

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: P195496

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195496
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-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5000K, 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: 25382 lumens
Efficiency: N/A
Efficacy: 112.8 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

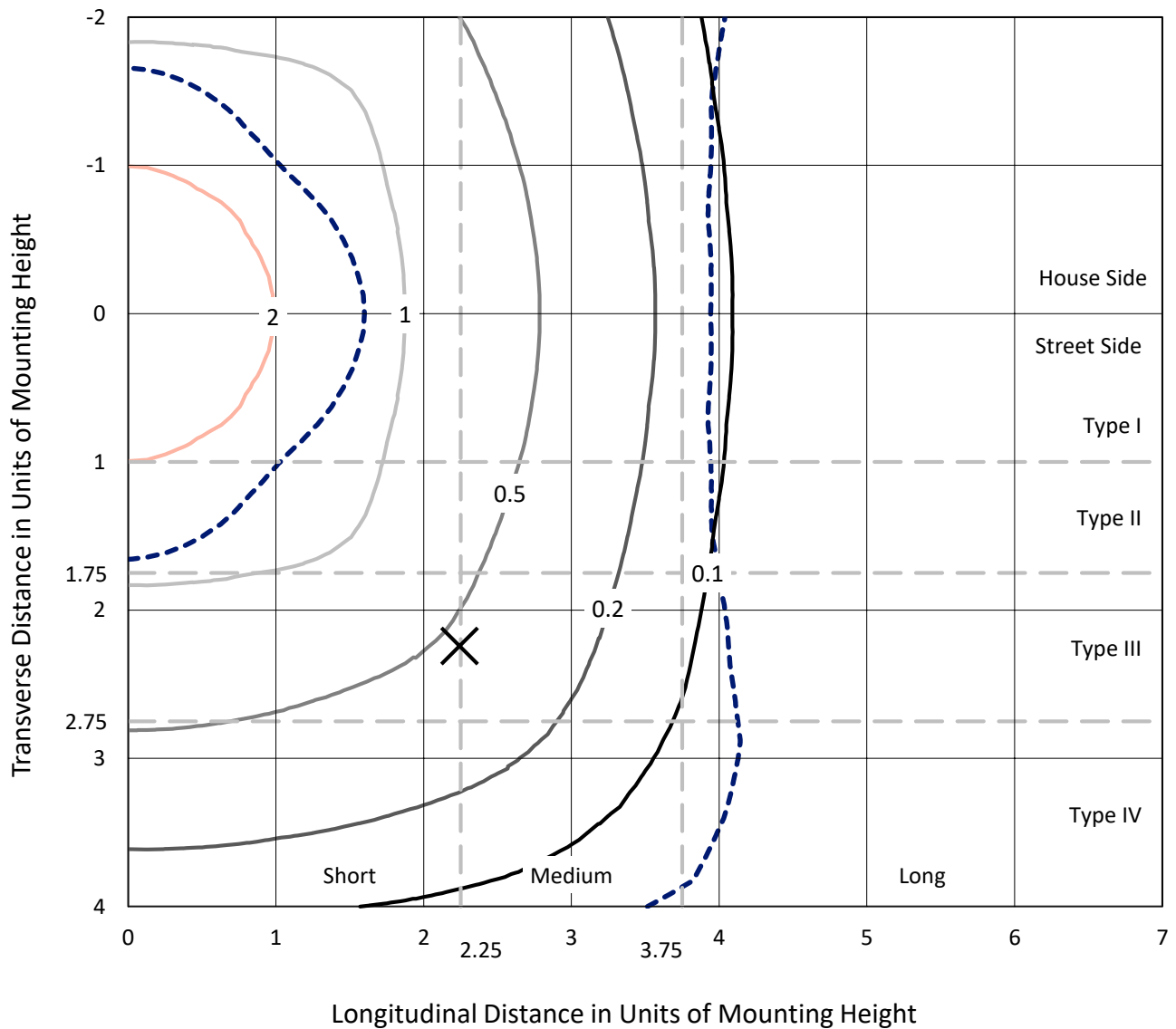


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

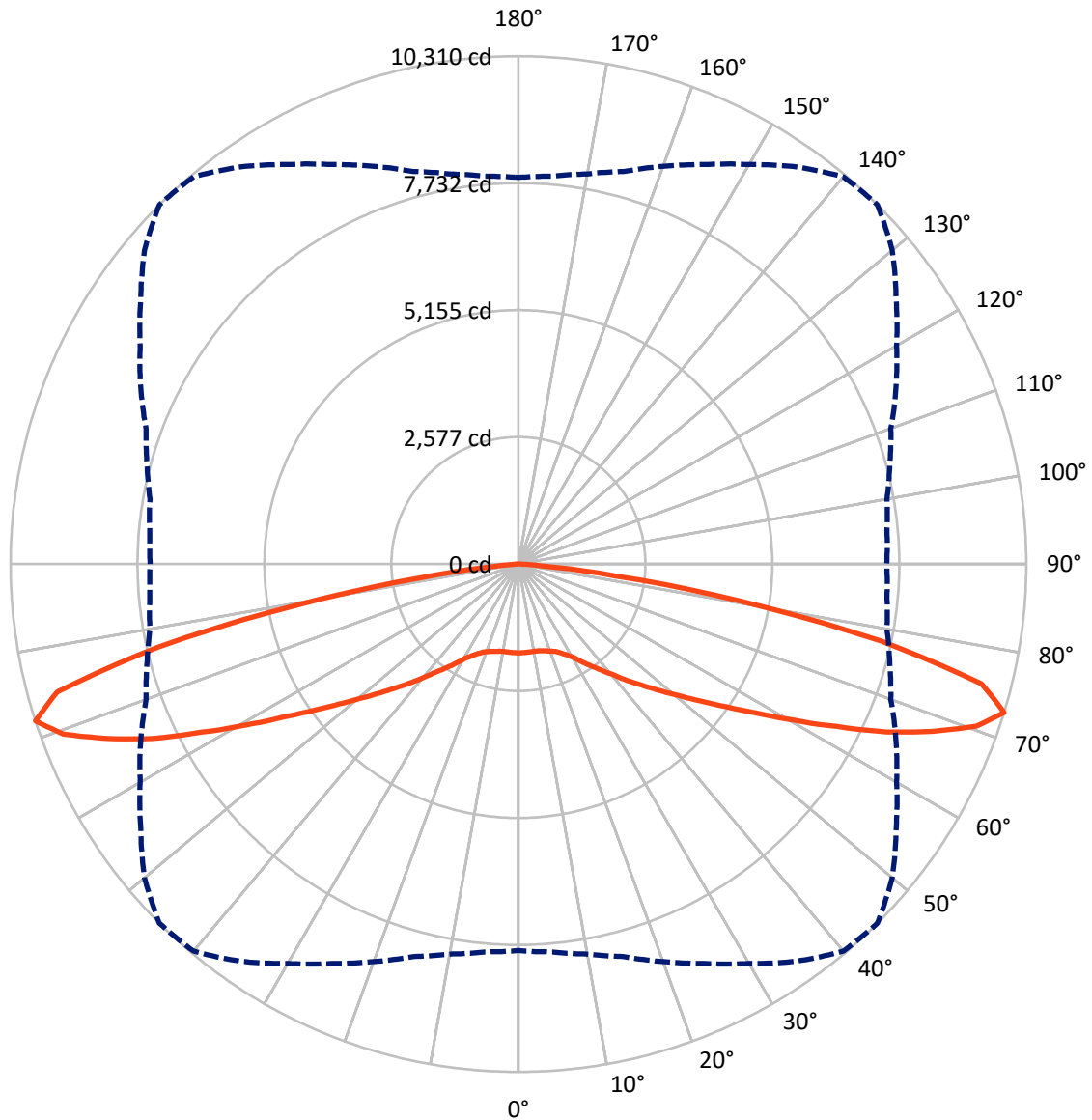


Based on 25 foot mounting height. Maximum calculated value = 2.9 fc
 Type V - Short - Semi-Cutoff

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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
House Side	Lumens	12691.0	0.0	12691.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12691.0	0.0	12691.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	25382.0	0.0	25382.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.2	0.7
10°-20°	521.2	2.1
20°-30°	941.0	3.7
30°-40°	1605.1	6.3
40°-50°	2732.7	10.8
50°-60°	4397.9	17.3
60°-70°	7313.8	28.8
70°-80°	7075.3	27.9
80°-90°	622.7	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°	25382.0	100.0
0°-180°	25382.0	100.0



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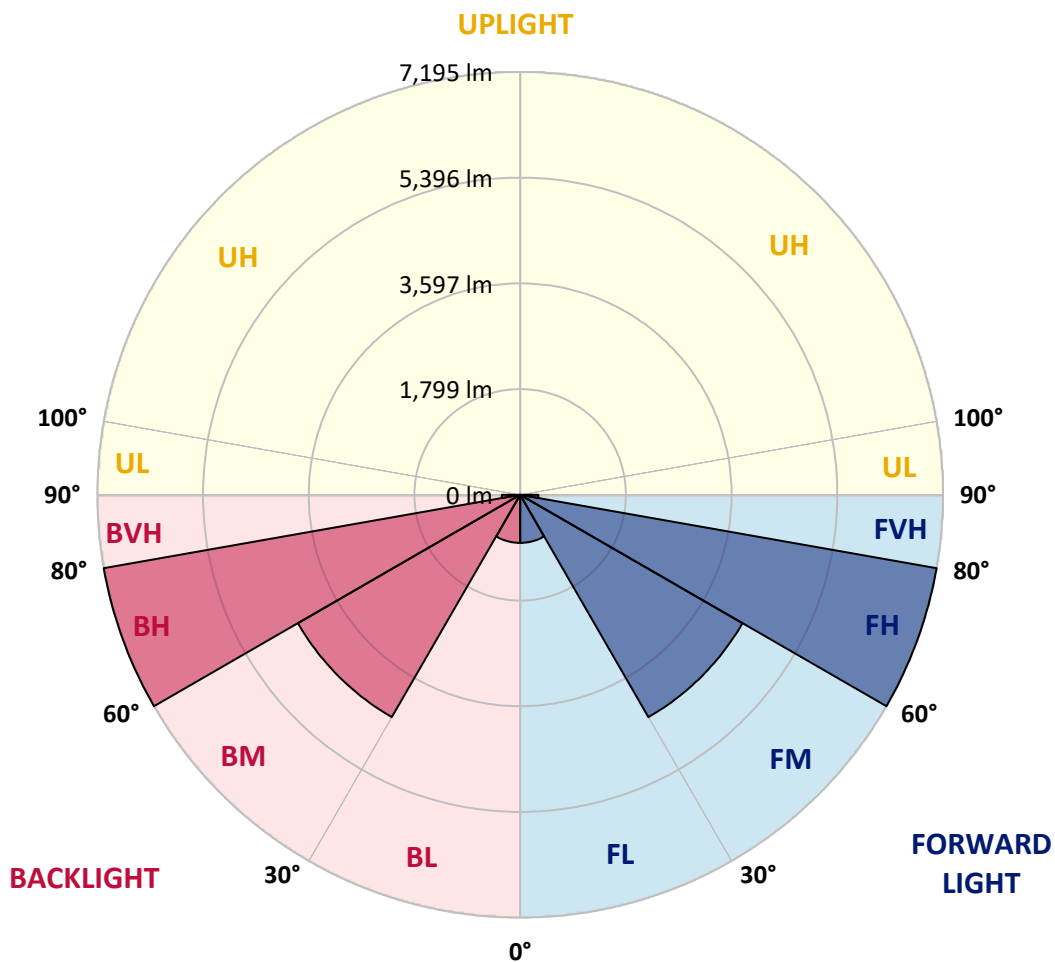
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	817.2	3.2			
FM	(30°-60°)	4367.9	17.2			
FH	(60°-80°)	7194.5	28.3			G3/7500
FVH	(80°-90°)	311.4	1.2			G3/500
BL	(0°-30°)	817.2	3.2	B2/1000		
BM	(30°-60°)	4367.9	17.2	B3/5000		
BH	(60°-80°)	7194.5	28.3	B5		G3/7500
BVH	(80°-90°)	311.4	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°	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5
2.5°	1818.5	1818.5	1820.1	1818.5	1815.4	1813.8	1809.2	1806.0	1802.9	1801.3	1798.2
5°	1820.1	1820.1	1821.7	1820.1	1817.0	1813.8	1810.7	1806.0	1802.9	1799.8	1798.2
7.5°	1826.3	1827.9	1829.5	1827.9	1821.7	1818.5	1813.8	1809.2	1802.9	1799.8	1796.7
10°	1838.8	1838.8	1838.8	1837.3	1832.6	1826.3	1820.1	1815.4	1807.6	1799.8	1795.1
12.5°	1848.2	1849.8	1849.8	1846.7	1840.4	1832.6	1826.3	1821.7	1815.4	1809.2	1804.5
15°	1862.3	1862.3	1860.7	1854.5	1845.1	1838.8	1835.7	1834.2	1832.6	1829.5	1824.8
17.5°	1890.4	1888.8	1884.1	1874.8	1863.8	1859.2	1856.0	1856.0	1856.0	1854.5	1851.3
20°	1931.0	1931.0	1924.8	1909.1	1899.8	1895.1	1890.4	1890.4	1890.4	1885.7	1881.0
22.5°	1996.6	1998.2	1988.8	1970.1	1957.6	1948.2	1942.0	1937.3	1932.6	1929.5	1921.6
25°	2085.7	2084.1	2073.2	2049.8	2040.4	2031.0	2018.5	2010.7	2004.4	1999.8	1990.4
27.5°	2179.4	2177.9	2165.4	2145.1	2138.8	2124.7	2115.4	2104.4	2096.6	2088.8	2079.4
30°	2299.7	2291.9	2282.5	2266.9	2263.8	2252.9	2240.4	2224.7	2212.2	2199.7	2188.8
32.5°	2407.5	2407.5	2393.5	2385.6	2391.9	2387.2	2388.8	2379.4	2371.6	2366.9	2356.0
35°	2557.5	2557.5	2551.3	2541.9	2543.4	2532.5	2530.9	2532.5	2538.8	2538.8	2526.3
37.5°	2757.5	2760.6	2740.3	2737.2	2729.4	2713.7	2705.9	2709.0	2723.1	2730.9	2713.7
40°	3005.9	3012.1	3005.9	2985.6	2976.2	2949.6	2934.0	2934.0	2945.0	2952.8	2946.5
42.5°	3251.2	3262.1	3251.2	3235.5	3227.7	3207.4	3199.6	3205.9	3219.9	3229.3	3219.9
45°	3524.6	3532.4	3518.3	3499.6	3490.2	3479.3	3474.6	3479.3	3494.9	3504.3	3501.1
47.5°	3793.3	3804.2	3787.0	3779.2	3779.2	3768.3	3780.8	3793.3	3807.4	3829.2	3819.9
50°	4055.8	4069.8	4058.9	4060.4	4072.9	4093.3	4116.7	4141.7	4166.7	4190.1	4193.2
52.5°	4290.1	4312.0	4313.5	4341.7	4380.7	4412.0	4477.6	4532.3	4591.6	4611.9	4602.6
55°	4537.0	4566.6	4605.7	4649.4	4711.9	4776.0	4886.9	4985.3	5063.5	5111.9	5104.1
57.5°	4890.0	4919.7	4960.3	5032.2	5125.9	5213.4	5365.0	5518.1	5636.8	5710.2	5674.3
60°	5347.8	5379.0	5432.2	5508.7	5630.6	5749.3	5957.1	6177.4	6361.7	6446.1	6380.5
62.5°	5954.0	5983.7	6018.0	6119.6	6255.5	6408.6	6669.5	6952.3	7186.6	7267.9	7175.7
65°	6817.9	6853.9	6864.8	6947.6	7080.4	7222.6	7503.8	7822.5	8089.6	8222.4	8038.1
67.5°	7791.2	7805.3	7849.1	7945.9	8081.8	8209.9	8431.8	8733.3	8989.5	9063.0	8866.1
70°	8361.5	8389.6	8466.2	8600.5	8763.0	8964.5	9206.7	9531.7	9822.3	9856.6	9606.7
72.5°	7845.9	7903.7	8039.7	8249.0	8589.6	8947.4	9364.5	9844.1	10261.3	10309.7	9908.2
75°	6293.0	6358.6	6521.1	6750.7	7153.8	7685.0	8288.1	9008.3	9633.2	9712.9	9181.7
77.5°	3354.3	3435.5	3671.4	3980.8	4555.7	5258.7	5985.2	6807.0	7338.2	7517.8	7135.1
80°	845.2	889.0	1003.0	1184.2	1573.2	2140.4	2766.9	3651.1	4310.4	4590.1	4310.4
82.5°	328.1	360.9	392.1	414.0	451.5	529.6	731.2	1192.0	1606.1	1977.9	1712.3
85°	126.5	134.4	193.7	220.3	220.3	242.2	278.1	328.1	406.2	443.7	371.8
87.5°	50.0	54.7	67.2	103.1	106.2	93.7	100.0	112.5	85.9	71.9	81.2
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°	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5	1804.5
2.5°	1796.7	1795.1	1792.0	1793.5	1792.0	1792.0	1792.0	1792.0
5°	1795.1	1795.1	1792.0	1792.0	1792.0	1793.5	1792.0	1792.0
7.5°	1793.5	1792.0	1788.8	1787.3	1787.3	1785.7	1785.7	1785.7
10°	1790.4	1787.3	1784.2	1782.6	1782.6	1779.5	1779.5	1779.5
12.5°	1798.2	1793.5	1790.4	1788.8	1788.8	1788.8	1790.4	1790.4
15°	1820.1	1810.7	1806.0	1804.5	1806.0	1809.2	1810.7	1812.3
17.5°	1843.5	1834.2	1826.3	1823.2	1824.8	1829.5	1834.2	1837.3
20°	1873.2	1865.4	1856.0	1852.9	1852.9	1859.2	1862.3	1867.0
22.5°	1915.4	1909.1	1901.3	1896.6	1893.5	1901.3	1906.0	1909.1
25°	1982.6	1976.3	1970.1	1965.4	1963.8	1971.6	1974.8	1976.3
27.5°	2071.6	2065.4	2062.3	2060.7	2056.0	2059.1	2063.8	2062.3
30°	2187.2	2191.9	2187.2	2187.2	2179.4	2182.5	2179.4	2176.3
32.5°	2341.9	2337.2	2323.2	2313.8	2302.8	2302.8	2298.2	2293.5
35°	2496.6	2481.0	2473.1	2477.8	2473.1	2476.3	2468.5	2460.6
37.5°	2679.4	2670.0	2668.4	2682.5	2679.4	2682.5	2682.5	2671.6
40°	2921.5	2915.3	2926.2	2949.6	2959.0	2957.5	2960.6	2946.5
42.5°	3199.6	3188.7	3193.4	3213.7	3224.6	3227.7	3226.2	3213.7
45°	3477.7	3480.8	3480.8	3502.7	3513.6	3519.9	3509.0	3504.3
47.5°	3791.7	3796.4	3785.5	3799.5	3802.7	3813.6	3804.2	3796.4
50°	4154.2	4137.0	4112.0	4116.7	4116.7	4113.6	4102.6	4093.3
52.5°	4558.8	4519.8	4472.9	4457.3	4440.1	4422.9	4401.0	4383.8
55°	5019.7	4952.5	4868.2	4829.1	4796.3	4757.2	4707.2	4690.1
57.5°	5554.0	5438.4	5325.9	5255.6	5171.3	5119.7	5055.6	5052.5
60°	6188.3	6032.1	5833.7	5729.0	5644.6	5583.7	5535.3	5516.5
62.5°	6921.0	6652.3	6438.3	6325.8	6227.4	6189.9	6128.9	6136.8
65°	7672.5	7399.1	7191.3	7100.7	7008.5	6983.5	6927.3	6947.6
67.5°	8486.5	8261.5	8033.4	7949.0	7864.7	7839.7	7781.9	7799.1
70°	9216.1	8930.2	8670.8	8505.2	8361.5	8245.9	8172.5	8142.8
72.5°	9361.4	8866.1	8458.4	8044.3	7805.3	7596.0	7510.0	7477.2
75°	8411.5	7642.8	7061.6	6575.8	6307.1	6002.4	5969.6	5924.3
77.5°	6543.0	5668.1	4965.0	4340.1	3979.2	3607.4	3479.3	3382.4
80°	3902.7	2999.6	2324.7	1629.5	1329.5	1070.2	1006.1	938.9
82.5°	1396.7	895.2	603.1	470.3	420.3	387.5	362.5	329.6
85°	337.5	284.3	268.7	243.7	240.6	204.7	145.3	129.7
87.5°	107.8	98.4	100.0	95.3	100.0	75.0	60.9	54.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)