

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: P195491

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195491
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-05-D-UNV-5WQ-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25276 lumens
Efficiency: N/A
Efficacy: 120.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G3

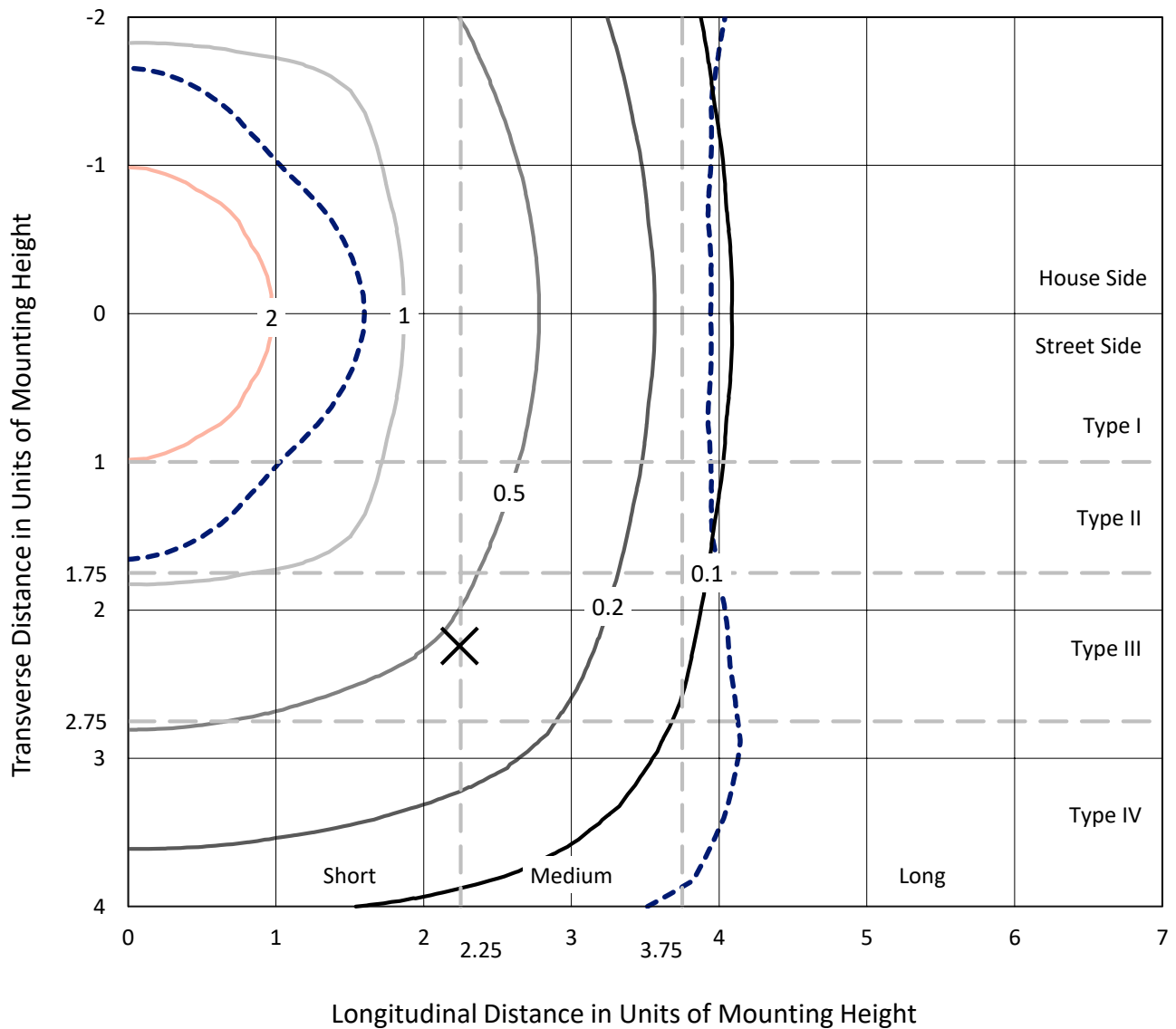
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

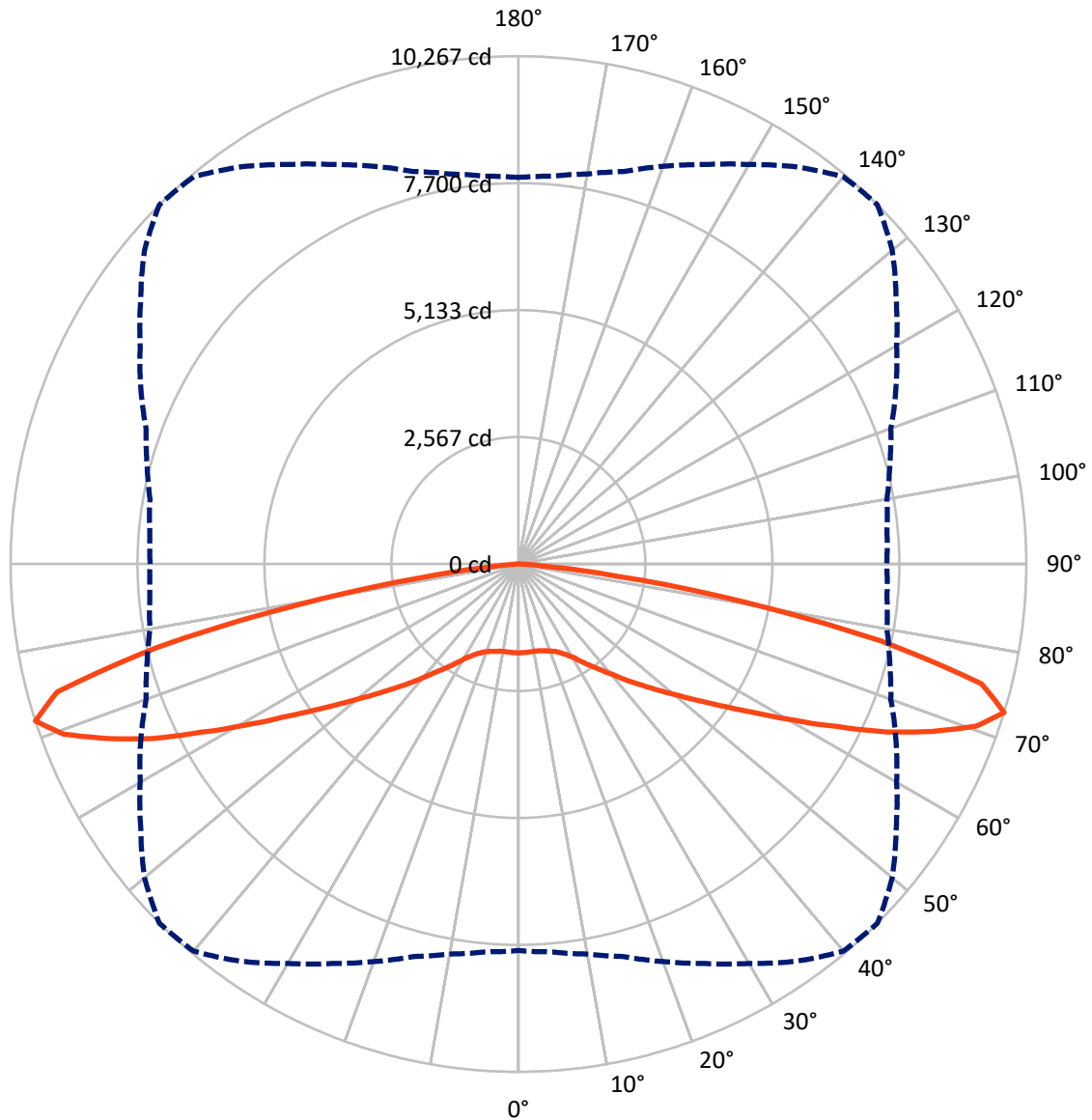
× Max cd
 - - - 1/2 Max cd



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	12638.0	0.0	12638.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12638.0	0.0	12638.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	25276.0	0.0	25276.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.5	0.7
10°-20°	519.1	2.1
20°-30°	937.1	3.7
30°-40°	1598.4	6.3
40°-50°	2721.3	10.8
50°-60°	4379.5	17.3
60°-70°	7283.3	28.8
70°-80°	7045.7	27.9
80°-90°	620.1	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°	25276.0	100.0
0°-180°	25276.0	100.0



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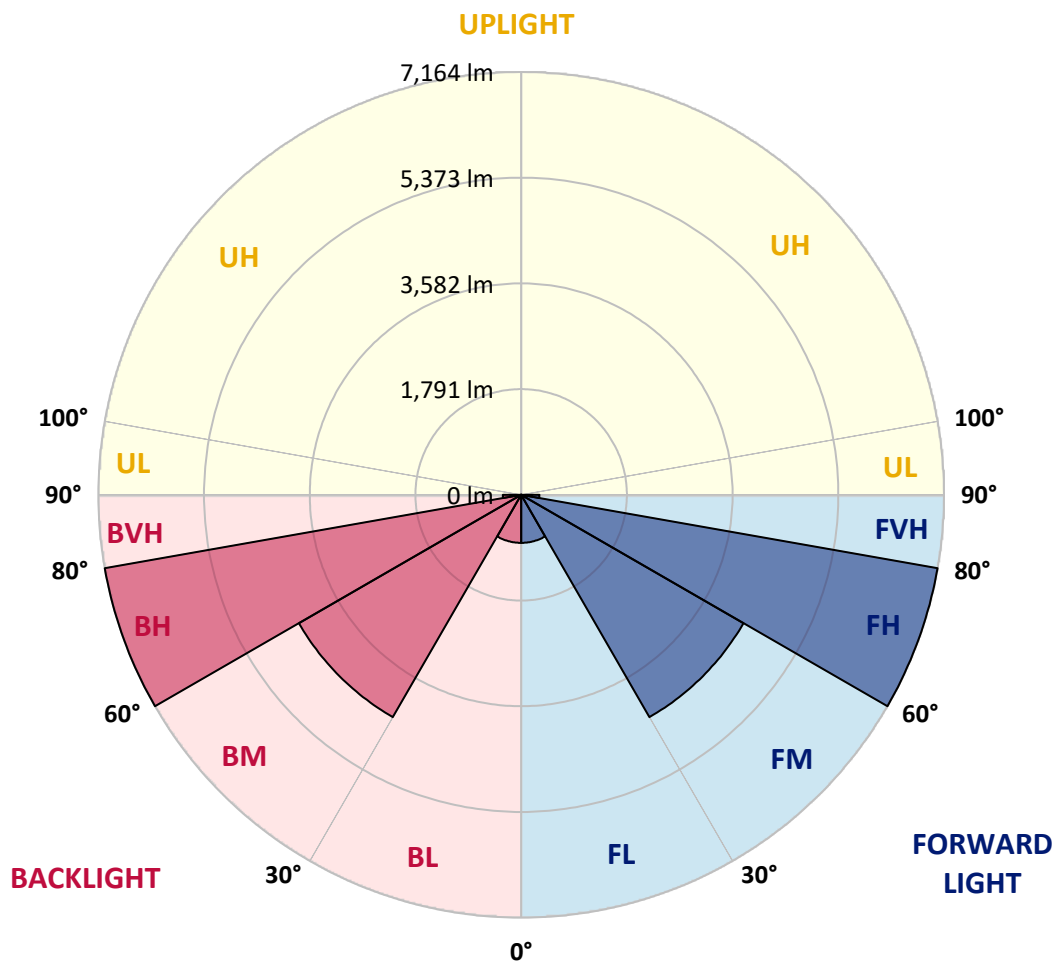
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	813.8	3.2			
FM (30°-60°)	4349.6	17.2			
FH (60°-80°)	7164.5	28.3			G3/7500
FVH (80°-90°)	310.1	1.2			G3/500
BL (0°-30°)	813.8	3.2	B2/1000		
BM (30°-60°)	4349.6	17.2	B3/5000		
BH (60°-80°)	7164.5	28.3	B5		G3/7500
BVH (80°-90°)	310.1	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°	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9
2.5°	1810.9	1810.9	1812.5	1810.9	1807.8	1806.3	1801.6	1798.5	1795.4	1793.8	1790.7
5°	1812.5	1812.5	1814.0	1812.5	1809.4	1806.3	1803.2	1798.5	1795.4	1792.3	1790.7
7.5°	1818.7	1820.3	1821.8	1820.3	1814.0	1810.9	1806.3	1801.6	1795.4	1792.3	1789.2
10°	1831.2	1831.2	1831.2	1829.6	1824.9	1818.7	1812.5	1807.8	1800.0	1792.3	1787.6
12.5°	1840.5	1842.1	1842.1	1838.9	1832.7	1824.9	1818.7	1814.0	1807.8	1801.6	1796.9
15°	1854.5	1854.5	1852.9	1846.7	1837.4	1831.2	1828.0	1826.5	1824.9	1821.8	1817.2
17.5°	1882.5	1880.9	1876.3	1866.9	1856.1	1851.4	1848.3	1848.3	1848.3	1846.7	1843.6
20°	1923.0	1923.0	1916.7	1901.2	1891.8	1887.2	1882.5	1882.5	1882.5	1877.8	1873.2
22.5°	1988.3	1989.9	1980.5	1961.8	1949.4	1940.1	1933.8	1929.2	1924.5	1921.4	1913.6
25°	2077.0	2075.4	2064.5	2041.2	2031.9	2022.5	2010.1	2002.3	1996.1	1991.4	1982.1
27.5°	2170.3	2168.8	2156.3	2136.1	2129.9	2115.9	2106.5	2095.6	2087.9	2080.1	2070.8
30°	2290.1	2282.3	2273.0	2257.4	2254.3	2243.4	2231.0	2215.4	2203.0	2190.5	2179.7
32.5°	2397.5	2397.5	2383.5	2375.7	2381.9	2377.2	2378.8	2369.5	2361.7	2357.0	2346.1
35°	2546.8	2546.8	2540.6	2531.3	2532.8	2521.9	2520.4	2521.9	2528.2	2528.2	2515.7
37.5°	2746.0	2749.1	2728.9	2725.7	2718.0	2702.4	2694.6	2697.7	2711.7	2719.5	2702.4
40°	2993.3	2999.6	2993.3	2973.1	2963.8	2937.3	2921.8	2921.8	2932.7	2940.4	2934.2
42.5°	3237.6	3248.5	3237.6	3222.0	3214.3	3194.0	3186.3	3192.5	3206.5	3215.8	3206.5
45°	3509.9	3517.6	3503.6	3485.0	3475.6	3464.7	3460.1	3464.7	3480.3	3489.6	3486.5
47.5°	3777.5	3788.3	3771.2	3763.4	3763.4	3752.6	3765.0	3777.5	3791.5	3813.2	3803.9
50°	4038.8	4052.8	4041.9	4043.5	4055.9	4076.2	4099.5	4124.4	4149.3	4172.6	4175.7
52.5°	4272.2	4294.0	4295.5	4323.5	4362.4	4393.5	4458.9	4513.3	4572.5	4592.7	4583.3
55°	4518.0	4547.6	4586.5	4630.0	4692.3	4756.0	4866.5	4964.5	5042.3	5090.5	5082.8
57.5°	4869.6	4899.2	4939.6	5011.2	5104.5	5191.7	5342.6	5495.0	5613.3	5686.4	5650.6
60°	5325.5	5356.6	5409.5	5485.7	5607.1	5725.3	5932.2	6151.6	6335.2	6419.2	6353.8
62.5°	5929.1	5958.7	5992.9	6094.0	6229.4	6381.8	6641.7	6923.3	7156.6	7237.5	7145.7
65°	6789.5	6825.2	6836.1	6918.6	7050.8	7192.4	7472.4	7789.8	8055.9	8188.1	8004.5
67.5°	7758.7	7772.7	7816.3	7912.7	8048.1	8175.7	8396.6	8696.8	8952.0	9025.1	8829.1
70°	8326.6	8354.6	8430.8	8564.6	8726.4	8927.1	9168.3	9491.9	9781.2	9815.5	9566.5
72.5°	7813.2	7870.7	8006.1	8214.6	8553.7	8910.0	9325.4	9803.0	10218.4	10266.6	9866.8
75°	6266.7	6332.1	6493.9	6722.6	7123.9	7652.9	8253.4	8970.7	9593.0	9672.3	9143.4
77.5°	3340.3	3421.2	3656.1	3964.1	4536.7	5236.8	5960.2	6778.6	7307.5	7486.4	7105.3
80°	841.7	885.2	998.8	1179.3	1566.7	2131.4	2755.3	3635.9	4292.4	4570.9	4292.4
82.5°	326.7	359.4	390.5	412.3	449.6	527.4	728.1	1187.1	1599.3	1969.6	1705.1
85°	126.0	133.8	192.9	219.4	219.4	241.1	276.9	326.7	404.5	441.8	370.3
87.5°	49.8	54.5	66.9	102.7	105.8	93.3	99.6	112.0	85.6	71.6	80.9
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°	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9	1796.9
2.5°	1789.2	1787.6	1784.5	1786.0	1784.5	1784.5	1784.5	1784.5
5°	1787.6	1787.6	1784.5	1784.5	1784.5	1786.0	1784.5	1784.5
7.5°	1786.0	1784.5	1781.4	1779.8	1779.8	1778.3	1778.3	1778.3
10°	1782.9	1779.8	1776.7	1775.2	1775.2	1772.0	1772.0	1772.0
12.5°	1790.7	1786.0	1782.9	1781.4	1781.4	1781.4	1782.9	1782.9
15°	1812.5	1803.2	1798.5	1796.9	1798.5	1801.6	1803.2	1804.7
17.5°	1835.8	1826.5	1818.7	1815.6	1817.2	1821.8	1826.5	1829.6
20°	1865.4	1857.6	1848.3	1845.2	1845.2	1851.4	1854.5	1859.2
22.5°	1907.4	1901.2	1893.4	1888.7	1885.6	1893.4	1898.1	1901.2
25°	1974.3	1968.1	1961.8	1957.2	1955.6	1963.4	1966.5	1968.1
27.5°	2063.0	2056.8	2053.6	2052.1	2047.4	2050.5	2055.2	2053.6
30°	2178.1	2182.8	2178.1	2178.1	2170.3	2173.4	2170.3	2167.2
32.5°	2332.1	2327.5	2313.5	2304.1	2293.2	2293.2	2288.6	2283.9
35°	2486.1	2470.6	2462.8	2467.5	2462.8	2465.9	2458.1	2450.4
37.5°	2668.2	2658.8	2657.3	2671.3	2668.2	2671.3	2671.3	2660.4
40°	2909.3	2903.1	2914.0	2937.3	2946.7	2945.1	2948.2	2934.2
42.5°	3186.3	3175.4	3180.0	3200.3	3211.1	3214.3	3212.7	3200.3
45°	3463.2	3466.3	3466.3	3488.1	3499.0	3505.2	3494.3	3489.6
47.5°	3775.9	3780.6	3769.7	3783.7	3786.8	3797.7	3788.3	3780.6
50°	4136.8	4119.7	4094.8	4099.5	4099.5	4096.4	4085.5	4076.2
52.5°	4539.8	4500.9	4454.2	4438.7	4421.5	4404.4	4382.7	4365.5
55°	4998.7	4931.8	4847.8	4808.9	4776.3	4737.4	4687.6	4670.5
57.5°	5530.8	5415.7	5303.7	5233.7	5149.7	5098.3	5034.5	5031.4
60°	6162.5	6006.9	5809.3	5705.1	5621.1	5560.4	5512.2	5493.5
62.5°	6892.1	6624.5	6411.4	6299.4	6201.4	6164.0	6103.4	6111.1
65°	7640.5	7368.2	7161.3	7071.1	6979.3	6954.4	6898.4	6918.6
67.5°	8451.0	8227.0	7999.9	7915.8	7831.8	7806.9	7749.4	7766.5
70°	9177.6	8892.9	8634.6	8469.7	8326.6	8211.4	8138.3	8108.8
72.5°	9322.3	8829.1	8423.0	8010.7	7772.7	7564.2	7478.7	7446.0
75°	8376.4	7610.9	7032.2	6548.3	6280.7	5977.3	5944.7	5899.5
77.5°	6515.6	5644.4	4944.3	4322.0	3962.6	3592.3	3464.7	3368.3
80°	3886.4	2987.1	2315.0	1622.7	1324.0	1065.7	1001.9	935.0
82.5°	1390.9	891.5	600.5	468.3	418.5	385.8	360.9	328.3
85°	336.0	283.2	267.6	242.7	239.6	203.8	144.7	129.1
87.5°	107.3	98.0	99.6	94.9	99.6	74.7	60.7	54.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)