

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: P270404

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270404
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-03-D-UNV-5MQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18386.1 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 191
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

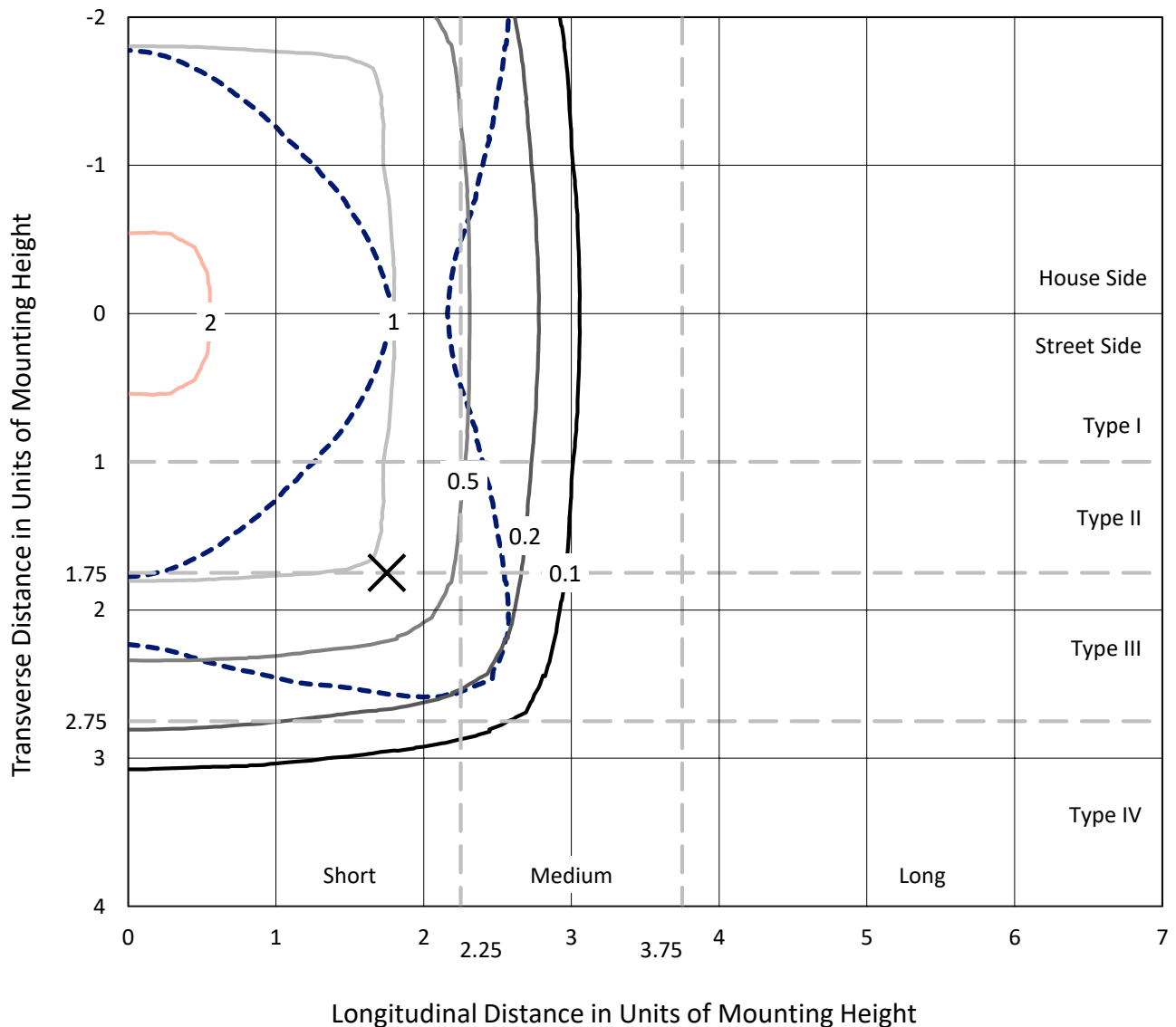


REPORT NUMBER: P270404

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

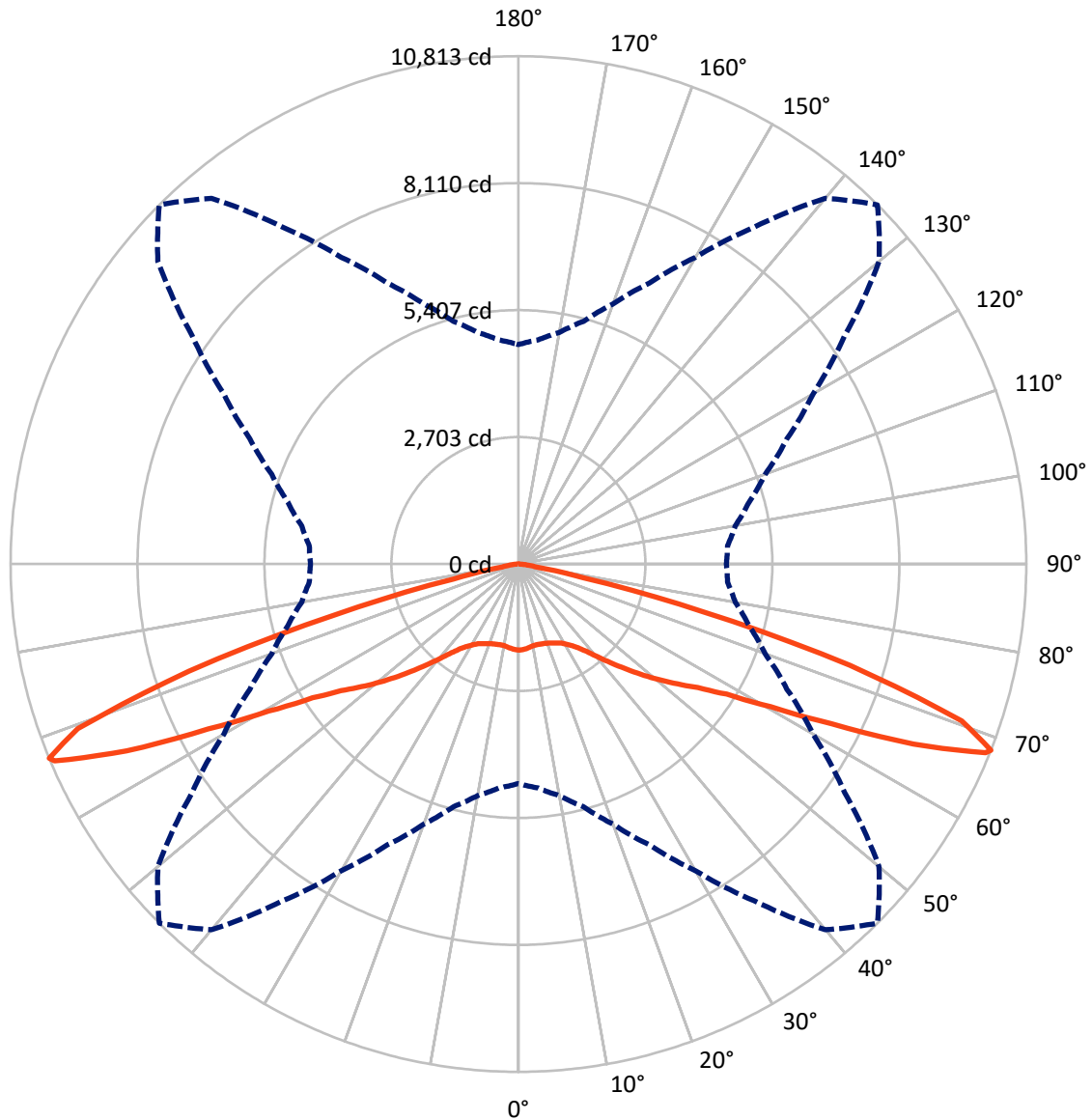
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P270404
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9193.0	0.0	9193.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9193.0	0.0	9193.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	18386.1	0.0	18386.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.6	0.9
10°-20°	497.7	2.7
20°-30°	846.2	4.6
30°-40°	1384.8	7.5
40°-50°	2474.8	13.5
50°-60°	4179.5	22.7
60°-70°	6480.8	35.2
70°-80°	2228.3	12.1
80°-90°	122.4	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°	18386.1	100.0
0°-180°	18386.1	100.0



REPORT NUMBER: P270404

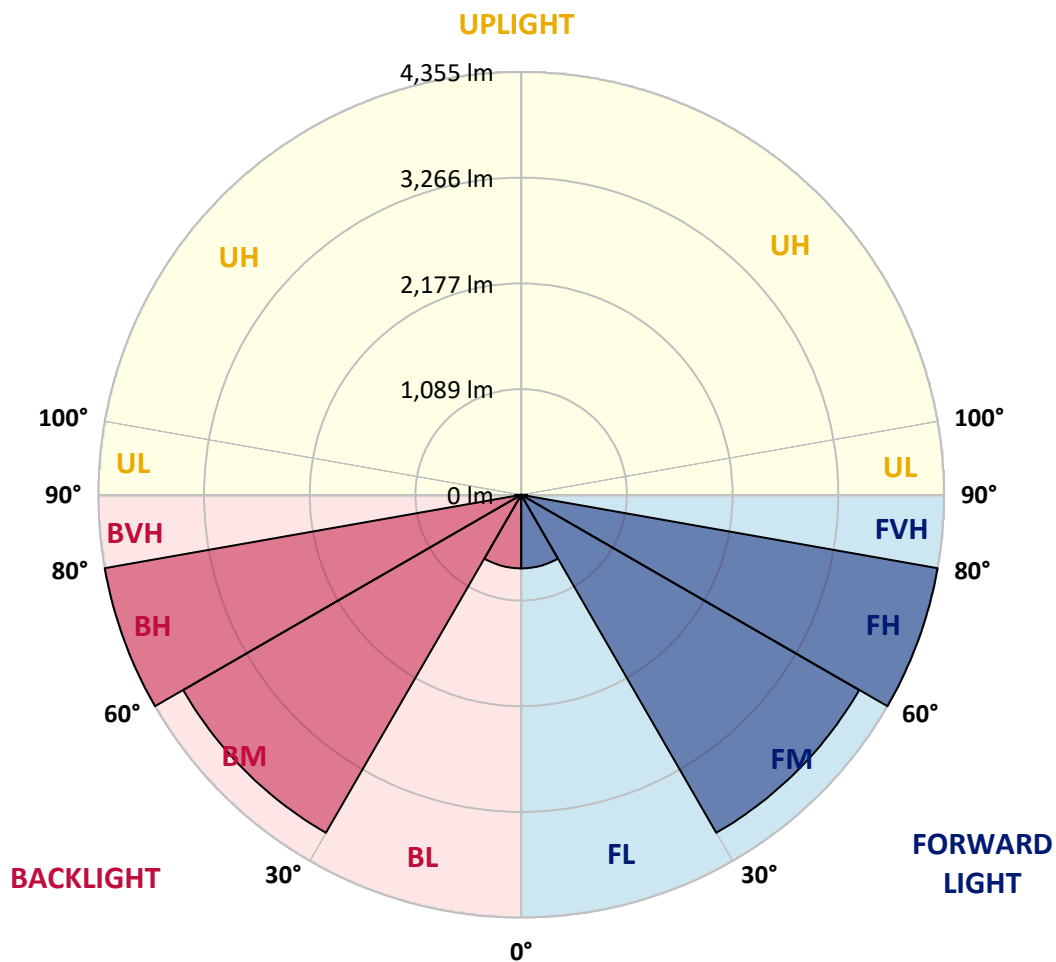
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	757.8	4.1			
FM	(30°-60°)	4019.5	21.9			
FH	(60°-80°)	4354.6	23.7			G2/5000
FVH	(80°-90°)	61.2	0.3			G1/100
BL	(0°-30°)	757.8	4.1	B2/1000		
BM	(30°-60°)	4019.5	21.9	B3/5000		
BH	(60°-80°)	4354.6	23.7	B4/5000		G2/5000
BVH	(80°-90°)	61.2	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





REPORT NUMBER: P270404

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1
2.5°	1842.0	1842.0	1844.2	1843.1	1839.6	1836.3	1832.9	1829.6	1827.3	1825.0	1822.8
5°	1822.8	1822.8	1826.2	1823.9	1821.8	1818.3	1816.1	1812.7	1810.4	1808.2	1809.2
7.5°	1798.0	1800.4	1802.5	1801.5	1796.9	1795.8	1792.4	1791.3	1789.1	1785.7	1786.8
10°	1776.7	1777.7	1780.0	1779.0	1777.7	1774.4	1773.3	1772.1	1771.0	1766.4	1765.3
12.5°	1755.3	1757.5	1759.8	1760.9	1759.8	1760.9	1762.0	1763.2	1762.0	1759.8	1759.8
15°	1738.4	1740.6	1744.0	1747.4	1748.6	1755.3	1759.8	1764.4	1767.7	1768.8	1765.3
17.5°	1729.3	1732.7	1737.2	1744.0	1749.5	1757.5	1765.3	1772.1	1777.7	1779.0	1775.5
20°	1728.2	1731.7	1738.4	1746.2	1756.4	1766.4	1779.0	1789.1	1794.6	1798.0	1794.6
22.5°	1736.2	1740.6	1749.5	1759.8	1772.1	1785.7	1801.5	1812.7	1823.9	1828.4	1825.0
25°	1758.6	1763.2	1773.3	1785.7	1799.1	1816.1	1831.9	1846.5	1857.8	1863.4	1858.9
27.5°	1806.0	1807.0	1818.3	1831.9	1847.5	1862.2	1882.5	1889.2	1898.3	1903.9	1898.3
30°	1872.3	1874.7	1884.7	1906.2	1920.8	1939.9	1951.2	1957.9	1968.0	1973.7	1966.8
32.5°	1973.7	1975.9	1985.0	2005.1	2018.8	2033.4	2046.9	2051.4	2061.5	2068.3	2060.4
35°	2116.6	2121.2	2129.1	2142.5	2153.9	2165.1	2175.2	2171.8	2178.6	2187.6	2179.6
37.5°	2312.5	2311.5	2313.7	2323.8	2335.1	2341.8	2357.6	2349.7	2356.4	2364.3	2359.8
40°	2541.1	2541.1	2540.0	2558.1	2562.5	2569.2	2586.2	2576.0	2585.1	2594.0	2586.2
42.5°	2801.3	2805.6	2811.3	2826.0	2838.4	2840.6	2848.4	2843.9	2855.3	2863.1	2855.3
45°	3100.7	3107.4	3114.2	3148.0	3153.6	3158.1	3163.7	3149.1	3161.4	3168.2	3165.9
47.5°	3411.5	3423.8	3438.4	3473.3	3495.8	3506.1	3510.4	3493.6	3494.8	3504.8	3506.1
50°	3762.7	3776.3	3790.8	3830.3	3851.7	3869.7	3875.3	3856.2	3858.4	3866.2	3868.6
52.5°	4087.0	4102.6	4134.3	4187.2	4217.5	4249.2	4251.4	4227.8	4237.8	4243.5	4238.9
55°	4392.1	4412.4	4453.9	4524.9	4580.1	4642.0	4670.2	4644.2	4644.2	4639.7	4637.5
57.5°	4747.8	4770.4	4813.2	4895.4	4971.8	5060.8	5137.3	5163.3	5210.6	5226.3	5201.5
60°	5283.8	5307.5	5351.4	5459.4	5556.2	5685.7	5811.9	5914.4	6080.8	6170.9	6089.9
62.5°	5773.5	5809.6	5913.2	6102.2	6311.8	6551.5	6829.6	7027.8	7330.7	7481.5	7277.7
65°	5662.0	5735.3	5937.9	6235.1	6667.5	7187.7	7754.0	8297.7	8923.8	9244.6	8830.2
67.5°	4946.0	5008.0	5226.3	5571.9	6111.3	6828.5	7709.0	8834.8	10126.2	10727.4	9994.5
68°	4672.4	4788.3	5005.6	5349.0	5892.9	6597.7	7537.8	8753.8	10163.3	10813.0	10021.5
70°	3582.6	3624.2	3832.4	4140.9	4727.6	5418.8	6368.1	7754.0	9347.1	10015.9	9201.9
72.5°	1702.4	1727.1	1862.2	2166.3	2538.9	3101.8	3939.4	5246.6	6682.1	7377.9	6566.3
75°	623.8	629.4	661.0	732.9	872.6	1084.3	1486.2	2299.0	3403.6	4058.8	3417.1
77.5°	336.7	337.8	350.2	368.1	392.9	421.0	481.9	646.3	1042.6	1418.7	1101.1
80°	211.7	210.6	222.9	237.5	254.5	268.0	273.7	292.8	329.9	386.2	354.7
82.5°	108.1	118.1	146.3	162.1	186.8	191.3	185.8	184.6	195.9	211.7	218.4
85°	59.6	52.9	77.8	103.6	112.6	116.1	117.0	110.3	108.1	105.8	111.5
87.5°	30.5	28.1	33.7	51.8	55.2	45.0	46.2	39.3	26.9	26.9	28.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270404

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1	1834.1
2.5°	1820.5	1821.8	1819.4	1819.4	1819.4	1820.5	1819.4	1818.3
5°	1806.0	1808.2	1808.2	1809.2	1810.4	1810.4	1810.4	1810.4
7.5°	1784.6	1785.7	1787.8	1787.8	1787.8	1787.8	1787.8	1787.8
10°	1764.4	1762.0	1760.9	1758.6	1758.6	1755.3	1756.4	1757.5
12.5°	1754.1	1749.5	1747.4	1744.0	1741.8	1738.4	1738.4	1739.5
15°	1758.6	1751.9	1745.0	1742.9	1740.6	1738.4	1736.2	1737.2
17.5°	1767.7	1759.8	1751.9	1747.4	1742.9	1739.5	1738.4	1739.5
20°	1786.8	1775.5	1763.2	1755.3	1746.2	1744.0	1740.6	1744.0
22.5°	1812.7	1799.1	1783.5	1768.8	1758.6	1754.1	1749.5	1753.0
25°	1844.2	1829.6	1813.8	1796.9	1785.7	1782.2	1776.7	1776.7
27.5°	1888.1	1875.8	1862.2	1846.5	1835.1	1831.9	1822.8	1822.8
30°	1957.9	1945.5	1933.2	1919.7	1908.4	1904.9	1893.7	1893.7
32.5°	2050.2	2036.7	2028.8	2017.7	2008.6	2003.0	1989.4	1988.3
35°	2174.1	2161.7	2160.6	2152.7	2143.6	2144.9	2131.3	2129.1
37.5°	2352.0	2341.8	2345.3	2338.5	2330.7	2337.3	2329.5	2329.5
40°	2579.5	2576.0	2579.5	2574.9	2576.0	2577.1	2570.4	2572.7
42.5°	2854.2	2845.1	2865.4	2863.1	2859.8	2868.7	2852.9	2841.8
45°	3170.5	3167.2	3187.4	3190.8	3184.0	3189.6	3161.4	3160.3
47.5°	3513.9	3513.9	3531.9	3529.6	3523.0	3524.1	3490.3	3468.9
50°	3872.0	3869.7	3887.7	3883.2	3874.2	3873.0	3838.2	3816.8
52.5°	4244.6	4244.6	4270.5	4258.1	4236.6	4226.5	4183.8	4155.6
55°	4656.6	4651.1	4658.9	4618.4	4576.8	4546.3	4493.4	4472.0
57.5°	5177.9	5112.7	5056.4	5004.5	4946.0	4910.0	4848.1	4825.5
60°	5917.7	5743.1	5667.6	5564.1	5467.4	5418.8	5336.7	5292.9
62.5°	6942.2	6652.8	6447.9	6219.3	5998.7	5843.4	5718.4	5663.3
65°	8126.6	7496.1	6974.9	6485.1	6069.7	5739.8	5556.2	5498.9
67.5°	8576.9	7419.6	6520.0	5817.5	5313.0	4920.1	4700.7	4654.4
68°	8481.3	7243.9	6309.4	5590.1	5083.4	4687.0	4468.7	4426.9
70°	7481.5	6111.3	5125.0	4409.1	3936.2	3558.9	3404.7	3338.2
72.5°	5100.2	3924.9	3010.6	2408.3	2054.8	1816.1	1674.3	1625.8
75°	2347.5	1586.3	1059.5	791.4	672.1	614.7	570.9	559.6
77.5°	684.6	497.7	427.9	396.3	372.6	352.4	337.8	336.7
80°	325.4	305.2	296.1	275.8	254.5	235.3	221.8	224.0
82.5°	218.4	212.8	212.8	192.5	158.7	136.3	112.6	101.2
85°	116.1	120.5	127.2	120.5	104.7	77.8	50.7	55.2
87.5°	39.3	45.0	47.3	46.2	41.6	31.5	23.6	23.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)