

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: P196456

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196456
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-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 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: 24548.4 lumens
Efficiency: N/A
Efficacy: 109.1 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

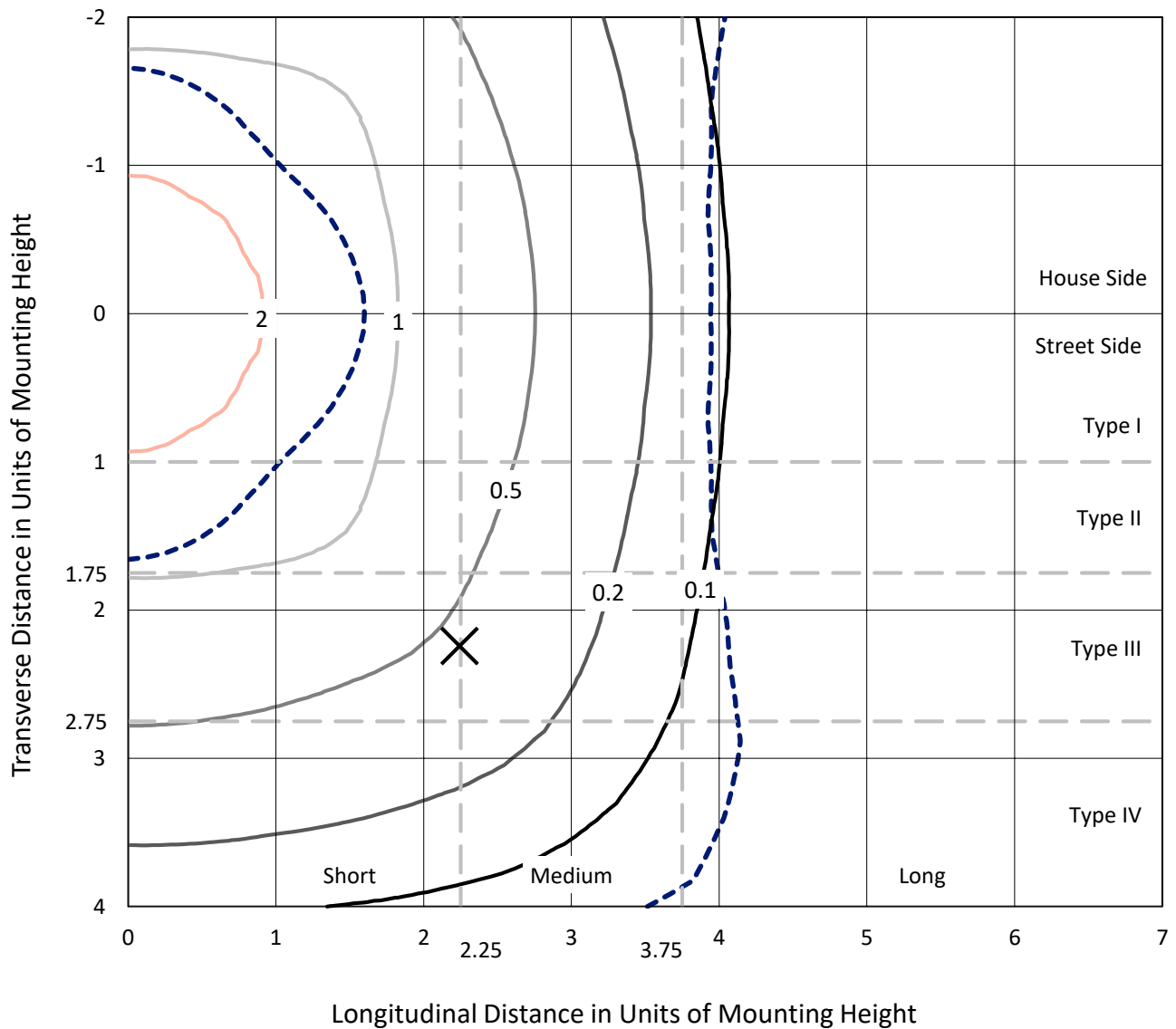
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

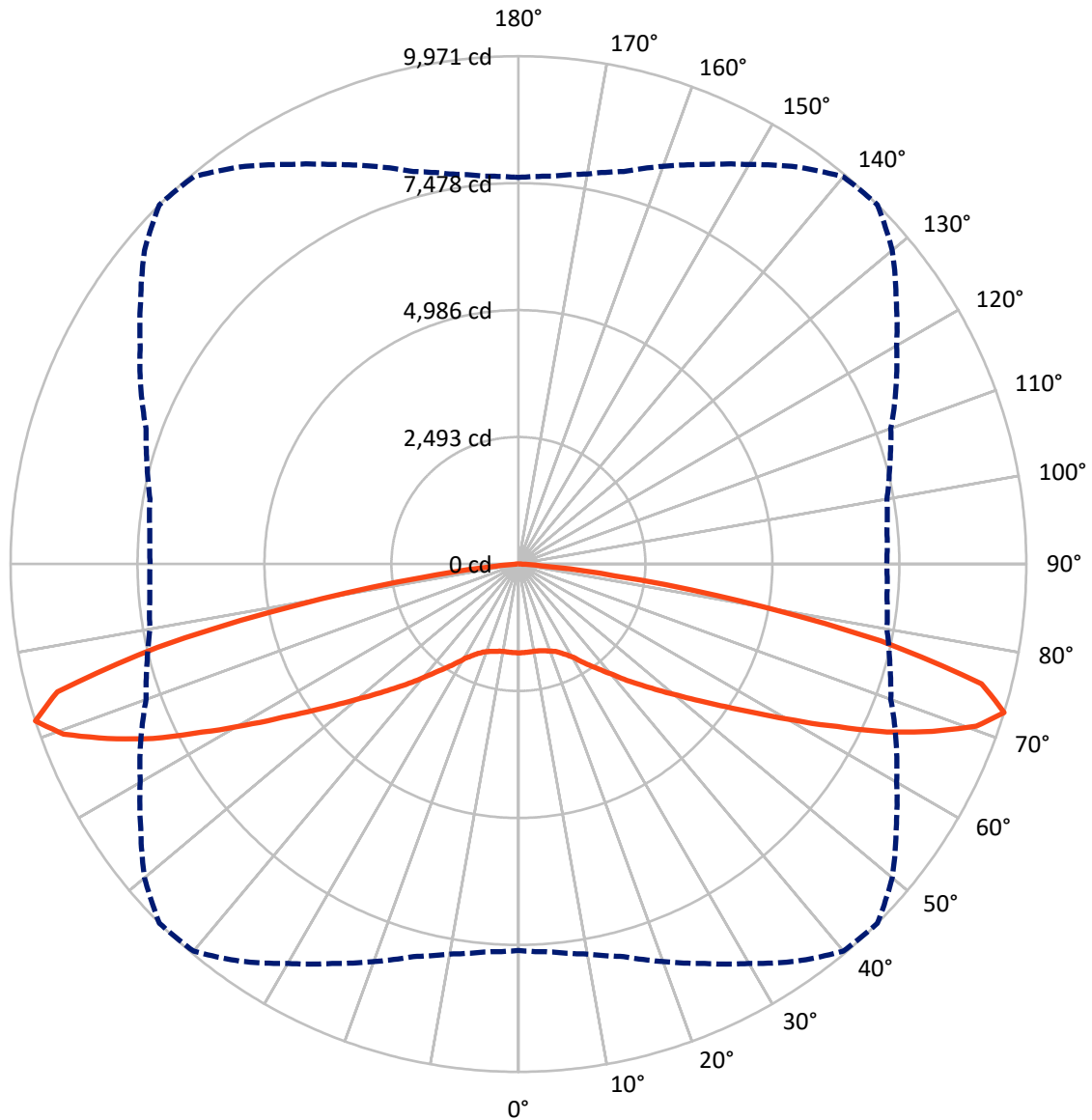


Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type V - Short - Semi-Cutoff

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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	12274.2	0.0	12274.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12274.2	0.0	12274.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	24548.4	0.0	24548.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.6	0.7
10°-20°	504.1	2.1
20°-30°	910.1	3.7
30°-40°	1552.4	6.3
40°-50°	2643.0	10.8
50°-60°	4253.5	17.3
60°-70°	7073.6	28.8
70°-80°	6842.9	27.9
80°-90°	602.3	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°	24548.4	100.0
0°-180°	24548.4	100.0



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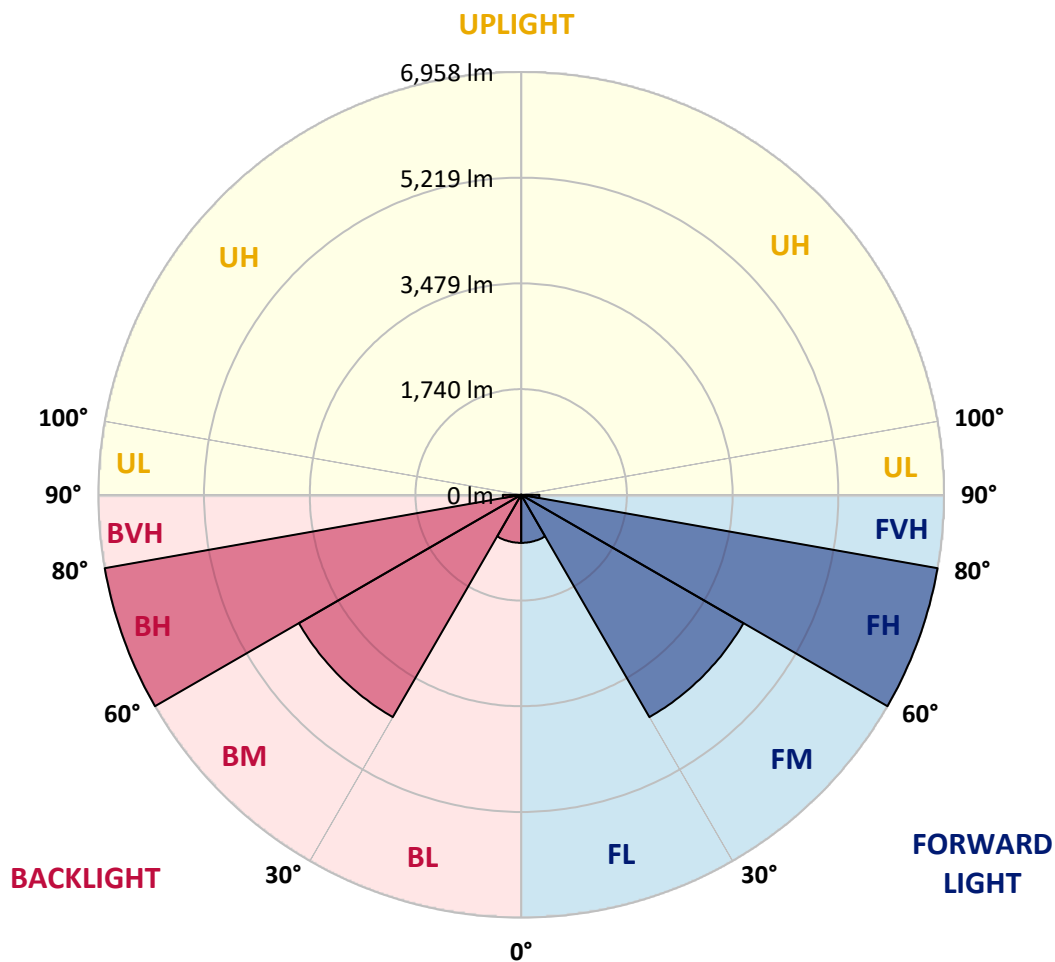
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	790.4	3.2			
FM	(30°-60°)	4224.4	17.2			
FH	(60°-80°)	6958.2	28.3			G3/7500
FVH	(80°-90°)	301.1	1.2			G3/500
BL	(0°-30°)	790.4	3.2	B2/1000		
BM	(30°-60°)	4224.4	17.2	B3/5000		
BH	(60°-80°)	6958.2	28.3	B5		G3/7500
BVH	(80°-90°)	301.1	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°	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2
2.5°	1758.8	1758.8	1760.2	1758.8	1755.8	1754.2	1749.8	1746.7	1743.7	1742.1	1739.2
5°	1760.2	1760.2	1761.8	1760.2	1757.3	1754.2	1751.2	1746.7	1743.7	1740.7	1739.2
7.5°	1766.4	1768.0	1769.4	1768.0	1761.8	1758.8	1754.2	1749.8	1743.7	1740.7	1737.7
10°	1778.4	1778.4	1778.4	1776.9	1772.4	1766.4	1760.2	1755.8	1748.2	1740.7	1736.1
12.5°	1787.5	1789.0	1789.0	1786.0	1780.0	1772.4	1766.4	1761.8	1755.8	1749.8	1745.2
15°	1801.1	1801.1	1799.6	1793.6	1784.5	1778.4	1775.5	1774.0	1772.4	1769.4	1764.9
17.5°	1828.4	1826.9	1822.2	1813.1	1802.7	1798.1	1795.0	1795.0	1795.0	1793.6	1790.5
20°	1867.6	1867.6	1861.6	1846.5	1837.4	1832.9	1828.4	1828.4	1828.4	1823.7	1819.2
22.5°	1931.0	1932.6	1923.5	1905.4	1893.3	1884.1	1878.1	1873.7	1869.1	1866.0	1858.5
25°	2017.2	2015.8	2005.1	1982.4	1973.3	1964.3	1952.3	1944.7	1938.6	1934.1	1925.0
27.5°	2107.8	2106.3	2094.3	2074.7	2068.6	2054.9	2045.9	2035.3	2027.8	2020.2	2011.1
30°	2224.2	2216.7	2207.6	2192.5	2189.4	2178.8	2166.7	2151.7	2139.7	2127.5	2116.9
32.5°	2328.5	2328.5	2314.8	2307.3	2313.3	2308.7	2310.3	2301.2	2293.7	2289.2	2278.6
35°	2473.5	2473.5	2467.5	2458.5	2459.9	2449.4	2447.9	2449.4	2455.4	2455.4	2443.2
37.5°	2666.9	2670.0	2650.3	2647.3	2639.7	2624.6	2617.1	2620.0	2633.7	2641.3	2624.6
40°	2907.2	2913.2	2907.2	2887.5	2878.4	2852.8	2837.7	2837.7	2848.3	2855.8	2849.7
42.5°	3144.4	3155.0	3144.4	3129.3	3121.7	3102.1	3094.5	3100.6	3114.2	3123.2	3114.2
45°	3408.8	3416.3	3402.8	3384.7	3375.6	3364.9	3360.5	3364.9	3380.2	3389.2	3386.2
47.5°	3668.7	3679.3	3662.7	3655.2	3655.2	3644.6	3656.6	3668.7	3682.2	3703.5	3694.4
50°	3922.5	3936.2	3925.5	3927.1	3939.2	3958.8	3981.5	4005.7	4029.8	4052.5	4055.4
52.5°	4149.2	4170.3	4171.8	4199.1	4236.8	4267.0	4330.5	4383.4	4440.9	4460.5	4451.4
55°	4388.0	4416.7	4454.4	4496.8	4557.2	4619.2	4726.4	4821.6	4897.1	4944.0	4936.5
57.5°	4729.4	4758.1	4797.5	4867.0	4957.6	5042.2	5188.7	5336.9	5451.7	5522.7	5488.0
60°	5172.2	5202.4	5253.7	5327.8	5445.6	5560.5	5761.5	5974.6	6152.8	6234.4	6171.0
62.5°	5758.4	5787.1	5820.3	5918.6	6050.0	6198.2	6450.4	6724.0	6950.6	7029.2	6940.0
65°	6594.1	6628.8	6639.3	6719.5	6847.9	6985.4	7257.3	7565.5	7823.9	7952.4	7774.2
67.5°	7535.4	7548.9	7591.3	7685.0	7816.4	7940.3	8154.9	8446.5	8694.3	8765.4	8574.8
70°	8086.9	8114.0	8188.1	8318.0	8475.2	8670.2	8904.3	9218.6	9499.6	9532.9	9291.2
72.5°	7588.3	7644.1	7775.7	7978.1	8307.5	8653.5	9056.9	9520.9	9924.2	9971.1	9582.8
75°	6086.3	6149.7	6306.9	6529.0	6918.9	7432.6	8015.8	8712.5	9316.9	9393.9	8880.1
77.5°	3244.1	3322.7	3550.8	3850.1	4406.1	5086.0	5788.7	6583.4	7097.2	7270.9	6900.7
80°	817.5	859.8	970.1	1145.4	1521.6	2070.0	2676.0	3531.3	4168.9	4439.3	4168.9
82.5°	317.3	349.1	379.2	400.4	436.7	512.2	707.1	1152.9	1553.3	1912.9	1656.1
85°	122.4	129.9	187.4	213.0	213.0	234.3	269.0	317.3	392.9	429.2	359.6
87.5°	48.4	52.9	65.0	99.8	102.7	90.6	96.7	108.8	83.1	69.5	78.5
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°	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2	1745.2
2.5°	1737.7	1736.1	1733.1	1734.6	1733.1	1733.1	1733.1	1733.1
5°	1736.1	1736.1	1733.1	1733.1	1733.1	1734.6	1733.1	1733.1
7.5°	1734.6	1733.1	1730.1	1728.6	1728.6	1727.1	1727.1	1727.1
10°	1731.6	1728.6	1725.5	1724.0	1724.0	1721.1	1721.1	1721.1
12.5°	1739.2	1734.6	1731.6	1730.1	1730.1	1730.1	1731.6	1731.6
15°	1760.2	1751.2	1746.7	1745.2	1746.7	1749.8	1751.2	1752.7
17.5°	1783.0	1774.0	1766.4	1763.3	1764.9	1769.4	1774.0	1776.9
20°	1811.7	1804.1	1795.0	1792.1	1792.1	1798.1	1801.1	1805.6
22.5°	1852.5	1846.5	1838.9	1834.4	1831.3	1838.9	1843.4	1846.5
25°	1917.5	1911.4	1905.4	1900.8	1899.4	1906.9	1909.9	1911.4
27.5°	2003.6	1997.6	1994.5	1993.0	1988.5	1991.5	1996.0	1994.5
30°	2115.4	2119.9	2115.4	2115.4	2107.8	2110.9	2107.8	2104.8
32.5°	2265.0	2260.5	2246.8	2237.7	2227.2	2227.2	2222.7	2218.2
35°	2414.6	2399.5	2391.9	2396.5	2391.9	2395.0	2387.5	2379.7
37.5°	2591.4	2582.4	2580.8	2594.4	2591.4	2594.4	2594.4	2583.8
40°	2825.6	2819.6	2830.2	2852.8	2861.8	2860.3	2863.3	2849.7
42.5°	3094.5	3084.0	3088.4	3108.1	3118.7	3121.7	3120.2	3108.1
45°	3363.4	3366.5	3366.5	3387.7	3398.3	3404.3	3393.7	3389.2
47.5°	3667.2	3671.7	3661.2	3674.7	3677.7	3688.4	3679.3	3671.7
50°	4017.8	4001.1	3976.9	3981.5	3981.5	3978.4	3967.9	3958.8
52.5°	4409.0	4371.4	4326.0	4311.0	4294.2	4277.6	4256.5	4240.0
55°	4854.8	4789.8	4708.3	4670.5	4638.8	4601.0	4552.7	4536.0
57.5°	5371.6	5259.7	5151.0	5083.0	5001.5	4951.5	4889.6	4886.6
60°	5985.1	5834.0	5642.0	5540.9	5459.2	5400.3	5353.4	5335.3
62.5°	6693.8	6433.8	6226.8	6118.1	6022.8	5986.6	5927.7	5935.2
65°	7420.6	7156.1	6955.1	6867.5	6778.3	6754.2	6699.8	6719.5
67.5°	8207.8	7990.1	7769.5	7687.9	7606.4	7582.1	7526.4	7542.9
70°	8913.4	8636.8	8386.0	8225.9	8086.9	7975.1	7904.1	7875.3
72.5°	9053.9	8574.8	8180.6	7780.2	7548.9	7346.5	7263.3	7231.7
75°	8135.2	7391.8	6829.7	6359.8	6100.0	5805.3	5773.5	5729.7
77.5°	6328.1	5481.9	4802.0	4197.5	3848.5	3488.8	3364.9	3271.3
80°	3774.5	2901.2	2248.3	1575.9	1285.9	1035.0	973.1	908.2
82.5°	1350.9	865.8	583.2	454.8	406.5	374.8	350.5	318.8
85°	326.3	275.0	259.9	235.7	232.7	198.0	140.5	125.4
87.5°	104.3	95.2	96.7	92.3	96.7	72.5	58.9	52.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)