

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: P270421

Luminaire Tested: **NAV-AF-03-D-UNV-RW-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270421
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16081.6 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

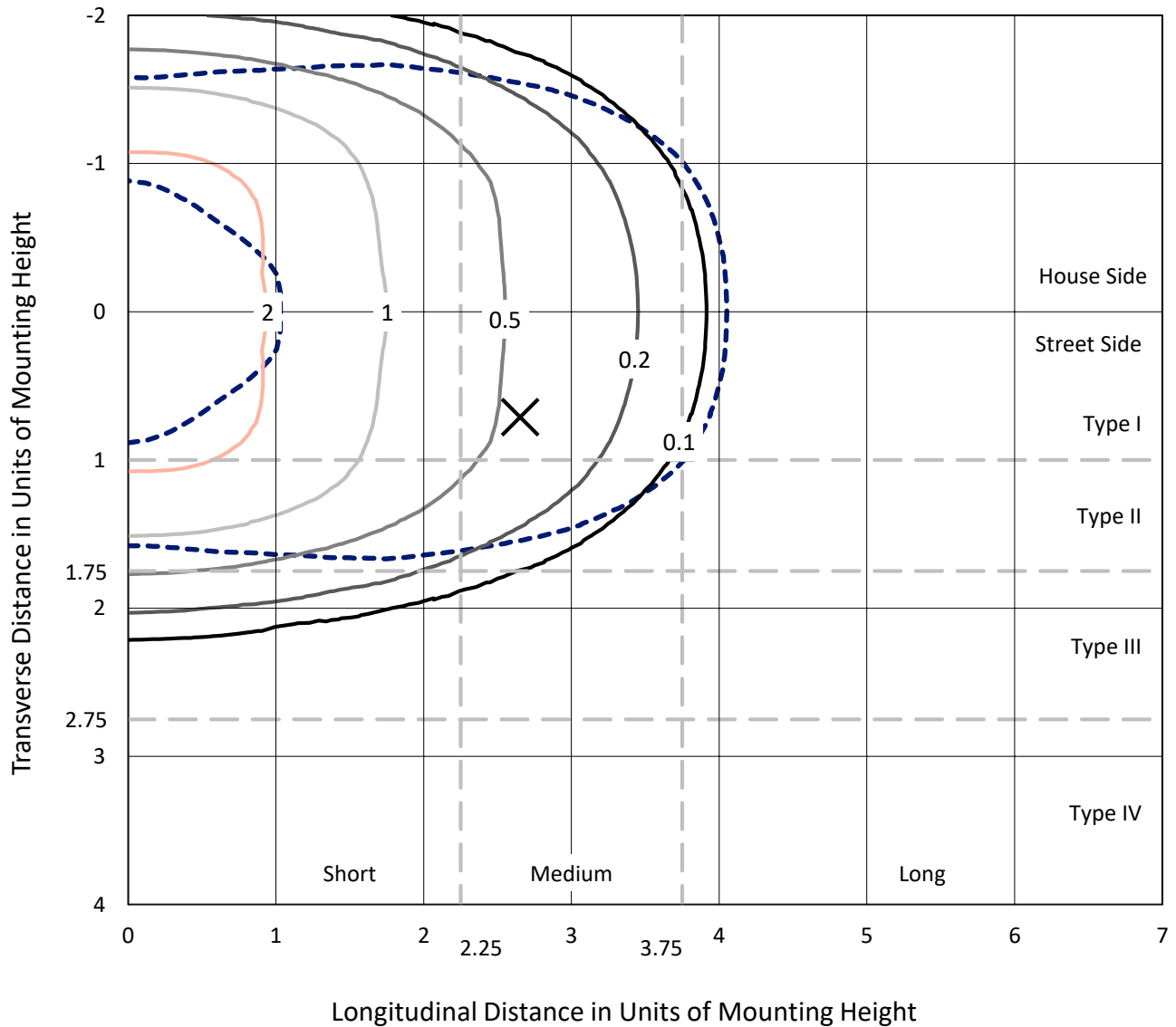
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

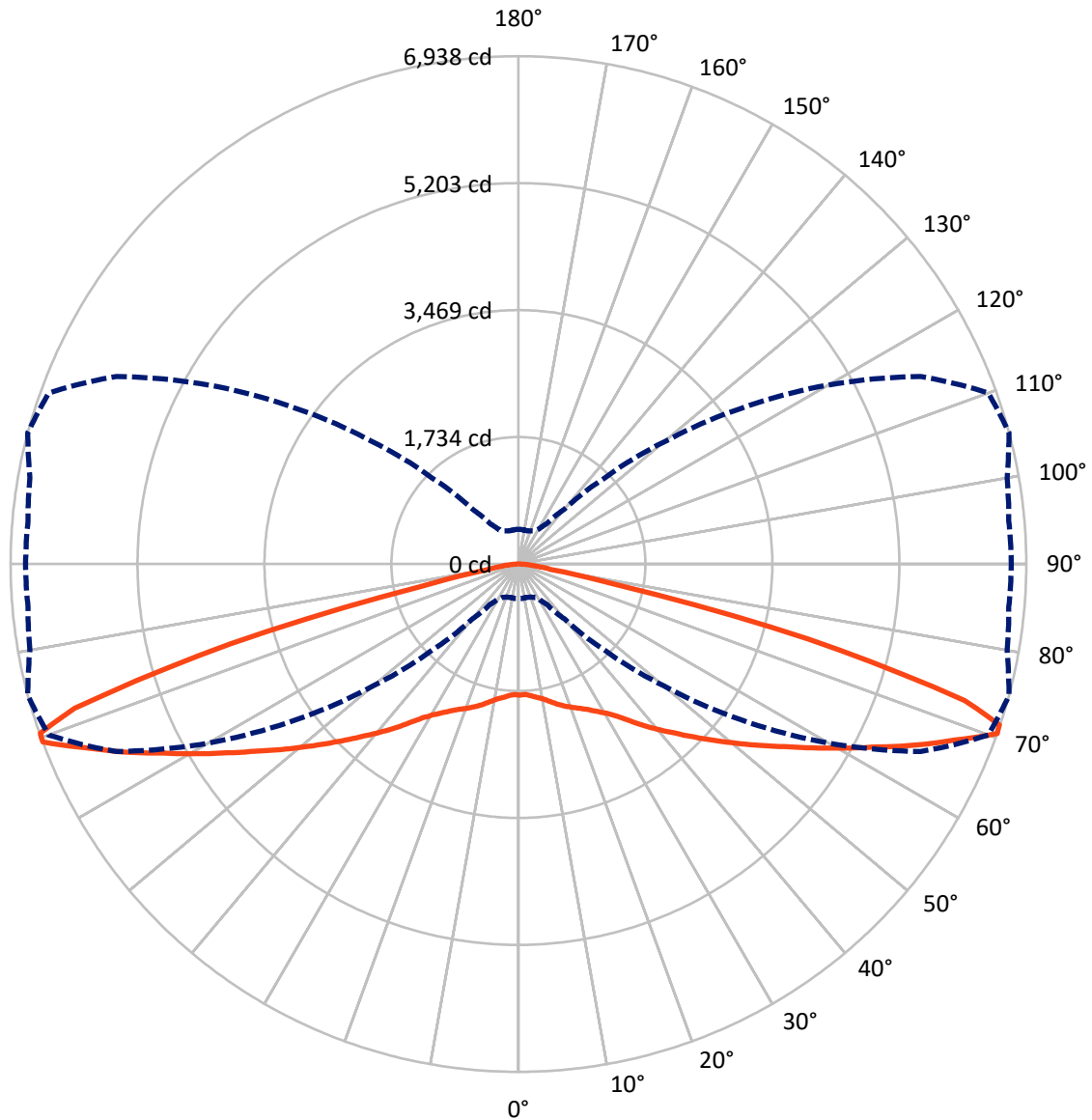
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8040.8	0.0	8040.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8040.8	0.0	8040.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	16081.6	0.0	16081.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.8	1.1
10°-20°	532.7	3.3
20°-30°	1000.6	6.2
30°-40°	1762.5	11.0
40°-50°	2921.0	18.2
50°-60°	4063.6	25.3
60°-70°	3836.1	23.9
70°-80°	1638.4	10.2
80°-90°	154.8	1.0
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°	16081.6	100.0
0°-180°	16081.6	100.0



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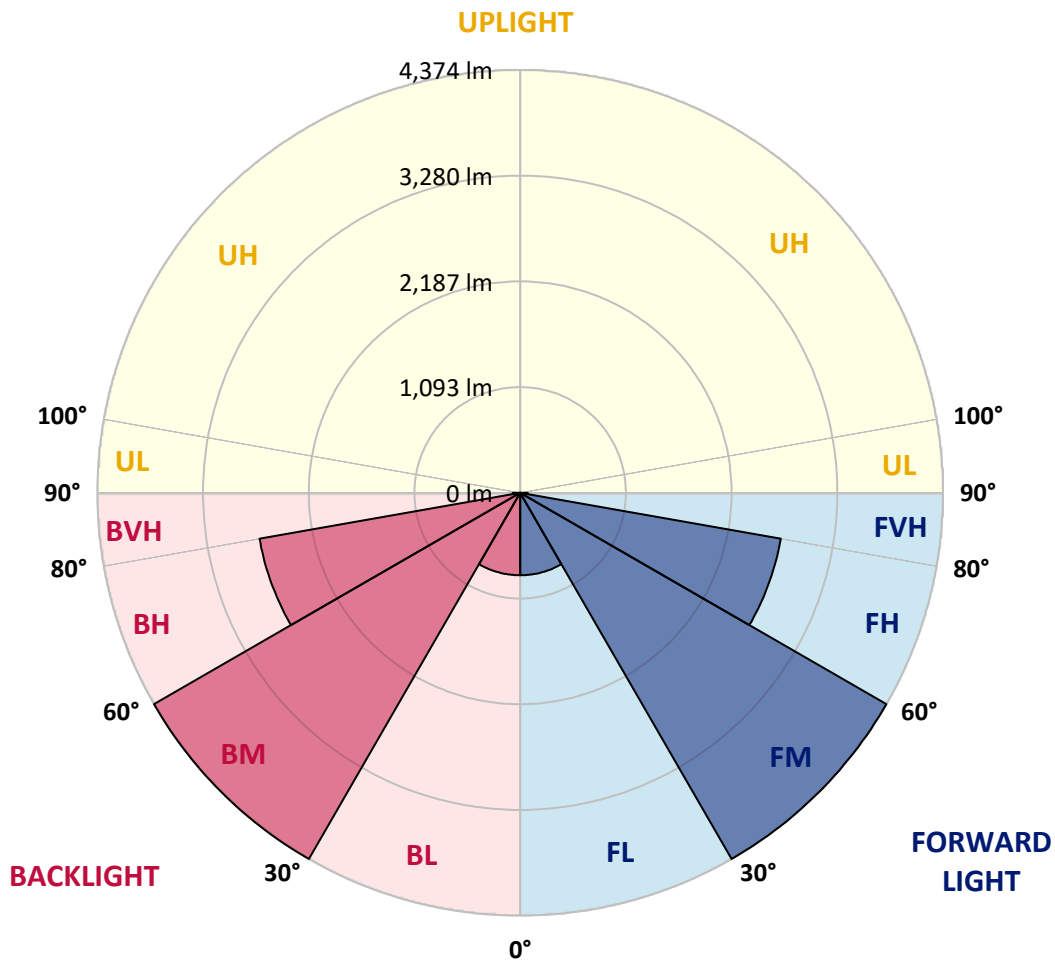
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	852.5	5.3			
FM	(30°-60°)	4373.6	27.2			
FH	(60°-80°)	2737.3	17.0			G2/5000
FVH	(80°-90°)	77.4	0.5			G1/100
BL	(0°-30°)	852.5	5.3	B2/1000		
BM	(30°-60°)	4373.6	27.2	B3/5000		
BH	(60°-80°)	2737.3	17.0	B4/5000		G4/5000
BVH	(80°-90°)	77.4	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9
2.5°	1801.9	1800.9	1801.9	1798.9	1799.9	1798.9	1798.9	1794.9	1794.9	1792.8	1789.9
5°	1781.8	1783.8	1783.8	1783.8	1786.8	1786.8	1790.9	1791.8	1794.9	1797.9	1799.9
7.5°	1748.6	1749.4	1752.6	1754.6	1760.6	1768.7	1776.8	1785.8	1793.8	1803.9	1815.0
10°	1720.3	1722.3	1727.4	1732.4	1743.5	1753.5	1767.7	1781.8	1795.9	1813.0	1830.1
12.5°	1705.3	1708.1	1716.2	1724.3	1741.5	1754.6	1773.8	1795.9	1815.0	1831.1	1850.2
15°	1707.1	1708.1	1719.3	1730.3	1754.6	1772.6	1799.9	1826.2	1849.3	1867.4	1889.7
17.5°	1736.5	1738.4	1749.4	1765.7	1788.9	1812.1	1841.3	1868.5	1899.6	1920.8	1947.0
20°	1793.8	1796.9	1808.9	1826.2	1851.2	1875.5	1905.8	1934.0	1966.2	1991.5	2017.7
22.5°	1868.5	1873.4	1886.6	1907.7	1933.0	1962.2	1993.3	2022.7	2052.8	2078.0	2100.2
25°	1968.1	1974.3	1988.4	2009.5	2034.8	2065.9	2098.3	2128.4	2159.6	2178.7	2197.0
27.5°	2102.3	2112.4	2127.5	2144.6	2166.7	2199.9	2230.2	2255.5	2285.6	2306.8	2319.0
30°	2282.7	2296.7	2308.9	2327.0	2343.0	2378.4	2402.5	2422.6	2445.9	2458.0	2461.0
32.5°	2503.3	2516.4	2528.5	2541.7	2563.9	2596.0	2619.3	2630.3	2642.5	2640.4	2629.2
35°	2752.2	2762.4	2769.5	2792.7	2828.9	2850.1	2867.2	2871.3	2873.1	2852.1	2830.9
37.5°	3014.4	3026.4	3032.5	3068.7	3102.9	3127.2	3135.3	3144.2	3138.3	3102.9	3064.7
40°	3297.5	3310.6	3328.7	3360.0	3400.3	3423.5	3433.5	3432.6	3427.6	3386.3	3323.6
42.5°	3575.7	3591.8	3606.9	3661.3	3694.5	3733.8	3738.8	3737.8	3726.8	3679.5	3606.9
45°	3811.5	3830.6	3861.9	3922.3	3975.7	4023.1	4042.3	4049.3	4038.2	3987.8	3905.2
47.5°	4005.9	4019.0	4058.4	4131.9	4200.5	4270.1	4308.4	4335.5	4334.5	4298.2	4210.5
50°	4139.0	4154.1	4202.5	4285.2	4370.8	4452.4	4527.9	4589.5	4618.6	4592.4	4510.8
52.5°	4177.3	4196.4	4259.9	4358.7	4458.5	4568.3	4681.2	4790.0	4855.5	4871.7	4808.2
55°	4016.1	4037.3	4129.9	4266.9	4431.2	4593.6	4764.8	4920.0	5055.0	5117.6	5092.3
57.5°	3546.4	3561.5	3679.5	3856.9	4091.6	4376.8	4665.1	4949.2	5181.1	5343.3	5371.5
60°	2804.7	2823.8	2952.8	3140.2	3407.4	3768.1	4171.2	4636.8	5091.4	5463.2	5647.6
62.5°	1892.5	1905.8	2029.7	2200.9	2493.2	2841.0	3290.4	3880.0	4527.9	5192.2	5712.1
65°	993.6	993.6	1077.3	1197.3	1430.0	1741.5	2202.0	2806.7	3577.7	4407.1	5276.7
67.5°	576.4	575.5	594.6	621.7	695.4	821.3	1075.4	1519.8	2249.4	3214.9	4204.4
70°	475.7	472.7	469.6	469.6	480.8	499.8	548.2	670.1	980.6	1657.8	2586.9
71°	454.5	452.4	444.4	441.3	446.5	456.5	477.7	534.1	696.4	1130.7	1932.0
72.5°	429.3	424.3	412.2	407.1	408.2	412.2	418.3	440.3	489.8	642.9	1101.5
75°	391.0	378.9	363.9	356.7	353.8	352.8	352.8	358.8	369.8	388.0	451.5
77.5°	346.7	329.6	313.4	306.3	301.3	298.2	296.4	292.3	290.2	298.2	321.6
80°	293.2	275.2	262.0	258.1	254.9	248.9	240.8	232.8	227.8	231.9	245.9
82.5°	226.7	208.5	210.7	211.6	206.6	196.5	188.5	179.4	170.3	168.3	175.3
85°	180.4	171.3	165.3	178.4	167.3	155.1	144.1	128.9	107.8	88.8	96.7
87.5°	77.7	78.6	112.8	170.3	149.2	120.0	99.8	80.6	51.5	38.3	39.3
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°	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9	1790.9
2.5°	1788.9	1788.9	1785.8	1783.8	1783.8	1783.8	1781.8	1782.7
5°	1800.9	1803.0	1805.0	1803.9	1807.0	1809.9	1808.9	1808.0
7.5°	1821.0	1827.2	1833.3	1836.1	1840.2	1844.3	1845.3	1842.2
10°	1841.3	1853.4	1862.4	1870.5	1875.5	1879.6	1882.6	1881.5
12.5°	1866.4	1883.6	1899.6	1915.8	1926.9	1933.0	1939.0	1936.9
15°	1907.7	1926.9	1947.0	1968.1	1985.3	1994.3	2003.5	2001.5
17.5°	1964.1	1981.3	1997.4	2018.6	2039.7	2049.8	2060.0	2058.9
20°	2034.8	2047.9	2056.8	2068.9	2089.2	2100.2	2109.3	2106.3
22.5°	2115.4	2119.5	2120.4	2124.4	2140.5	2153.6	2165.8	2168.8
25°	2203.1	2199.9	2194.0	2191.0	2202.0	2216.1	2231.2	2235.3
27.5°	2311.9	2301.7	2286.6	2274.6	2277.7	2295.8	2312.9	2316.9
30°	2448.9	2425.8	2393.5	2370.3	2366.2	2385.4	2403.5	2409.7
32.5°	2605.2	2574.0	2529.5	2494.2	2479.1	2496.3	2512.4	2521.5
35°	2790.6	2756.3	2702.9	2657.5	2633.3	2644.4	2672.6	2682.8
37.5°	3010.3	2962.9	2903.4	2846.0	2805.6	2807.7	2837.9	2850.1
40°	3253.1	3184.6	3109.0	3037.4	2979.0	2974.9	3002.1	3011.3
42.5°	3506.1	3418.4	3329.7	3236.1	3163.4	3150.4	3185.6	3186.6
45°	3778.2	3665.4	3555.5	3446.6	3371.1	3347.9	3382.2	3386.3
47.5°	4068.5	3927.4	3797.3	3679.5	3597.8	3561.5	3594.7	3600.9
50°	4370.8	4224.6	4073.5	3942.5	3846.7	3802.3	3841.7	3845.7
52.5°	4670.1	4531.9	4381.8	4231.6	4115.9	4065.4	4111.8	4125.8
55°	4971.4	4838.5	4697.2	4547.1	4401.1	4356.7	4407.1	4422.1
57.5°	5284.9	5156.9	5028.8	4877.6	4735.5	4668.1	4722.5	4743.7
60°	5630.5	5517.6	5396.7	5244.6	5104.4	5025.8	5072.2	5096.4
62.5°	5970.1	5947.0	5837.0	5678.8	5501.5	5422.9	5462.2	5479.3
65°	5998.3	6374.3	6369.3	6212.0	5964.0	5832.1	5843.1	5851.2
67.5°	5235.4	6098.1	6649.3	6698.8	6422.6	6216.0	6191.8	6196.9
70°	3706.6	4890.8	6060.9	6828.7	6937.6	6777.4	6725.0	6733.1
71°	2969.9	4196.4	5484.4	6517.4	6929.5	6883.3	6854.0	6875.2
72.5°	1895.7	3091.8	4345.6	5581.1	6372.2	6598.9	6632.2	6645.3
75°	688.3	1330.3	2251.4	3226.0	4088.5	4682.1	5008.7	5034.9
77.5°	369.8	476.7	736.7	1100.6	1382.8	1533.9	1552.0	1559.1
80°	272.0	315.5	360.8	412.2	444.4	450.5	439.5	416.3
82.5°	192.4	217.7	235.9	254.0	267.1	255.9	212.7	162.2
85°	111.8	123.0	132.9	142.1	144.1	136.1	89.7	73.7
87.5°	44.3	48.4	47.4	53.4	51.5	47.4	35.3	30.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)