

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: P194985

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-7060-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P194985  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
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-5NQ-7060-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15045 lumens  
Efficiency: N/A  
Efficacy: 121.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G2

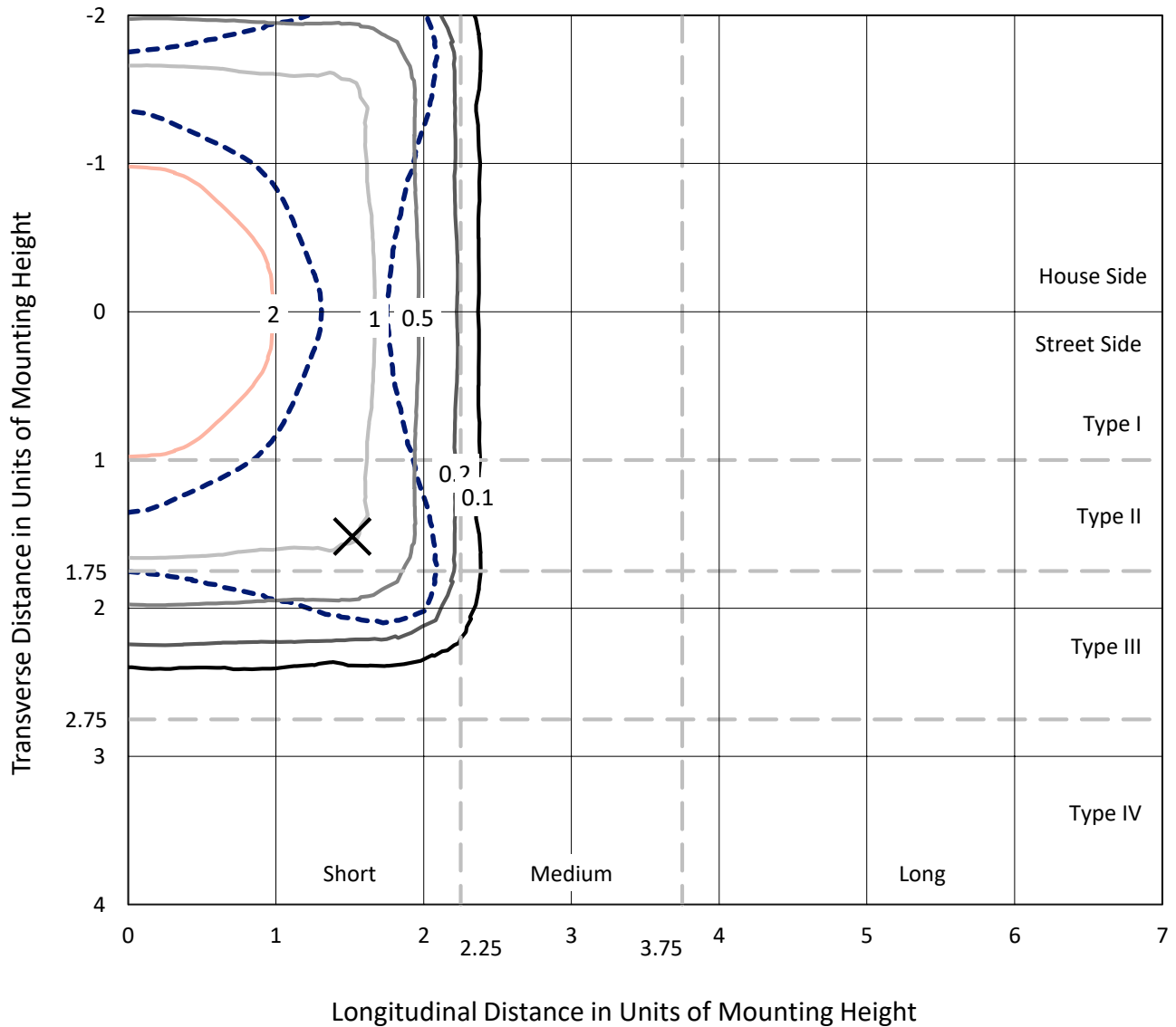
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

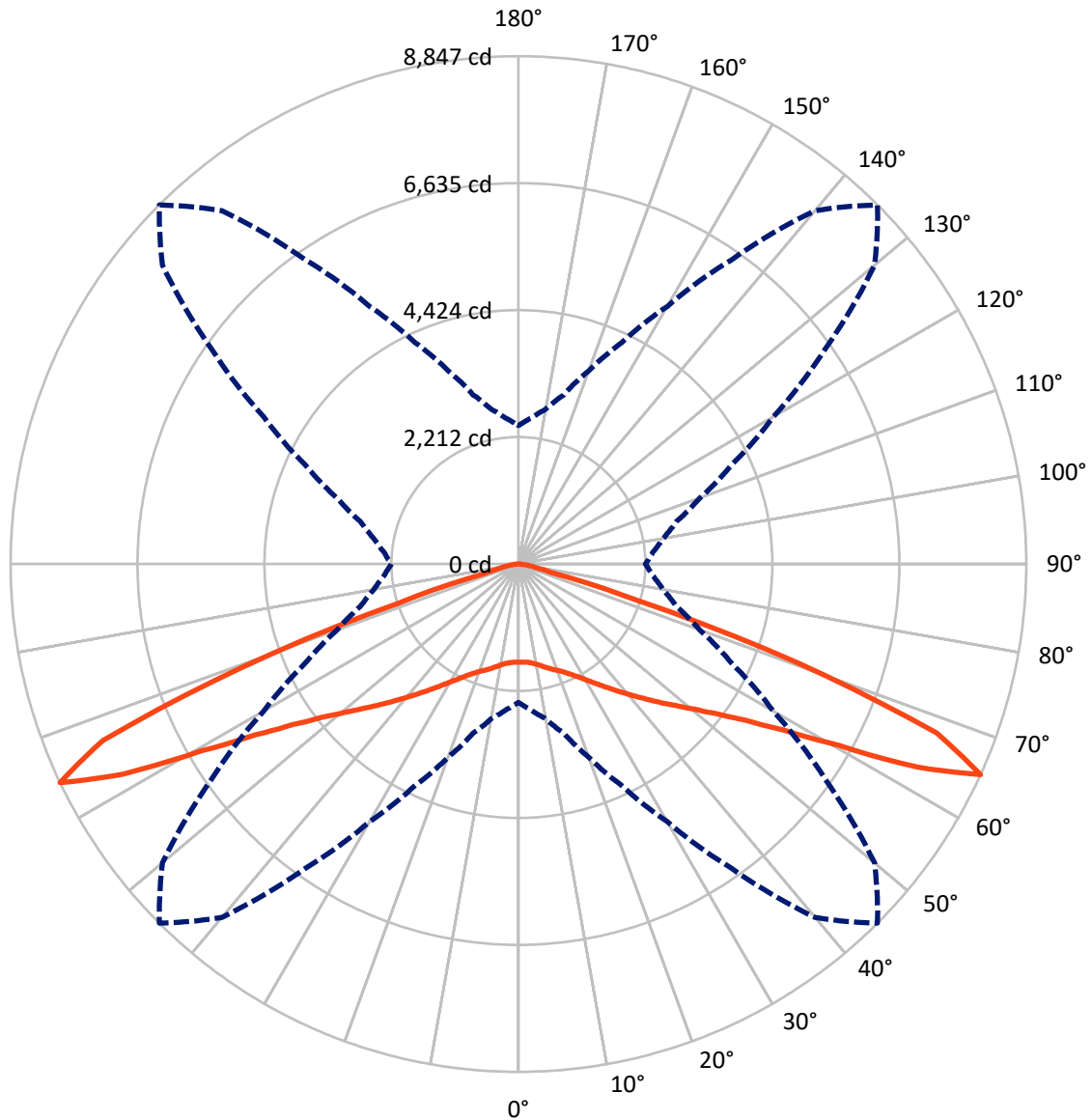
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7522.5	0.0	7522.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	7522.5	0.0	7522.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	15045.0	0.0	15045.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.7	1.1
10°-20°	534.1	3.6
20°-30°	996.4	6.6
30°-40°	1680.1	11.2
40°-50°	2729.0	18.1
50°-60°	4275.8	28.4
60°-70°	4036.2	26.8
70°-80°	543.9	3.6
80°-90°	82.9	0.6
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°	15045.0	100.0
0°-180°	15045.0	100.0



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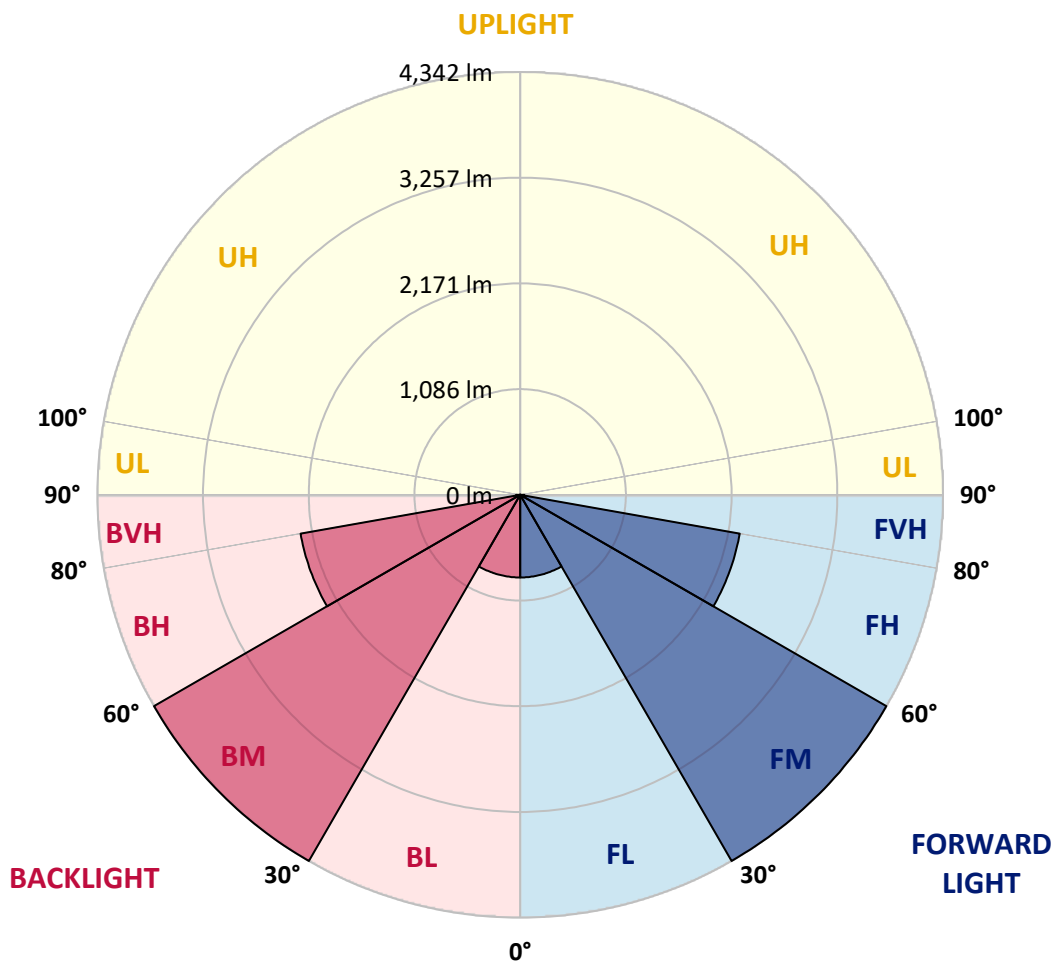
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	848.6	5.6			
FM (30°-60°)	4342.4	28.9			
FH (60°-80°)	2290.1	15.2			G2/5000
FVH (80°-90°)	41.4	0.3			G1/100
BL (0°-30°)	848.6	5.6	B2/1000		
BM (30°-60°)	4342.4	28.9	B3/5000		
BH (60°-80°)	2290.1	15.2	B3/2500		G2/5000
BVH (80°-90°)	41.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4
2.5°	1725.4	1725.4	1728.2	1727.3	1723.5	1720.7	1717.9	1714.2	1712.3	1710.4	1709.5
5°	1734.8	1734.8	1737.6	1736.7	1733.8	1730.1	1728.2	1725.4	1722.6	1720.7	1721.7
7.5°	1758.2	1759.1	1760.1	1759.1	1756.3	1753.5	1749.8	1748.8	1745.1	1742.3	1744.2
10°	1793.8	1793.8	1794.8	1795.7	1793.8	1787.3	1787.3	1785.4	1781.6	1777.9	1778.8
12.5°	1833.2	1833.2	1834.1	1834.1	1834.1	1830.4	1831.3	1830.4	1825.7	1823.8	1825.7
15°	1871.6	1872.6	1872.6	1874.4	1874.4	1875.4	1879.1	1879.1	1877.2	1876.3	1876.3
17.5°	1916.6	1918.5	1919.4	1922.2	1923.2	1925.0	1928.8	1929.7	1930.7	1927.8	1928.8
20°	1976.6	1977.5	1980.3	1981.3	1985.0	1985.0	1986.9	1986.0	1984.1	1980.3	1980.3
22.5°	2044.1	2045.9	2051.6	2051.6	2056.2	2053.4	2054.4	2051.6	2046.9	2045.0	2043.1
25°	2132.2	2135.0	2139.7	2137.8	2139.7	2135.0	2135.0	2135.0	2132.2	2129.3	2128.4
27.5°	2243.7	2239.0	2243.7	2239.9	2239.0	2235.3	2236.2	2234.3	2231.5	2230.6	2226.8
30°	2359.9	2354.3	2357.1	2358.0	2356.2	2355.2	2351.5	2348.7	2344.0	2344.9	2342.1
32.5°	2493.0	2487.4	2490.2	2491.1	2489.2	2491.1	2490.2	2483.6	2478.0	2481.7	2481.7
35°	2651.4	2647.6	2655.1	2657.9	2652.3	2649.5	2645.8	2638.3	2629.8	2635.4	2636.4
37.5°	2841.6	2836.9	2842.6	2850.1	2839.8	2834.1	2819.1	2807.9	2802.3	2805.1	2808.8
40°	3039.4	3040.3	3056.3	3058.1	3046.9	3040.3	3025.3	3008.5	2992.5	2992.5	2997.2
42.5°	3247.4	3250.3	3269.0	3275.6	3271.8	3259.6	3239.0	3218.4	3197.8	3201.5	3207.1
45°	3482.7	3478.9	3498.6	3514.5	3511.7	3508.0	3488.3	3450.8	3432.1	3431.1	3440.5
47.5°	3730.1	3737.6	3758.2	3785.4	3784.5	3775.1	3749.8	3715.1	3680.4	3683.2	3694.5
50°	4018.8	4029.1	4063.8	4090.9	4094.7	4091.9	4061.9	4021.6	3972.8	3975.7	3990.7
52.5°	4277.4	4292.4	4332.7	4389.0	4423.6	4439.6	4419.9	4382.4	4332.7	4335.5	4351.5
55°	4511.7	4535.2	4595.2	4672.0	4741.4	4806.0	4835.1	4834.1	4797.6	4806.0	4826.6
57.5°	4658.9	4691.7	4782.6	4906.3	5044.1	5174.4	5286.8	5392.7	5416.2	5460.2	5460.2
60°	4461.1	4538.0	4658.9	4870.7	5141.6	5434.0	5750.7	6059.1	6257.8	6414.3	6329.9
62.5°	3725.4	3838.8	4008.5	4287.7	4709.5	5231.5	5867.9	6584.9	7332.8	7790.1	7454.6
65°	2410.5	2553.0	2737.6	3051.6	3583.0	4254.9	5181.9	6470.5	8035.7	8847.3	8097.5
67.5°	955.0	1051.6	1164.0	1387.1	1848.2	2508.0	3548.3	5137.8	7095.6	7861.3	7020.7
70°	456.4	472.4	493.9	541.7	657.0	886.6	1425.5	2531.4	4351.5	5158.4	4247.4
72.5°	329.9	332.7	343.0	359.0	392.7	439.6	534.2	774.1	1500.5	2181.8	1502.4
75°	250.2	254.0	259.6	268.0	285.8	308.3	344.0	412.4	513.6	592.3	512.7
77.5°	190.3	194.0	198.7	207.1	216.5	232.4	245.5	272.7	315.8	332.7	330.8
80°	138.7	145.3	152.8	160.3	166.8	174.3	175.3	188.4	212.7	228.7	224.0
82.5°	88.1	93.7	113.4	121.8	122.8	124.6	123.7	124.6	137.8	149.0	145.3
85°	56.2	60.0	70.3	79.7	77.8	81.5	81.5	79.7	74.0	63.7	75.9
87.5°	28.1	29.1	33.7	42.2	40.3	35.6	34.7	34.7	25.3	21.6	23.4
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°	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4	1711.4
2.5°	1706.7	1708.5	1705.7	1705.7	1704.8	1706.7	1703.9	1703.9
5°	1719.8	1722.6	1721.7	1721.7	1723.5	1725.4	1724.5	1723.5
7.5°	1743.2	1745.1	1747.0	1747.9	1749.8	1748.8	1750.7	1749.8
10°	1778.8	1777.0	1779.8	1777.0	1777.9	1776.0	1777.0	1777.0
12.5°	1823.8	1821.0	1819.1	1817.3	1817.3	1813.5	1813.5	1814.4
15°	1875.4	1870.7	1866.9	1865.1	1863.2	1863.2	1860.4	1862.2
17.5°	1926.0	1921.3	1914.7	1914.7	1911.9	1910.0	1908.2	1912.9
20°	1979.4	1974.7	1971.0	1970.0	1964.4	1962.5	1963.5	1969.1
22.5°	2041.2	2038.4	2038.4	2036.6	2032.8	2030.0	2030.0	2036.6
25°	2124.7	2119.0	2120.0	2120.9	2119.0	2119.0	2117.2	2121.9
27.5°	2226.8	2222.1	2224.9	2226.8	2224.9	2227.8	2224.9	2228.7
30°	2346.8	2344.0	2346.8	2349.6	2344.9	2344.9	2343.0	2345.8
32.5°	2490.2	2486.4	2488.3	2488.3	2481.7	2476.1	2468.6	2474.2
35°	2647.6	2642.9	2646.7	2649.5	2642.0	2636.4	2625.1	2629.8
37.5°	2821.0	2822.9	2827.6	2839.8	2837.9	2828.5	2820.1	2823.8
40°	3015.0	3024.4	3045.0	3053.4	3051.6	3042.2	3030.9	3032.8
42.5°	3234.3	3246.5	3268.1	3282.1	3275.6	3262.4	3248.4	3254.0
45°	3473.3	3492.1	3520.2	3534.2	3525.8	3511.7	3492.1	3502.4
47.5°	3726.4	3763.8	3801.3	3820.1	3817.3	3797.6	3772.3	3775.1
50°	4029.1	4078.8	4126.5	4145.3	4131.2	4101.2	4065.6	4064.7
52.5°	4405.8	4459.3	4498.6	4493.9	4459.3	4412.4	4372.1	4370.2
55°	4876.3	4894.1	4888.5	4848.2	4787.3	4714.2	4662.6	4654.2
57.5°	5445.2	5385.2	5297.1	5175.3	5038.5	4899.7	4806.0	4771.4
60°	6140.6	5869.8	5554.9	5223.1	4920.4	4693.6	4550.2	4463.0
62.5°	6715.1	5930.7	5226.8	4650.5	4179.0	3898.8	3702.9	3582.0
65°	6518.3	5123.7	4104.1	3360.8	2846.3	2556.7	2349.6	2211.8
67.5°	5035.6	3423.6	2382.4	1651.4	1252.1	1060.0	926.0	838.8
70°	2538.9	1313.0	795.7	561.4	479.9	446.1	423.6	410.5
72.5°	745.1	497.7	413.3	365.5	336.5	315.8	302.7	296.2
75°	412.4	336.5	297.1	269.9	251.2	237.1	228.7	223.1
77.5°	284.0	244.6	224.9	207.1	192.1	181.8	175.3	169.6
80°	198.7	179.0	170.6	161.2	150.0	141.5	132.1	128.4
82.5°	132.1	123.7	121.8	114.3	107.8	98.4	81.5	75.9
85°	77.8	76.9	76.9	74.0	69.4	60.9	48.7	48.7
87.5°	27.2	28.1	29.1	30.9	30.0	25.3	20.6	19.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)