

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: P195966

Luminaire Tested: **NAV-AF-06-D-UNV-5WQ-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195966
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-06-D-UNV-5WQ-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25258.7 lumens
Efficiency: N/A
Efficacy: 130.9 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

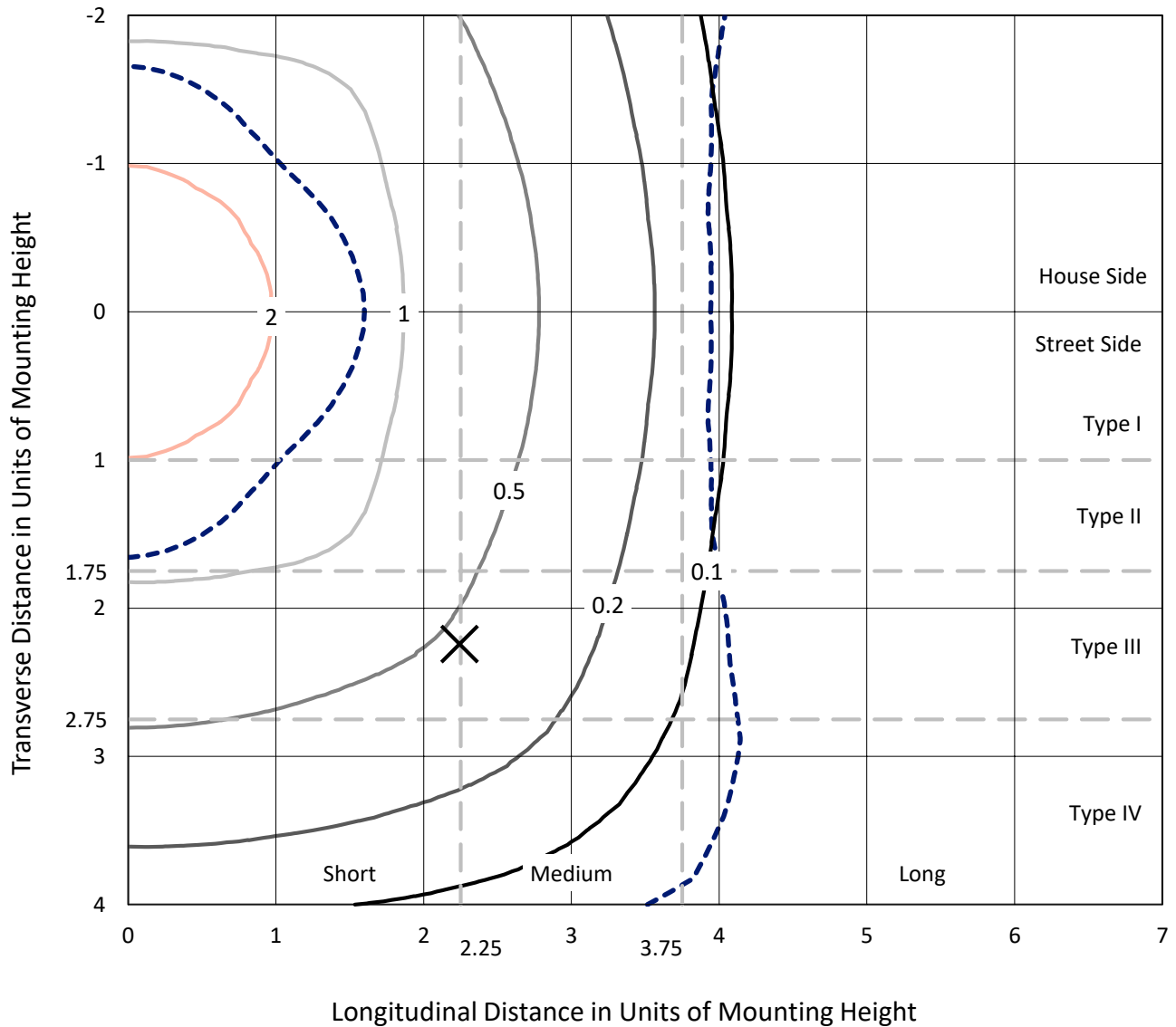
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

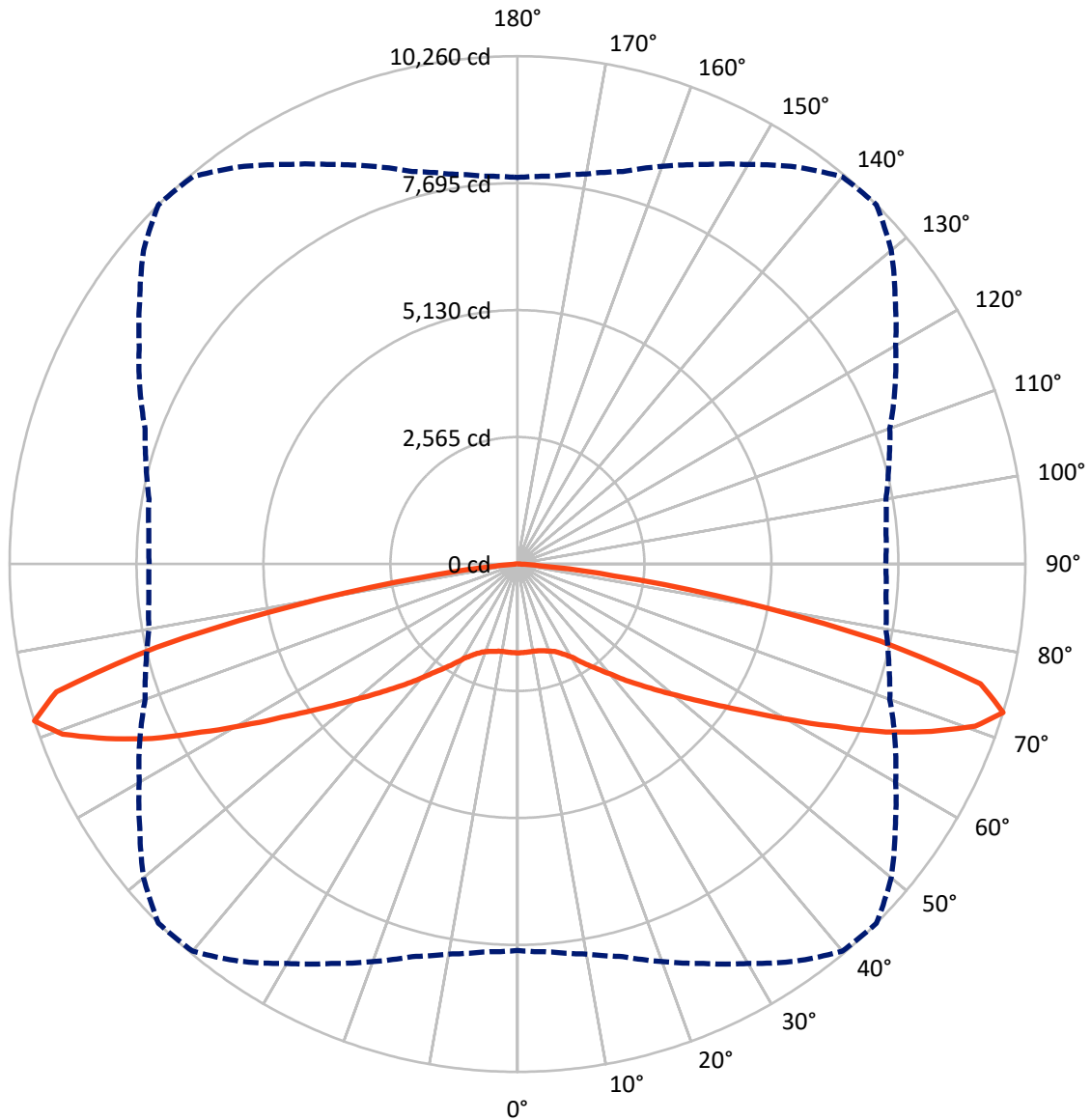
× Max cd
 - - - 1/2 Max cd



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	12629.4	0.0	12629.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12629.4	0.0	12629.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	25258.7	0.0	25258.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.4	0.7
10°-20°	518.7	2.1
20°-30°	936.4	3.7
30°-40°	1597.3	6.3
40°-50°	2719.4	10.8
50°-60°	4376.5	17.3
60°-70°	7278.3	28.8
70°-80°	7040.9	27.9
80°-90°	619.7	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°	25258.7	100.0
0°-180°	25258.7	100.0



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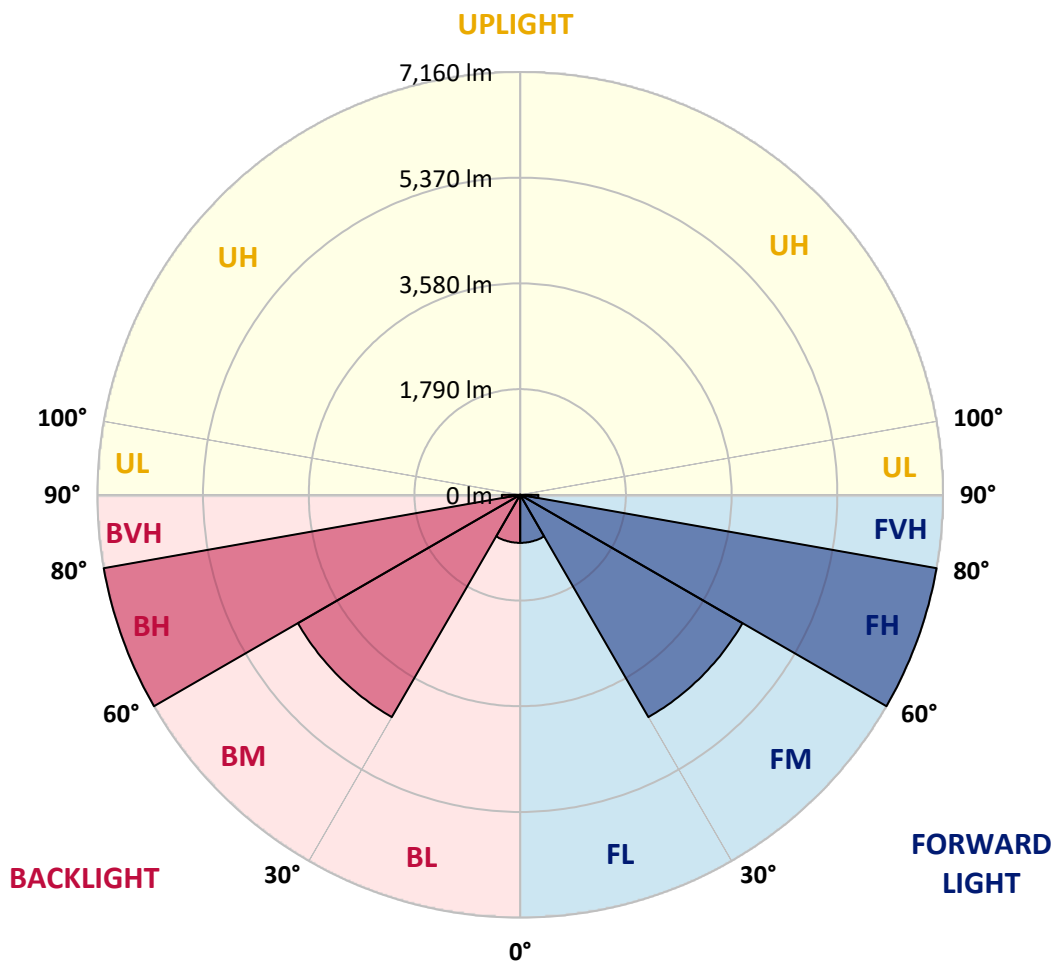
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	813.3	3.2			
FM	(30°-60°)	4346.6	17.2			
FH	(60°-80°)	7159.6	28.3			G3/7500
FVH	(80°-90°)	309.8	1.2			G3/500
BL	(0°-30°)	813.3	3.2	B2/1000		
BM	(30°-60°)	4346.6	17.2	B3/5000		
BH	(60°-80°)	7159.6	28.3	B5		G3/7500
BVH	(80°-90°)	309.8	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°	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7
2.5°	1809.7	1809.7	1811.2	1809.7	1806.6	1805.0	1800.4	1797.2	1794.2	1792.6	1789.4
5°	1811.2	1811.2	1812.8	1811.2	1808.2	1805.0	1801.9	1797.2	1794.2	1791.1	1789.4
7.5°	1817.5	1819.0	1820.5	1819.0	1812.8	1809.7	1805.0	1800.4	1794.2	1791.1	1787.9
10°	1830.0	1830.0	1830.0	1828.3	1823.7	1817.5	1811.2	1806.6	1798.9	1791.1	1786.4
12.5°	1839.3	1840.8	1840.8	1837.7	1831.5	1823.7	1817.5	1812.8	1806.6	1800.4	1795.7
15°	1853.2	1853.2	1851.6	1845.5	1836.1	1830.0	1826.8	1825.3	1823.7	1820.5	1815.9
17.5°	1881.2	1879.7	1875.0	1865.7	1854.8	1850.1	1847.0	1847.0	1847.0	1845.5	1842.3
20°	1921.6	1921.6	1915.4	1899.8	1890.5	1885.9	1881.2	1881.2	1881.2	1876.5	1871.9
22.5°	1987.0	1988.5	1979.2	1960.5	1948.1	1938.7	1932.6	1927.9	1923.1	1920.1	1912.3
25°	2075.6	2074.0	2063.1	2039.8	2030.5	2021.1	2008.7	2000.9	1994.8	1990.0	1980.7
27.5°	2168.9	2167.3	2154.8	2134.6	2128.5	2114.4	2105.1	2094.2	2086.4	2078.6	2069.3
30°	2288.5	2280.8	2271.5	2255.9	2252.7	2241.9	2229.5	2214.0	2201.5	2189.0	2178.2
32.5°	2395.9	2395.9	2381.8	2374.1	2380.3	2375.6	2377.1	2367.8	2360.0	2355.4	2344.5
35°	2545.1	2545.1	2538.9	2529.6	2531.1	2520.2	2518.6	2520.2	2526.4	2526.4	2514.0
37.5°	2744.1	2747.2	2727.0	2723.9	2716.1	2700.6	2692.8	2695.9	2709.9	2717.7	2700.6
40°	2991.3	2997.6	2991.3	2971.1	2961.7	2935.4	2919.8	2919.8	2930.7	2938.4	2932.2
42.5°	3235.4	3246.2	3235.4	3219.8	3212.1	3191.8	3184.0	3190.3	3204.3	3213.6	3204.3
45°	3507.5	3515.3	3501.3	3482.5	3473.2	3462.4	3457.7	3462.4	3477.9	3487.2	3484.2
47.5°	3774.9	3785.7	3768.7	3760.9	3760.9	3750.0	3762.4	3774.9	3788.9	3810.6	3801.3
50°	4036.1	4050.1	4039.1	4040.8	4053.1	4073.4	4096.7	4121.6	4146.4	4169.8	4172.9
52.5°	4269.3	4291.1	4292.6	4320.5	4359.4	4390.5	4455.9	4510.3	4569.3	4589.6	4580.3
55°	4514.9	4544.5	4583.3	4626.8	4689.0	4752.8	4863.2	4961.1	5038.9	5087.0	5079.3
57.5°	4866.3	4895.8	4936.2	5007.8	5101.0	5188.1	5338.9	5491.3	5609.5	5682.5	5646.8
60°	5321.8	5352.9	5405.8	5482.0	5603.2	5721.4	5928.2	6147.3	6330.8	6414.8	6349.5
62.5°	5925.0	5954.6	5988.8	6089.8	6225.1	6377.5	6637.1	6918.5	7151.8	7232.6	7140.8
65°	6784.8	6820.5	6831.5	6913.8	7046.0	7187.5	7467.3	7784.5	8050.3	8182.5	7999.1
67.5°	7753.4	7767.4	7810.9	7907.3	8042.5	8170.1	8390.9	8690.9	8945.9	9018.9	8823.1
70°	8320.9	8348.8	8425.0	8558.7	8720.5	8920.9	9162.0	9485.3	9774.5	9808.8	9560.0
72.5°	7807.8	7865.4	8000.6	8209.0	8547.9	8903.9	9319.0	9796.3	10211.4	10259.6	9860.0
75°	6262.4	6327.8	6489.4	6717.9	7119.0	7647.7	8247.8	8964.5	9586.4	9665.7	9137.1
77.5°	3338.0	3418.8	3653.6	3961.5	4533.6	5233.2	5956.1	6773.9	7302.5	7481.4	7100.4
80°	841.1	884.6	998.1	1178.4	1565.6	2130.0	2753.4	3633.4	4289.4	4567.8	4289.4
82.5°	326.5	359.2	390.3	412.0	449.3	527.0	727.6	1186.2	1598.3	1968.3	1703.9
85°	125.9	133.7	192.8	219.2	219.2	241.0	276.7	326.5	404.3	441.5	370.0
87.5°	49.7	54.4	66.9	102.6	105.7	93.3	99.5	111.9	85.5	71.5	80.8
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°	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7	1795.7
2.5°	1787.9	1786.4	1783.3	1784.8	1783.3	1783.3	1783.3	1783.3
5°	1786.4	1786.4	1783.3	1783.3	1783.3	1784.8	1783.3	1783.3
7.5°	1784.8	1783.3	1780.1	1778.6	1778.6	1777.1	1777.1	1777.1
10°	1781.7	1778.6	1775.5	1773.9	1773.9	1770.8	1770.8	1770.8
12.5°	1789.4	1784.8	1781.7	1780.1	1780.1	1780.1	1781.7	1781.7
15°	1811.2	1801.9	1797.2	1795.7	1797.2	1800.4	1801.9	1803.5
17.5°	1834.6	1825.3	1817.5	1814.4	1815.9	1820.5	1825.3	1828.3
20°	1864.1	1856.3	1847.0	1843.9	1843.9	1850.1	1853.2	1857.9
22.5°	1906.1	1899.8	1892.0	1887.4	1884.3	1892.0	1896.8	1899.8
25°	1973.0	1966.7	1960.5	1955.9	1954.2	1962.0	1965.2	1966.7
27.5°	2061.6	2055.3	2052.2	2050.7	2046.0	2049.1	2053.8	2052.2
30°	2176.6	2181.2	2176.6	2176.6	2168.9	2171.9	2168.9	2165.7
32.5°	2330.5	2325.9	2311.9	2302.6	2291.6	2291.6	2287.0	2282.3
35°	2484.4	2468.9	2461.1	2465.8	2461.1	2464.2	2456.4	2448.6
37.5°	2666.3	2657.0	2655.5	2669.5	2666.3	2669.5	2669.5	2658.5
40°	2907.3	2901.1	2912.0	2935.4	2944.7	2943.1	2946.2	2932.2
42.5°	3184.0	3173.2	3177.9	3198.1	3209.0	3212.1	3210.5	3198.1
45°	3460.8	3463.9	3463.9	3485.7	3496.5	3502.8	3491.9	3487.2
47.5°	3773.4	3778.0	3767.1	3781.1	3784.2	3795.0	3785.7	3778.0
50°	4134.1	4116.9	4092.0	4096.7	4096.7	4093.5	4082.7	4073.4
52.5°	4536.7	4497.8	4451.2	4435.6	4418.5	4401.5	4379.7	4362.6
55°	4995.3	4928.5	4844.5	4805.6	4773.0	4734.1	4684.4	4667.3
57.5°	5527.0	5412.0	5300.0	5230.0	5146.2	5094.8	5031.1	5028.0
60°	6158.3	6002.8	5805.3	5701.2	5617.2	5556.6	5508.4	5489.8
62.5°	6887.4	6620.0	6407.0	6295.0	6197.1	6159.8	6099.1	6106.9
65°	7635.2	7363.2	7156.4	7066.2	6974.5	6949.6	6893.7	6913.8
67.5°	8445.3	8221.4	7994.4	7910.4	7826.5	7801.6	7744.0	7761.1
70°	9171.3	8886.8	8628.7	8463.9	8320.9	8205.8	8132.8	8103.2
72.5°	9315.9	8823.1	8417.2	8005.3	7767.4	7559.1	7473.6	7440.9
75°	8370.6	7605.7	7027.4	6543.8	6276.4	5973.2	5940.6	5895.5
77.5°	6511.2	5640.6	4941.0	4319.0	3959.8	3589.8	3462.4	3366.0
80°	3883.7	2985.1	2313.4	1621.6	1323.1	1065.0	1001.3	934.4
82.5°	1389.9	890.9	600.2	468.0	418.2	385.6	360.7	328.1
85°	335.8	282.9	267.4	242.5	239.5	203.7	144.5	129.0
87.5°	107.3	97.9	99.5	94.8	99.5	74.7	60.7	54.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)