

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: P195976

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195976  
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-04-D-UNV-5WQ  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25964.5 lumens  
Efficiency: N/A  
Efficacy: 115.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G3

Input Watts (W): 225  
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

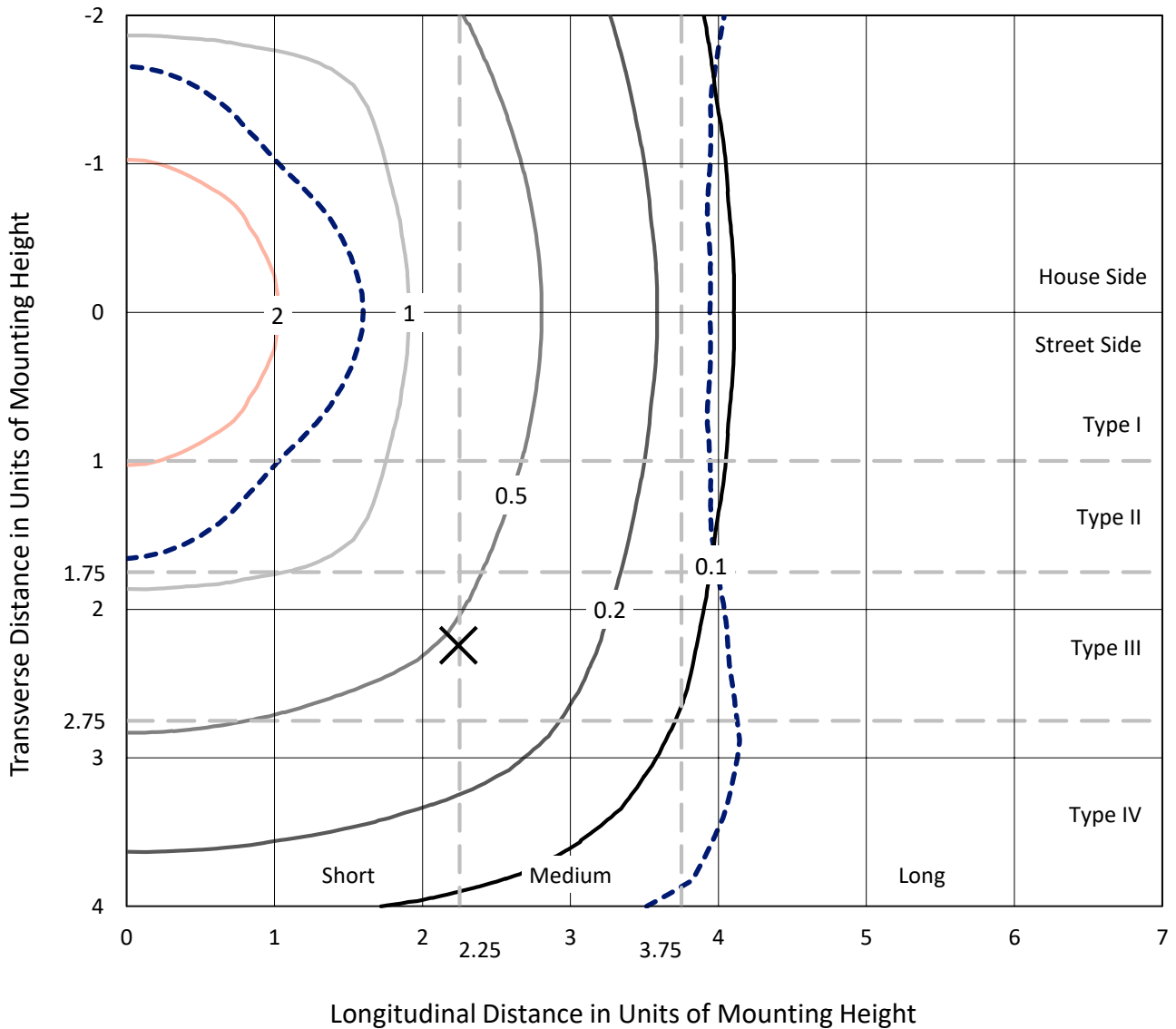


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

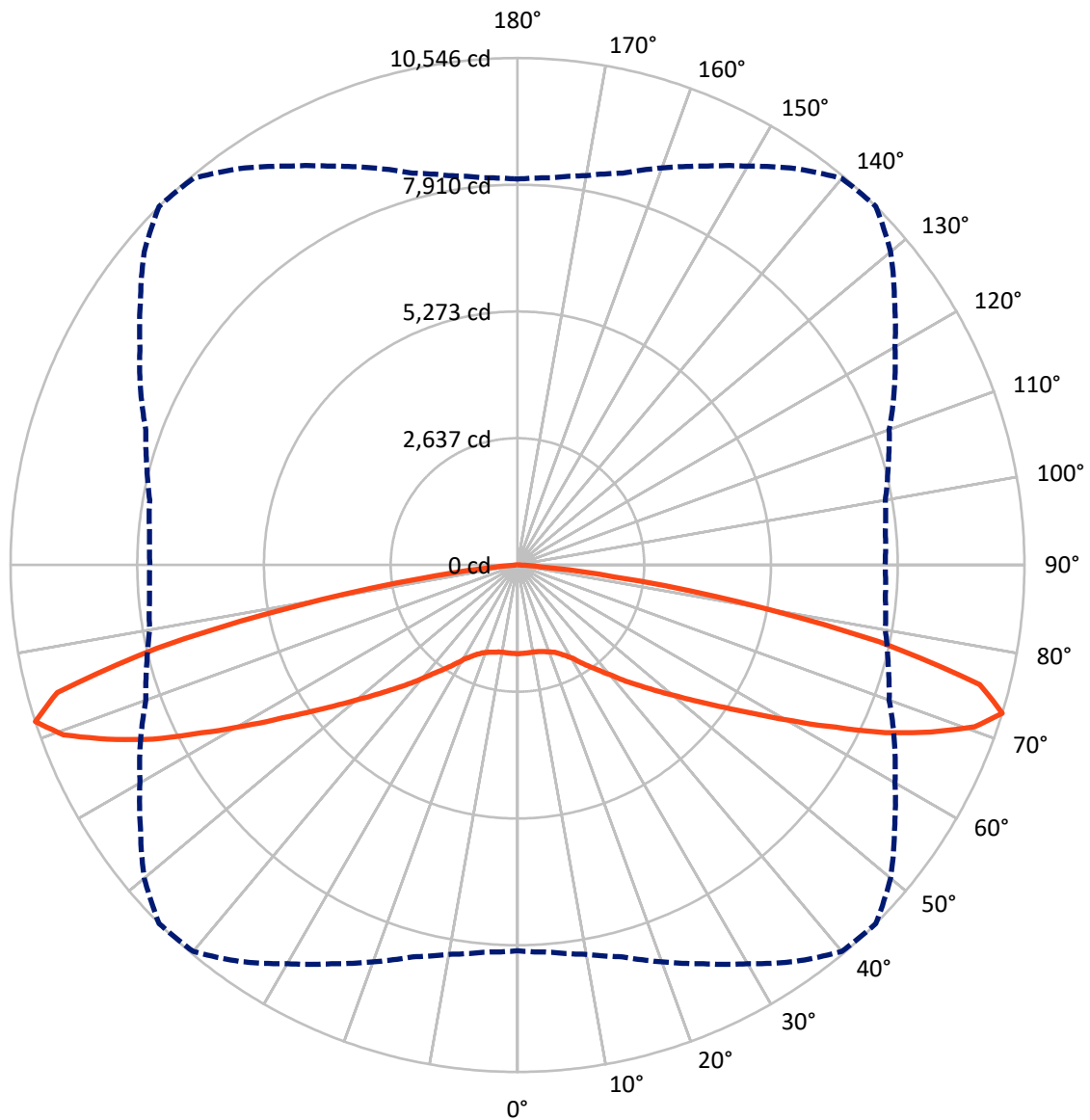


Based on 25 foot mounting height. Maximum calculated value = 3 fc  
 Type V - Short - Semi-Cutoff

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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
<b>House Side</b>	Lumens	12982.3	0.0	12982.3
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	12982.3	0.0	12982.3
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	25964.5	0.0	25964.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.2	0.7
10°-20°	533.2	2.1
20°-30°	962.6	3.7
30°-40°	1641.9	6.3
40°-50°	2795.4	10.8
50°-60°	4498.8	17.3
60°-70°	7481.7	28.8
70°-80°	7237.6	27.9
80°-90°	637.0	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°	25964.5	100.0
0°-180°	25964.5	100.0



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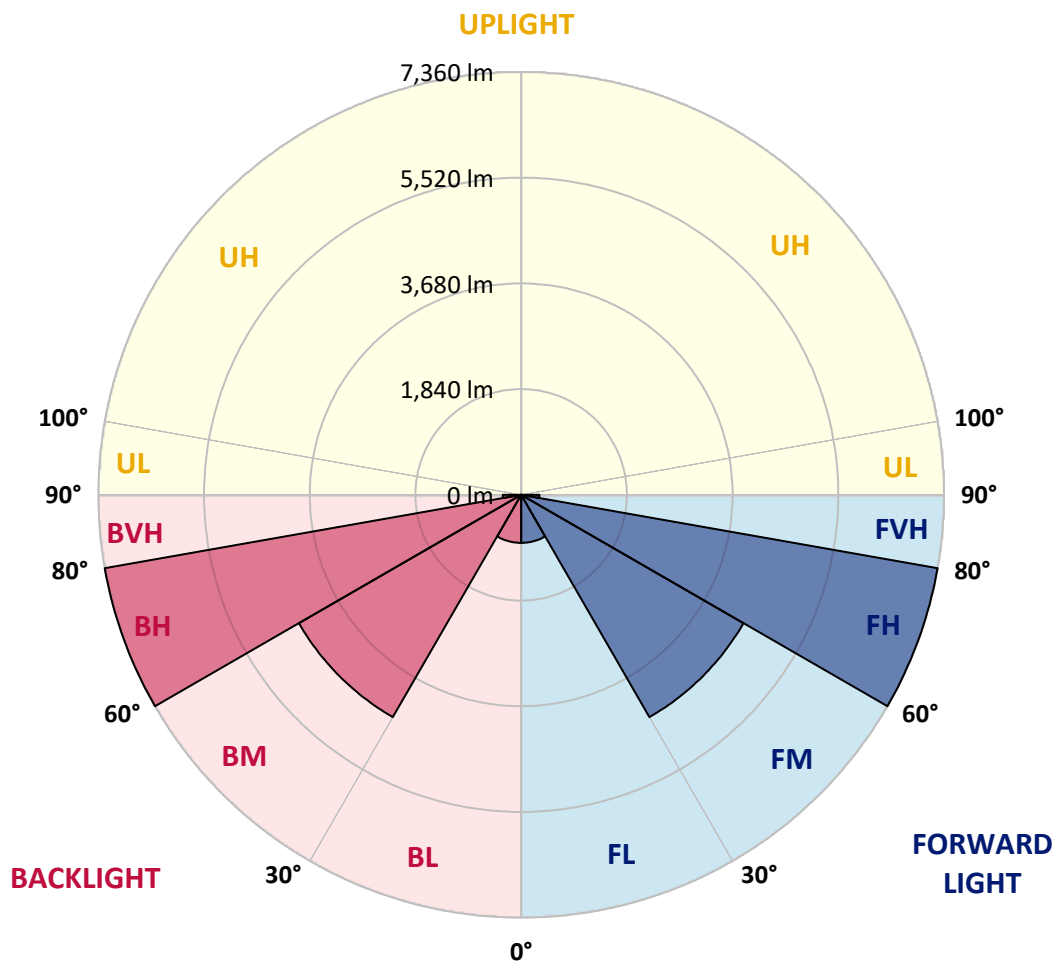
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	836.0	3.2			
FM	(30°-60°)	4468.1	17.2			
FH	(60°-80°)	7359.7	28.3			G3/7500
FVH	(80°-90°)	318.5	1.2			G3/500
BL	(0°-30°)	836.0	3.2	B2/1000		
BM	(30°-60°)	4468.1	17.2	B3/5000		
BH	(60°-80°)	7359.7	28.3	B5		G3/7500
BVH	(80°-90°)	318.5	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-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9
2.5°	1860.2	1860.2	1861.9	1860.2	1857.1	1855.4	1850.7	1847.4	1844.3	1842.6	1839.5
5°	1861.9	1861.9	1863.5	1861.9	1858.7	1855.4	1852.3	1847.4	1844.3	1841.1	1839.5
7.5°	1868.2	1869.9	1871.5	1869.9	1863.5	1860.2	1855.4	1850.7	1844.3	1841.1	1837.9
10°	1881.0	1881.0	1881.0	1879.5	1874.7	1868.2	1861.9	1857.1	1849.1	1841.1	1836.3
12.5°	1890.6	1892.3	1892.3	1889.1	1882.6	1874.7	1868.2	1863.5	1857.1	1850.7	1845.9
15°	1905.0	1905.0	1903.4	1897.1	1887.4	1881.0	1877.8	1876.3	1874.7	1871.5	1866.7
17.5°	1933.8	1932.1	1927.3	1917.8	1906.6	1901.9	1898.6	1898.6	1898.6	1897.1	1893.8
20°	1975.3	1975.3	1969.0	1952.9	1943.4	1938.6	1933.8	1933.8	1933.8	1929.0	1924.2
22.5°	2042.4	2044.1	2034.4	2015.3	2002.5	1992.9	1986.6	1981.8	1977.0	1973.8	1965.7
25°	2133.6	2131.9	2120.8	2096.8	2087.2	2077.6	2064.8	2056.8	2050.4	2045.7	2036.1
27.5°	2229.4	2227.9	2215.1	2194.3	2187.9	2173.5	2164.0	2152.7	2144.7	2136.7	2127.1
30°	2352.5	2344.5	2334.9	2318.9	2315.8	2304.6	2291.8	2275.8	2263.0	2250.2	2239.0
32.5°	2462.8	2462.8	2448.4	2440.4	2446.8	2442.0	2443.6	2434.0	2426.0	2421.2	2410.1
35°	2616.2	2616.2	2609.9	2600.2	2601.8	2590.6	2589.0	2590.6	2597.1	2597.1	2584.3
37.5°	2820.8	2824.0	2803.2	2800.0	2792.0	2776.0	2768.0	2771.2	2785.6	2793.6	2776.0
40°	3074.9	3081.2	3074.9	3054.1	3044.5	3017.3	3001.3	3001.3	3012.6	3020.6	3014.1
42.5°	3325.8	3337.0	3325.8	3309.8	3301.8	3281.0	3273.0	3279.5	3293.8	3303.4	3293.8
45°	3605.5	3613.5	3599.0	3579.9	3570.3	3559.2	3554.3	3559.2	3575.1	3584.7	3581.5
47.5°	3880.4	3891.5	3873.9	3865.9	3865.9	3854.8	3867.6	3880.4	3894.8	3917.1	3907.6
50°	4148.9	4163.2	4152.1	4153.6	4166.4	4187.2	4211.2	4236.8	4262.3	4286.3	4289.4
52.5°	4388.6	4411.0	4412.5	4441.3	4481.2	4513.3	4580.4	4636.3	4697.0	4717.7	4708.2
55°	4641.1	4671.4	4711.4	4756.1	4820.0	4885.6	4999.1	5099.7	5179.7	5229.2	5221.2
57.5°	5002.2	5032.6	5074.1	5147.7	5243.5	5333.1	5488.1	5644.7	5766.2	5841.3	5804.5
60°	5470.5	5502.5	5556.9	5635.1	5759.8	5881.3	6093.8	6319.2	6507.7	6594.0	6526.9
62.5°	6090.6	6121.0	6156.1	6260.0	6399.1	6555.7	6822.6	7111.9	7351.5	7434.7	7340.4
65°	6974.4	7011.2	7022.4	7107.1	7242.9	7388.4	7676.0	8002.0	8275.3	8411.1	8222.6
67.5°	7970.0	7984.4	8029.2	8128.3	8267.3	8398.3	8625.3	8933.7	9195.8	9271.0	9069.6
70°	8553.4	8582.1	8660.5	8797.9	8964.1	9170.2	9418.0	9750.5	10047.7	10082.8	9827.2
72.5°	8026.0	8085.1	8224.2	8438.3	8786.7	9152.8	9579.4	10070.0	10496.8	10546.3	10135.6
75°	6437.4	6504.5	6670.8	6905.6	7318.0	7861.4	8478.3	9215.0	9854.3	9935.8	9392.4
77.5°	3431.3	3514.3	3755.7	4072.2	4660.3	5379.4	6122.6	6963.2	7506.6	7690.3	7298.9
80°	864.6	909.4	1026.0	1211.4	1609.3	2189.5	2830.4	3734.9	4409.3	4695.4	4409.3
82.5°	335.6	369.2	401.1	423.5	461.9	541.8	748.0	1219.4	1643.0	2023.3	1751.6
85°	129.4	137.5	198.1	225.4	225.4	247.8	284.5	335.6	415.5	453.9	380.3
87.5°	51.1	56.0	68.7	105.5	108.6	95.9	102.3	115.1	87.9	73.6	83.1
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°	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9	1845.9
2.5°	1837.9	1836.3	1833.1	1834.7	1833.1	1833.1	1833.1	1833.1
5°	1836.3	1836.3	1833.1	1833.1	1833.1	1834.7	1833.1	1833.1
7.5°	1834.7	1833.1	1829.9	1828.3	1828.3	1826.7	1826.7	1826.7
10°	1831.5	1828.3	1825.1	1823.5	1823.5	1820.3	1820.3	1820.3
12.5°	1839.5	1834.7	1831.5	1829.9	1829.9	1829.9	1831.5	1831.5
15°	1861.9	1852.3	1847.4	1845.9	1847.4	1850.7	1852.3	1853.9
17.5°	1885.8	1876.3	1868.2	1865.0	1866.7	1871.5	1876.3	1879.5
20°	1916.2	1908.2	1898.6	1895.4	1895.4	1901.9	1905.0	1909.8
22.5°	1959.4	1952.9	1944.9	1940.1	1937.0	1944.9	1949.7	1952.9
25°	2028.1	2021.7	2015.3	2010.5	2008.9	2016.8	2020.1	2021.7
27.5°	2119.1	2112.8	2109.6	2108.0	2103.2	2106.4	2111.2	2109.6
30°	2237.4	2242.2	2237.4	2237.4	2229.4	2232.6	2229.4	2226.2
32.5°	2395.6	2390.8	2376.5	2366.9	2355.7	2355.7	2350.9	2346.1
35°	2553.9	2537.9	2529.9	2534.7	2529.9	2533.1	2525.2	2517.1
37.5°	2740.9	2731.3	2729.6	2744.1	2740.9	2744.1	2744.1	2732.9
40°	2988.6	2982.2	2993.4	3017.3	3026.9	3025.4	3028.5	3014.1
42.5°	3273.0	3261.9	3266.7	3287.5	3298.6	3301.8	3300.2	3287.5
45°	3557.5	3560.7	3560.7	3583.1	3594.2	3600.7	3589.5	3584.7
47.5°	3878.7	3883.5	3872.4	3886.7	3890.0	3901.1	3891.5	3883.5
50°	4249.5	4231.9	4206.4	4211.2	4211.2	4208.0	4196.8	4187.2
52.5°	4663.4	4623.5	4575.6	4559.6	4542.0	4524.4	4502.0	4484.4
55°	5134.9	5066.2	4979.9	4939.9	4906.4	4866.4	4815.2	4797.7
57.5°	5681.5	5563.2	5448.1	5376.2	5290.0	5237.2	5171.6	5168.5
60°	6330.3	6170.5	5967.6	5860.5	5774.1	5711.9	5662.3	5643.1
62.5°	7079.8	6805.0	6586.1	6471.0	6370.3	6332.0	6269.6	6277.6
65°	7848.6	7568.9	7356.3	7263.7	7169.4	7143.8	7086.3	7107.1
67.5°	8681.3	8451.1	8217.8	8131.4	8045.2	8019.6	7960.5	7978.1
70°	9427.6	9135.2	8869.8	8700.4	8553.4	8435.2	8360.1	8329.7
72.5°	9576.3	9069.6	8652.5	8228.9	7984.4	7770.3	7682.4	7648.8
75°	8604.6	7818.2	7223.7	6726.7	6451.9	6140.2	6106.6	6060.3
77.5°	6693.2	5798.2	5079.0	4439.7	4070.5	3690.2	3559.2	3460.0
80°	3992.3	3068.4	2378.1	1666.9	1360.0	1094.8	1029.2	960.4
82.5°	1428.8	915.7	616.9	481.1	429.9	396.4	370.8	337.2
85°	345.2	290.8	274.9	249.3	246.1	209.4	148.6	132.7
87.5°	110.3	100.7	102.3	97.5	102.3	76.7	62.3	56.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)