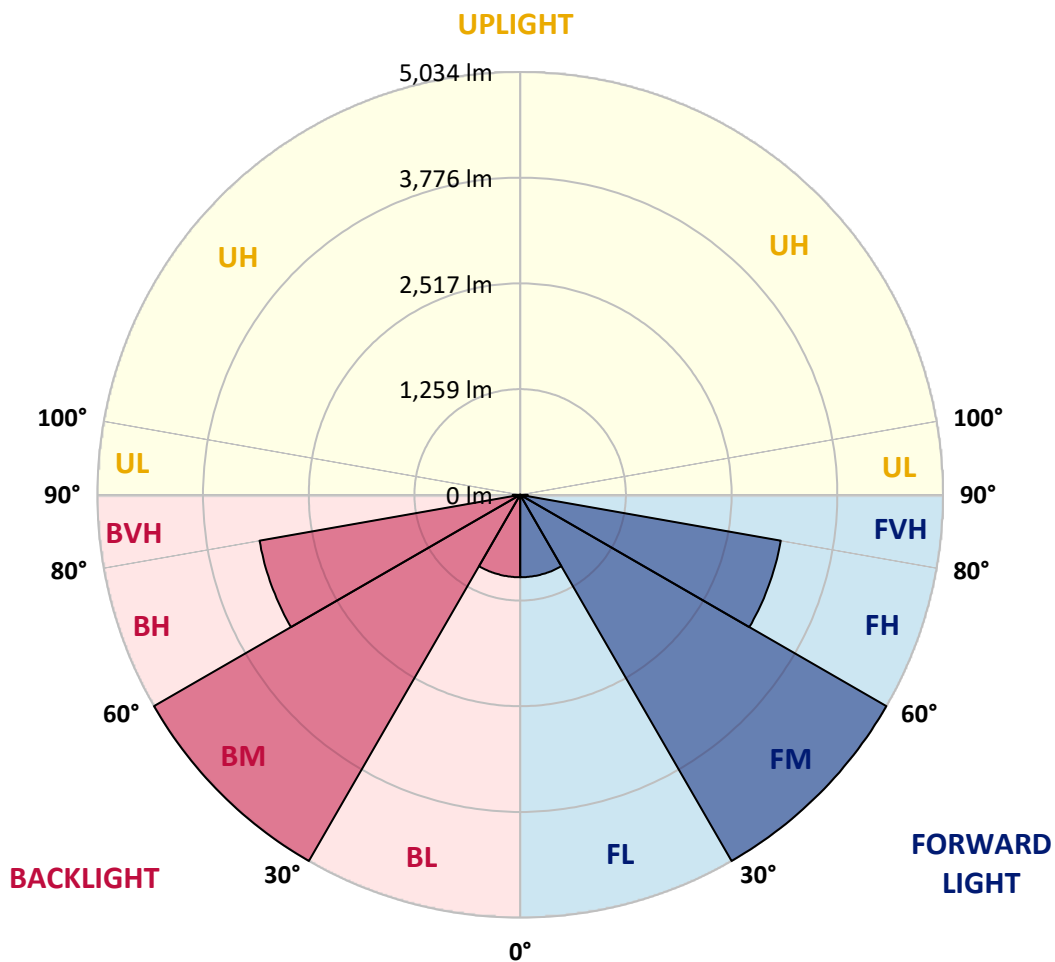
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	981.3	5.3			
FM	(30°-60°)	5034.0	27.2			
FH	(60°-80°)	3150.6	17.0			G2/5000
FVH	(80°-90°)	89.1	0.5			G1/100
BL	(0°-30°)	981.3	5.3	B2/1000		
BM	(30°-60°)	5034.0	27.2	B4/8500		
BH	(60°-80°)	3150.6	17.0	B4/5000		G4/5000
BVH	(80°-90°)	89.1	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°	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3
2.5°	2074.0	2072.9	2074.0	2070.5	2071.7	2070.5	2070.5	2065.9	2065.9	2063.6	2060.1
5°	2050.8	2053.1	2053.1	2053.1	2056.6	2056.6	2061.3	2062.4	2065.9	2069.4	2071.7
7.5°	2012.6	2013.7	2017.2	2019.5	2026.5	2035.7	2045.0	2055.5	2064.7	2076.3	2089.1
10°	1980.1	1982.4	1988.2	1994.0	2006.8	2018.4	2034.6	2050.8	2067.1	2086.8	2106.5
12.5°	1962.7	1966.2	1975.4	1984.7	2004.4	2019.5	2041.5	2067.1	2089.1	2107.7	2129.7
15°	1965.0	1966.2	1978.9	1991.7	2019.5	2040.4	2071.7	2101.9	2128.5	2149.4	2174.9
17.5°	1998.6	2001.0	2013.7	2032.3	2058.9	2085.6	2119.3	2150.6	2186.5	2210.9	2241.1
20°	2064.7	2068.2	2082.1	2101.9	2130.9	2158.7	2193.5	2226.0	2263.1	2292.1	2322.3
22.5°	2150.6	2156.4	2171.5	2195.8	2224.8	2258.5	2294.4	2328.1	2362.9	2391.9	2417.4
25°	2265.4	2272.4	2288.6	2313.0	2342.0	2377.9	2415.1	2449.9	2485.8	2507.9	2528.7
27.5°	2419.7	2431.3	2448.7	2468.4	2493.9	2532.2	2567.0	2596.0	2630.8	2655.2	2669.1
30°	2627.3	2643.6	2657.5	2678.4	2696.9	2737.5	2765.4	2788.6	2815.3	2829.2	2832.6
32.5°	2881.4	2896.4	2910.4	2925.4	2951.0	2988.1	3014.8	3027.5	3041.4	3039.1	3026.4
35°	3167.9	3179.5	3187.6	3214.3	3256.0	3280.4	3300.1	3304.8	3307.1	3282.7	3258.4
37.5°	3469.5	3483.4	3490.4	3532.1	3571.6	3599.4	3608.7	3619.1	3612.2	3571.6	3527.5
40°	3795.4	3810.5	3831.4	3867.3	3913.7	3940.4	3952.0	3950.9	3945.1	3897.5	3825.6
42.5°	4115.6	4134.1	4151.5	4214.2	4252.5	4297.7	4303.5	4302.3	4289.6	4235.1	4151.5
45°	4387.0	4409.1	4445.0	4514.6	4576.1	4630.6	4652.6	4660.8	4648.0	4590.0	4494.9
47.5°	4610.9	4626.0	4671.2	4755.9	4834.8	4914.8	4958.9	4990.2	4989.0	4947.3	4846.4
50°	4764.0	4781.4	4837.1	4932.2	5030.8	5124.8	5211.8	5282.5	5316.1	5286.0	5192.0
52.5°	4808.1	4830.1	4903.2	5016.9	5131.7	5258.2	5388.1	5513.3	5588.7	5607.3	5534.2
55°	4622.5	4646.8	4753.6	4911.3	5100.4	5287.1	5484.3	5663.0	5818.4	5890.3	5861.3
57.5°	4081.9	4099.3	4235.1	4439.2	4709.5	5037.8	5369.5	5696.6	5963.4	6150.2	6182.6
60°	3228.2	3250.2	3398.7	3614.5	3921.9	4337.1	4801.1	5337.0	5860.2	6288.2	6500.5
62.5°	2178.4	2193.5	2336.2	2533.4	2869.8	3270.0	3787.3	4465.9	5211.8	5976.2	6574.7
65°	1143.7	1143.7	1240.0	1378.0	1646.0	2004.4	2534.5	3230.5	4117.9	5072.6	6073.6
67.5°	663.5	662.3	684.4	715.7	800.4	945.4	1237.7	1749.2	2589.1	3700.3	4839.4
70°	547.5	544.0	540.5	540.5	553.3	575.3	631.0	771.4	1128.7	1908.2	2977.6
71°	523.1	520.8	511.5	508.1	513.9	525.5	549.8	614.8	801.5	1301.5	2223.7
72.5°	494.1	488.3	474.4	468.6	469.8	474.4	481.4	506.9	563.7	740.1	1267.8
75°	450.1	436.1	418.7	410.6	407.1	406.0	406.0	412.9	425.7	446.6	519.7
77.5°	399.0	379.3	360.8	352.6	346.8	343.4	341.0	336.4	334.1	343.4	370.0
80°	337.6	316.7	301.6	297.0	293.5	286.5	277.2	268.0	262.2	266.8	283.0
82.5°	261.0	240.1	242.4	243.6	237.8	226.2	216.9	206.5	196.0	193.7	201.8
85°	207.6	197.2	190.2	205.3	192.6	178.6	165.9	148.5	124.1	102.1	111.4
87.5°	89.3	90.5	129.9	196.0	171.7	138.0	114.8	92.8	59.2	44.1	45.2
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°	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3	2061.3
2.5°	2058.9	2058.9	2055.5	2053.1	2053.1	2053.1	2050.8	2052.0
5°	2072.9	2075.2	2077.5	2076.3	2079.8	2083.3	2082.1	2081.0
7.5°	2096.1	2103.0	2110.0	2113.5	2118.1	2122.7	2123.9	2120.4
10°	2119.3	2133.2	2143.6	2152.9	2158.7	2163.3	2166.8	2165.7
12.5°	2148.3	2168.0	2186.5	2205.1	2217.9	2224.8	2231.8	2229.5
15°	2195.8	2217.9	2241.1	2265.4	2285.1	2295.6	2306.0	2303.7
17.5°	2260.8	2280.5	2299.1	2323.4	2347.8	2359.4	2371.0	2369.8
20°	2342.0	2357.1	2367.5	2381.4	2404.6	2417.4	2427.8	2424.3
22.5°	2434.8	2439.4	2440.6	2445.2	2463.8	2478.9	2492.8	2496.3
25°	2535.7	2532.2	2525.3	2521.8	2534.5	2550.8	2568.2	2572.8
27.5°	2661.0	2649.4	2632.0	2618.1	2621.5	2642.4	2662.1	2666.8
30°	2818.7	2792.1	2754.9	2728.3	2723.6	2745.7	2766.5	2773.5
32.5°	2998.5	2962.6	2911.5	2870.9	2853.5	2873.2	2891.8	2902.2
35°	3212.0	3172.5	3111.0	3058.8	3031.0	3043.8	3076.2	3087.8
37.5°	3464.8	3410.3	3341.9	3275.8	3229.4	3231.7	3266.5	3280.4
40°	3744.4	3665.5	3578.5	3496.2	3428.9	3424.2	3455.6	3466.0
42.5°	4035.5	3934.6	3832.5	3724.7	3641.1	3626.1	3666.7	3667.8
45°	4348.7	4218.8	4092.4	3967.1	3880.1	3853.4	3892.9	3897.5
47.5°	4682.8	4520.4	4370.8	4235.1	4141.1	4099.3	4137.6	4144.6
50°	5030.8	4862.6	4688.6	4537.8	4427.6	4376.6	4421.8	4426.5
52.5°	5375.3	5216.4	5043.6	4870.7	4737.3	4679.3	4732.7	4748.9
55°	5722.1	5569.0	5406.6	5233.8	5065.6	5014.6	5072.6	5090.0
57.5°	6082.9	5935.6	5788.3	5614.3	5450.7	5373.0	5435.6	5460.0
60°	6480.8	6350.8	6211.6	6036.5	5875.3	5784.8	5838.1	5866.0
62.5°	6871.7	6845.0	6718.6	6536.4	6332.3	6241.8	6287.0	6306.8
65°	6904.1	7336.8	7331.0	7150.1	6864.7	6712.8	6725.5	6734.8
67.5°	6026.1	7019.0	7653.5	7710.3	7392.5	7154.7	7126.9	7132.7
70°	4266.4	5629.3	6976.1	7860.0	7985.2	7800.8	7740.5	7749.8
71°	3418.4	4830.1	6312.6	7501.5	7976.0	7922.6	7889.0	7913.3
72.5°	2181.9	3558.8	5001.8	6423.9	7334.5	7595.5	7633.8	7648.9
75°	792.3	1531.2	2591.4	3713.1	4706.0	5389.2	5765.1	5795.2
77.5°	425.7	548.7	847.9	1266.7	1591.5	1765.5	1786.4	1794.5
80°	313.2	363.1	415.3	474.4	511.5	518.5	505.7	479.1
82.5°	221.6	250.6	271.4	292.3	307.4	294.6	244.8	186.8
85°	128.8	141.5	153.1	163.6	165.9	156.6	103.2	84.7
87.5°	51.0	55.7	54.5	61.5	59.2	54.5	40.6	34.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)