

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: P270562

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270562  
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-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18331.2 lumens  
Efficiency: N/A  
Efficacy: 113.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

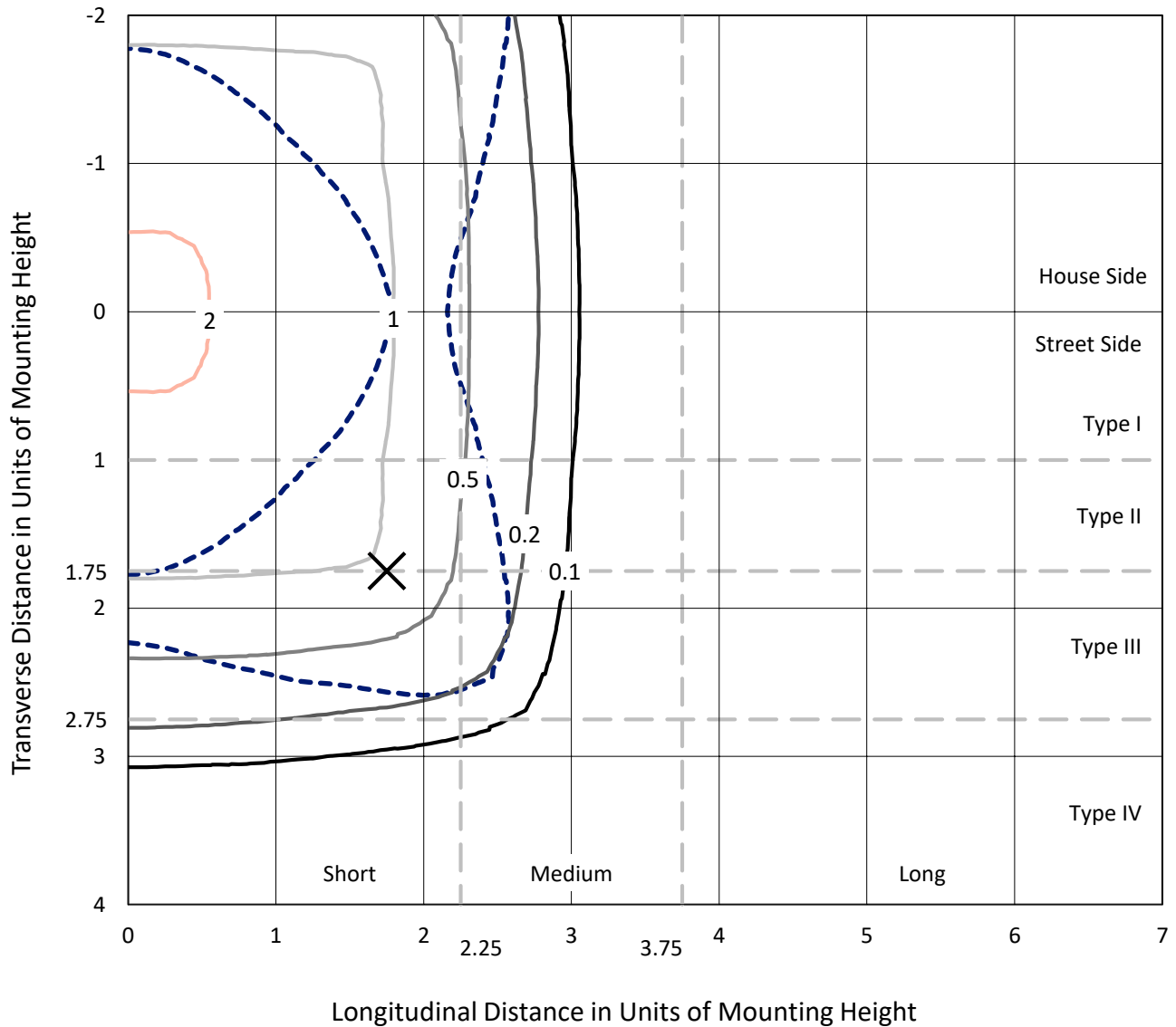
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

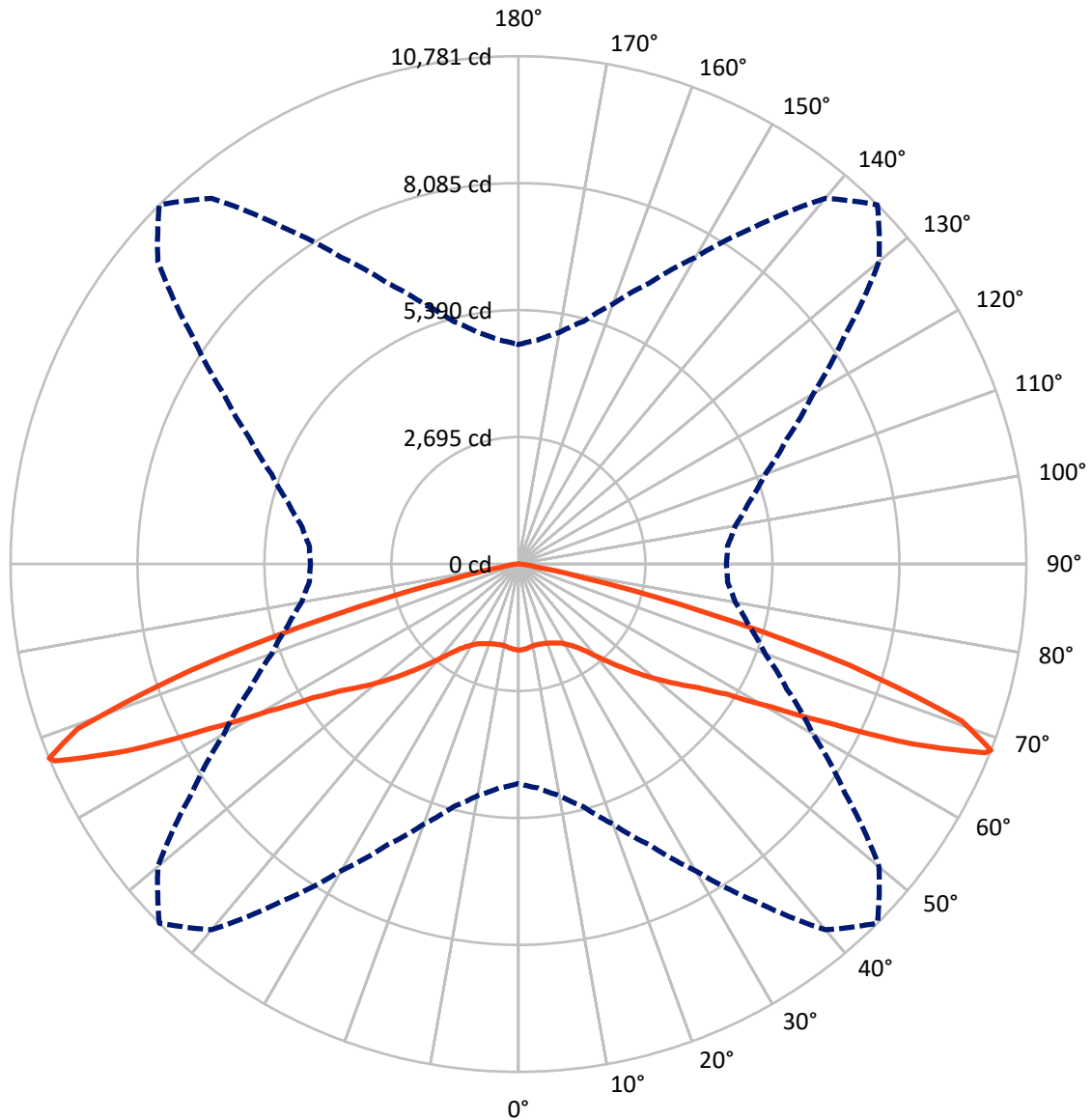
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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	9165.6	0.0	9165.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	9165.6	0.0	9165.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	18331.2	0.0	18331.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.1	0.9
10°-20°	496.3	2.7
20°-30°	843.7	4.6
30°-40°	1380.6	7.5
40°-50°	2467.4	13.5
50°-60°	4167.0	22.7
60°-70°	6461.5	35.2
70°-80°	2221.6	12.1
80°-90°	122.1	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°	18331.2	100.0
0°-180°	18331.2	100.0



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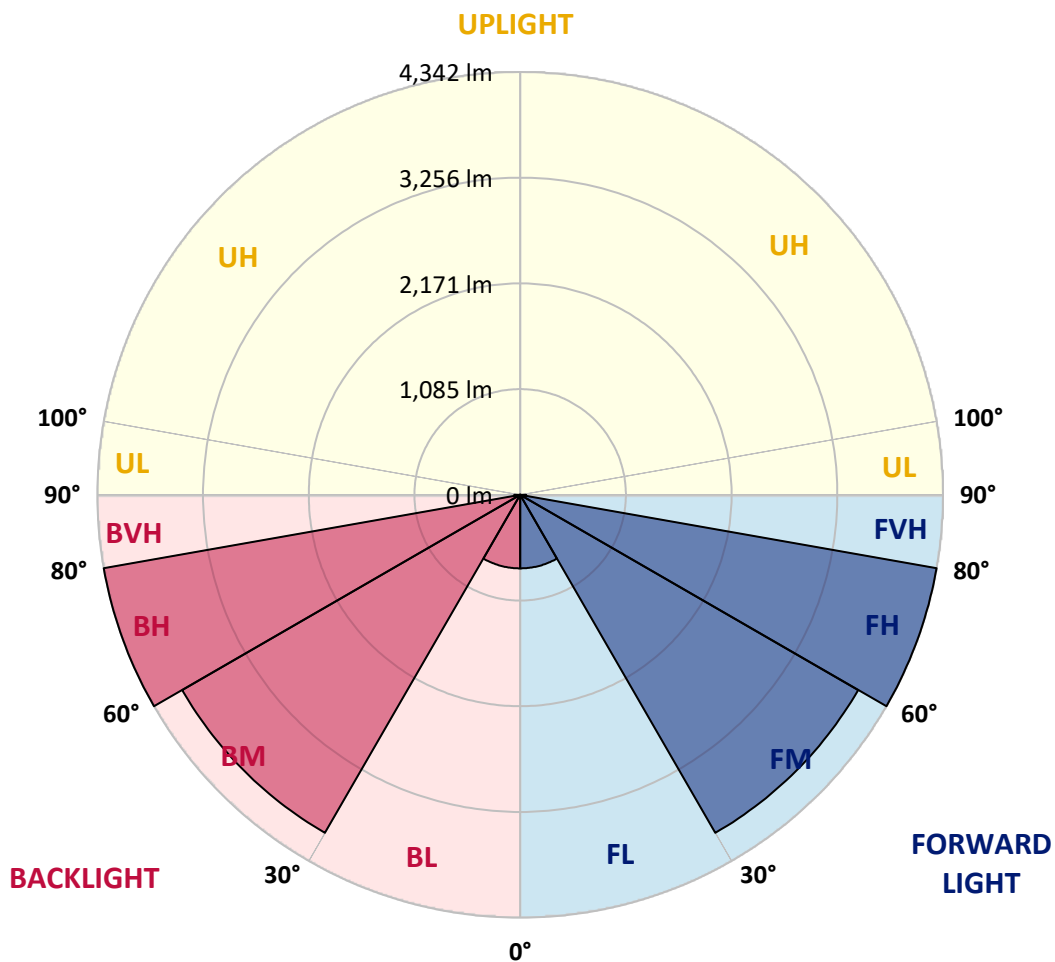
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	755.5	4.1			
FM	(30°-60°)	4007.5	21.9			
FH	(60°-80°)	4341.5	23.7			G2/5000
FVH	(80°-90°)	61.0	0.3			G1/100
BL	(0°-30°)	755.5	4.1	B2/1000		
BM	(30°-60°)	4007.5	21.9	B3/5000		
BH	(60°-80°)	4341.5	23.7	B4/5000		G2/5000
BVH	(80°-90°)	61.0	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6
2.5°	1836.5	1836.5	1838.7	1837.6	1834.2	1830.8	1827.4	1824.1	1821.9	1819.5	1817.4
5°	1817.4	1817.4	1820.8	1818.4	1816.3	1812.9	1810.7	1807.3	1805.1	1802.8	1803.8
7.5°	1792.7	1795.0	1797.1	1796.0	1791.5	1790.4	1787.1	1785.9	1783.7	1780.4	1781.5
10°	1771.4	1772.4	1774.7	1773.6	1772.4	1769.1	1768.0	1766.8	1765.7	1761.2	1760.0
12.5°	1750.0	1752.2	1754.5	1755.6	1754.5	1755.6	1756.7	1757.9	1756.7	1754.5	1754.5
15°	1733.2	1735.4	1738.8	1742.2	1743.3	1750.0	1754.5	1759.1	1762.4	1763.6	1760.0
17.5°	1724.1	1727.6	1732.0	1738.8	1744.4	1752.2	1760.0	1766.8	1772.4	1773.6	1770.2
20°	1723.0	1726.5	1733.2	1741.1	1751.2	1761.2	1773.6	1783.7	1789.3	1792.7	1789.3
22.5°	1730.9	1735.4	1744.4	1754.5	1766.8	1780.4	1796.0	1807.3	1818.4	1823.0	1819.5
25°	1753.4	1757.9	1768.0	1780.4	1793.7	1810.7	1826.3	1840.9	1852.1	1857.8	1853.3
27.5°	1800.6	1801.6	1812.9	1826.3	1842.1	1856.6	1876.9	1883.6	1892.5	1898.2	1892.5
30°	1866.8	1869.1	1879.2	1900.5	1915.0	1934.1	1945.3	1952.0	1962.2	1967.7	1961.0
32.5°	1967.7	1970.1	1979.0	1999.2	2012.7	2027.3	2040.7	2045.3	2055.3	2062.1	2054.2
35°	2110.4	2114.8	2122.7	2136.2	2147.4	2158.5	2168.7	2165.4	2172.1	2181.1	2173.2
37.5°	2305.7	2304.5	2306.8	2316.9	2328.0	2334.9	2350.5	2342.7	2349.4	2357.3	2352.8
40°	2533.5	2533.5	2532.4	2550.4	2554.9	2561.5	2578.4	2568.3	2577.2	2586.3	2578.4
42.5°	2792.8	2797.3	2802.9	2817.5	2829.9	2832.1	2840.0	2835.5	2846.6	2854.5	2846.6
45°	3091.3	3098.2	3104.9	3138.6	3144.2	3148.6	3154.3	3139.7	3152.1	3158.8	3156.6
47.5°	3401.3	3413.6	3428.2	3463.0	3485.5	3495.6	3500.1	3483.2	3484.3	3494.3	3495.6
50°	3751.4	3764.9	3779.4	3818.9	3840.2	3858.1	3863.7	3844.7	3846.9	3854.7	3857.1
52.5°	4074.7	4090.4	4122.0	4174.7	4205.0	4236.3	4238.7	4215.0	4225.2	4230.7	4226.3
55°	4379.0	4399.2	4440.7	4511.4	4566.4	4628.2	4656.3	4630.5	4630.5	4625.9	4623.7
57.5°	4733.7	4756.2	4798.7	4880.8	4957.0	5045.7	5122.0	5147.8	5195.0	5210.8	5186.1
60°	5268.0	5291.6	5335.4	5443.1	5539.7	5668.8	5794.4	5896.7	6062.8	6152.5	6071.7
62.5°	5756.2	5792.2	5895.4	6084.1	6292.8	6531.9	6809.2	7006.8	7308.7	7459.2	7256.0
65°	5645.2	5718.2	5920.2	6216.5	6647.5	7166.1	7730.9	8273.0	8897.2	9217.0	8803.8
67.5°	4931.2	4993.0	5210.8	5555.4	6093.1	6808.1	7685.9	8808.4	10096.0	10695.4	9964.5
68°	4658.5	4774.1	4990.8	5333.1	5875.3	6578.0	7515.3	8727.7	10133.1	10780.6	9991.6
70°	3571.9	3613.4	3821.1	4128.6	4713.4	5402.6	6349.0	7730.9	9319.1	9985.9	9174.4
72.5°	1697.3	1722.0	1856.6	2159.7	2531.2	3092.5	3927.7	5230.9	6662.2	7356.0	6546.6
75°	621.8	627.5	658.9	730.7	870.0	1081.0	1481.8	2292.1	3393.3	4046.7	3406.8
77.5°	335.6	336.8	349.1	367.0	391.8	419.8	480.5	644.4	1039.5	1414.4	1097.8
80°	211.0	209.9	222.3	236.9	253.7	267.2	272.7	291.9	328.9	385.1	353.7
82.5°	107.7	117.9	146.0	161.7	186.4	190.8	185.2	184.2	195.3	211.0	217.7
85°	59.5	52.8	77.4	103.2	112.3	115.6	116.7	110.0	107.7	105.6	111.1
87.5°	30.4	28.0	33.6	51.7	54.9	44.8	46.1	39.3	26.9	26.9	28.0
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°	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6	1828.6
2.5°	1815.1	1816.3	1813.9	1813.9	1813.9	1815.1	1813.9	1812.9
5°	1800.6	1802.8	1802.8	1803.8	1805.1	1805.1	1805.1	1805.1
7.5°	1779.3	1780.4	1782.5	1782.5	1782.5	1782.5	1782.5	1782.5
10°	1759.1	1756.7	1755.6	1753.4	1753.4	1750.0	1751.2	1752.2
12.5°	1748.9	1744.4	1742.2	1738.8	1736.6	1733.2	1733.2	1734.3
15°	1753.4	1746.7	1739.8	1737.6	1735.4	1733.2	1730.9	1732.0
17.5°	1762.4	1754.5	1746.7	1742.2	1737.6	1734.3	1733.2	1734.3
20°	1781.5	1770.2	1757.9	1750.0	1741.1	1738.8	1735.4	1738.8
22.5°	1807.3	1793.7	1778.0	1763.6	1753.4	1748.9	1744.4	1747.7
25°	1838.7	1824.1	1808.4	1791.5	1780.4	1776.9	1771.4	1771.4
27.5°	1882.5	1870.1	1856.6	1840.9	1829.7	1826.3	1817.4	1817.4
30°	1952.0	1939.7	1927.4	1913.8	1902.7	1899.2	1888.1	1888.1
32.5°	2044.2	2030.7	2022.8	2011.6	2002.6	1996.9	1983.5	1982.4
35°	2167.6	2155.3	2154.1	2146.3	2137.2	2138.3	2124.9	2122.7
37.5°	2344.9	2334.9	2338.2	2331.6	2323.6	2330.4	2322.5	2322.5
40°	2571.7	2568.3	2571.7	2567.1	2568.3	2569.4	2562.8	2565.0
42.5°	2845.7	2836.6	2856.8	2854.5	2851.2	2860.2	2844.5	2833.3
45°	3161.0	3157.6	3177.8	3181.2	3174.5	3180.1	3152.1	3151.0
47.5°	3503.4	3503.4	3521.4	3519.1	3512.4	3513.5	3479.9	3458.5
50°	3860.3	3858.1	3876.0	3871.5	3862.6	3861.5	3826.7	3805.3
52.5°	4231.8	4231.8	4257.7	4245.4	4224.0	4213.9	4171.3	4143.3
55°	4642.7	4637.1	4645.0	4604.6	4563.0	4532.8	4479.9	4458.6
57.5°	5162.5	5097.3	5041.3	4989.5	4931.2	4895.4	4833.6	4811.1
60°	5900.0	5725.9	5650.8	5547.6	5450.9	5402.6	5320.8	5277.0
62.5°	6921.5	6632.9	6428.7	6200.8	5980.7	5825.9	5701.3	5646.2
65°	8102.4	7473.8	6954.0	6465.7	6051.5	5722.7	5539.7	5482.4
67.5°	8551.3	7397.5	6500.6	5800.0	5297.1	4905.5	4686.5	4640.6
68°	8455.9	7222.4	6290.7	5573.4	5068.1	4673.1	4455.2	4413.7
70°	7459.2	6093.1	5109.6	4395.8	3924.3	3548.2	3394.4	3328.3
72.5°	5085.0	3913.0	3001.6	2401.1	2048.7	1810.7	1669.2	1620.9
75°	2340.4	1581.6	1056.2	789.2	670.1	613.0	569.2	557.8
77.5°	682.5	496.1	426.5	395.2	371.5	351.3	336.8	335.6
80°	324.4	304.2	295.3	275.1	253.7	234.5	221.2	223.4
82.5°	217.7	212.2	212.2	192.0	158.3	135.9	112.3	101.0
85°	115.6	120.2	126.8	120.2	104.5	77.4	50.6	54.9
87.5°	39.3	44.8	47.2	46.1	41.5	31.4	23.5	23.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)