

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: P196041

Luminaire Tested: **NAV-AF-03-D-UNV-RW-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196041
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15298.2 lumens
Efficiency: N/A
Efficacy: 123.4 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

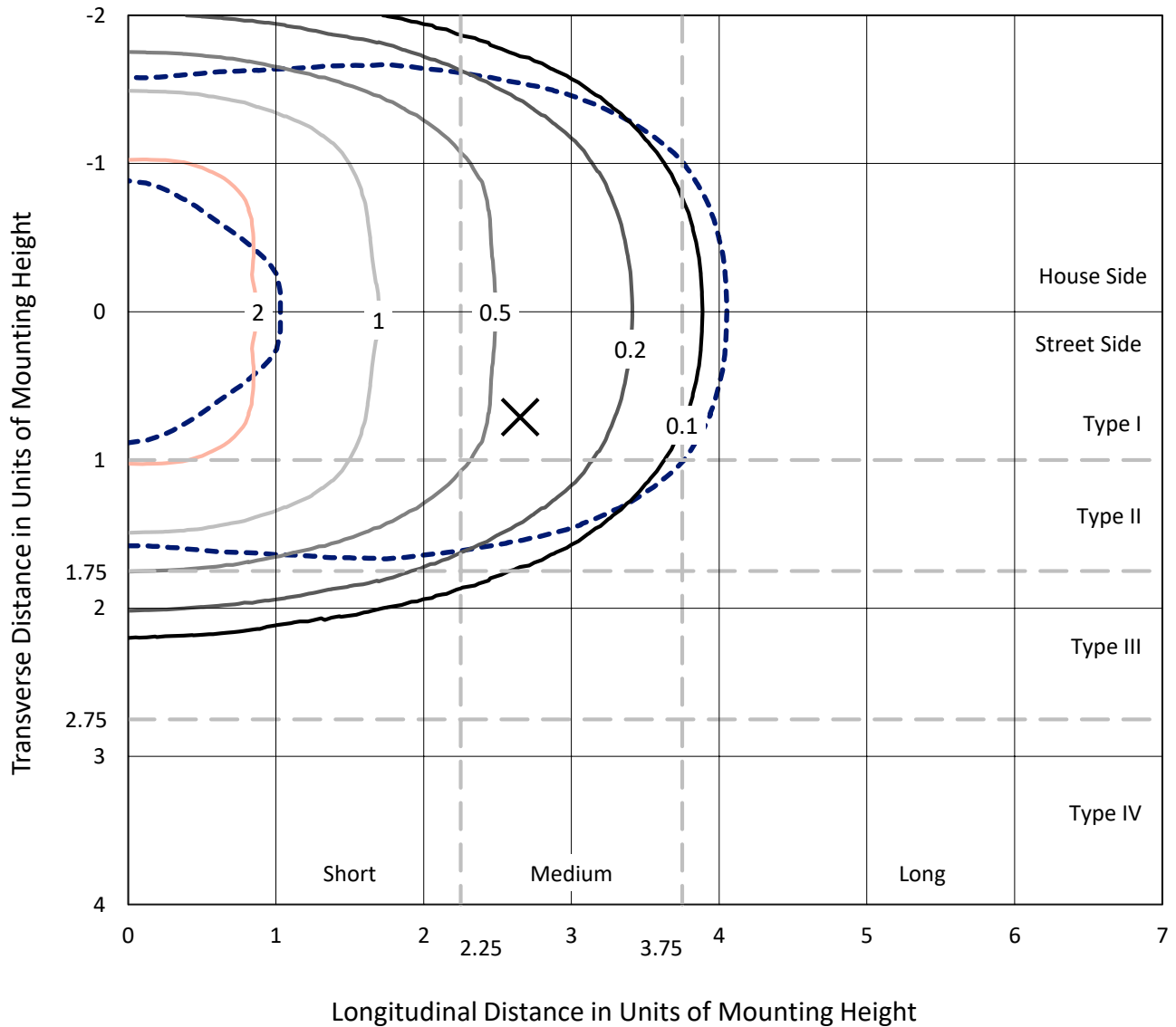
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196041
 CATALOG NUMBER: NAV-AF-03-D-UNV-RW-800

Iso-Footcandle Lines of Horizontal Illumination

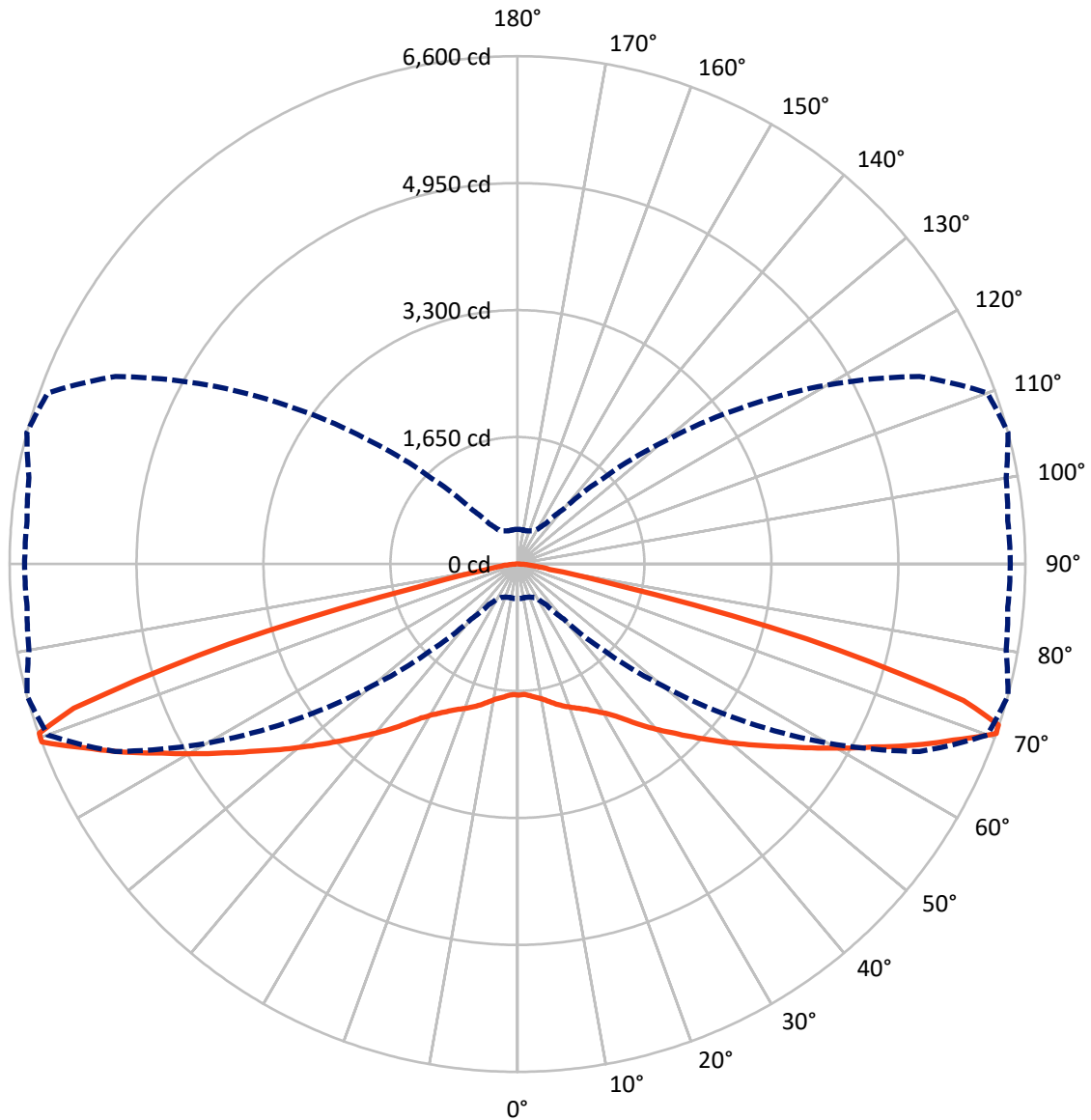
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type II - Medium - Full Cutoff

REPORT NUMBER: P196041
CATALOG NUMBER: NAV-AF-03-D-UNV-RW-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196041

CATALOG NUMBER: NAV-AF-03-D-UNV-RW-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7649.1	0.0	7649.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7649.1	0.0	7649.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	15298.2	0.0	15298.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.4	1.1
10°-20°	506.8	3.3
20°-30°	951.8	6.2
30°-40°	1676.7	11.0
40°-50°	2778.8	18.2
50°-60°	3865.6	25.3
60°-70°	3649.3	23.9
70°-80°	1558.6	10.2
80°-90°	147.3	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°	15298.2	100.0
0°-180°	15298.2	100.0



REPORT NUMBER: P196041

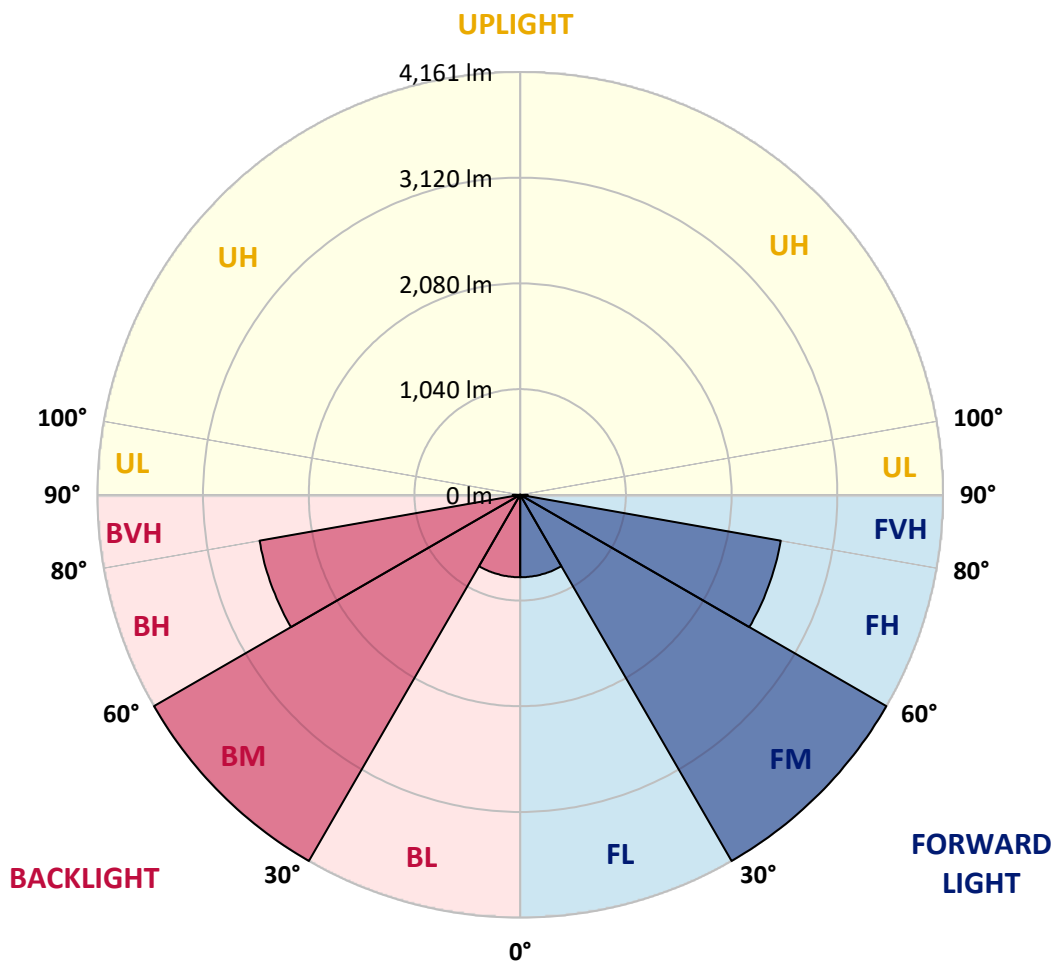
CATALOG NUMBER: NAV-AF-03-D-UNV-RW-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	811.0	5.3			
FM	(30°-60°)	4160.5	27.2			
FH	(60°-80°)	2603.9	17.0			G2/5000
FVH	(80°-90°)	73.6	0.5			G1/100
BL	(0°-30°)	811.0	5.3	B2/1000		
BM	(30°-60°)	4160.5	27.2	B3/5000		
BH	(60°-80°)	2603.9	17.0	B4/5000		G4/5000
BVH	(80°-90°)	73.6	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





REPORT NUMBER: P196041

CATALOG NUMBER: NAV-AF-03-D-UNV-RW-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6
2.5°	1714.2	1713.2	1714.2	1711.3	1712.2	1711.3	1711.3	1707.4	1707.4	1705.6	1702.6
5°	1695.0	1696.9	1696.9	1696.9	1699.7	1699.7	1703.6	1704.5	1707.4	1710.3	1712.2
7.5°	1663.3	1664.3	1667.2	1669.0	1674.9	1682.5	1690.2	1698.8	1706.5	1716.1	1726.6
10°	1636.5	1638.5	1643.2	1648.0	1658.5	1668.1	1681.5	1695.0	1708.4	1724.7	1741.0
12.5°	1622.1	1625.0	1632.6	1640.3	1656.7	1669.0	1687.4	1708.4	1726.6	1742.0	1760.2
15°	1624.0	1625.0	1635.5	1646.1	1669.0	1686.3	1712.2	1737.2	1759.2	1776.5	1797.5
17.5°	1651.9	1653.8	1664.3	1679.7	1701.7	1723.8	1751.5	1777.4	1807.1	1827.3	1852.2
20°	1706.5	1709.4	1720.9	1737.2	1761.1	1784.1	1812.9	1839.8	1870.5	1894.4	1919.4
22.5°	1777.4	1782.2	1794.7	1814.8	1838.8	1866.6	1896.3	1924.1	1952.9	1976.9	1997.9
25°	1872.3	1878.1	1891.5	1911.7	1935.6	1965.3	1996.0	2024.7	2054.5	2072.7	2090.0
27.5°	1999.9	2009.4	2023.8	2040.1	2061.2	2092.9	2121.6	2145.5	2174.3	2194.4	2206.0
30°	2171.4	2184.9	2196.4	2213.7	2229.0	2262.6	2285.6	2304.7	2326.8	2338.3	2341.1
32.5°	2381.4	2393.9	2405.4	2417.8	2438.9	2469.6	2491.7	2502.2	2513.7	2511.8	2501.2
35°	2618.2	2627.8	2634.5	2656.6	2691.1	2711.2	2727.5	2731.4	2733.2	2713.1	2693.0
37.5°	2867.4	2879.0	2884.7	2919.2	2951.8	2974.8	2982.5	2991.1	2985.4	2951.8	2915.4
40°	3136.9	3149.4	3166.5	3196.3	3234.7	3256.7	3266.3	3265.4	3260.6	3221.3	3161.7
42.5°	3401.4	3416.8	3431.2	3482.9	3514.6	3552.0	3556.8	3555.8	3545.2	3500.2	3431.2
45°	3625.7	3644.1	3673.7	3731.2	3782.1	3827.2	3845.4	3852.0	3841.5	3793.6	3714.9
47.5°	3810.8	3823.3	3860.7	3930.7	3995.9	4062.0	4098.5	4124.3	4123.4	4088.8	4005.5
50°	3937.3	3951.8	3997.8	4076.4	4157.9	4235.5	4307.4	4366.0	4393.7	4368.8	4291.2
52.5°	3973.8	3992.1	4052.4	4146.3	4241.3	4345.8	4453.1	4556.7	4619.0	4634.4	4573.9
55°	3820.4	3840.6	3928.7	4059.2	4215.4	4369.7	4532.7	4680.4	4808.8	4868.2	4844.3
57.5°	3373.7	3388.0	3500.2	3668.9	3892.3	4163.6	4437.8	4708.1	4928.7	5083.0	5109.8
60°	2668.1	2686.3	2809.0	2987.3	3241.3	3584.6	3968.0	4411.0	4843.4	5197.1	5372.5
62.5°	1800.4	1812.9	1930.8	2093.8	2371.8	2702.5	3130.1	3691.0	4307.4	4939.2	5433.9
65°	945.3	945.3	1024.9	1139.0	1360.4	1656.7	2094.8	2670.0	3403.4	4192.4	5019.7
67.5°	548.4	547.4	565.6	591.5	661.5	781.3	1023.0	1445.7	2139.8	3058.2	3999.7
70°	452.6	449.6	446.7	446.7	457.3	475.5	521.5	637.5	932.8	1577.1	2461.0
71°	432.4	430.5	422.8	419.9	424.7	434.2	454.4	508.1	662.5	1075.6	1837.8
72.5°	408.4	403.7	392.1	387.3	388.3	392.1	397.8	419.0	466.0	611.6	1047.8
75°	371.9	360.5	346.1	339.4	336.6	335.5	335.5	341.3	351.8	369.1	429.5
77.5°	329.8	313.5	298.2	291.4	286.6	283.8	281.8	278.0	276.1	283.8	305.9
80°	279.0	261.8	249.3	245.4	242.5	236.8	229.1	221.5	216.7	220.5	233.9
82.5°	215.7	198.5	200.4	201.3	196.5	187.0	179.3	170.6	162.0	160.1	166.8
85°	171.7	163.0	157.2	169.7	159.2	147.6	137.1	122.8	102.6	84.4	92.1
87.5°	73.9	74.8	107.4	162.0	141.9	114.1	94.9	76.7	48.9	36.4	37.4
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: P196041

CATALOG NUMBER: NAV-AF-03-D-UNV-RW-800

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6
2.5°	1701.7	1701.7	1698.8	1696.9	1696.9	1696.9	1695.0	1696.0
5°	1713.2	1715.1	1717.0	1716.1	1719.0	1721.8	1720.9	1719.9
7.5°	1732.4	1738.1	1743.8	1746.8	1750.6	1754.5	1755.4	1752.5
10°	1751.5	1763.1	1771.6	1779.3	1784.1	1788.0	1790.9	1789.9
12.5°	1775.5	1791.8	1807.1	1822.5	1833.0	1838.8	1844.6	1842.6
15°	1814.8	1833.0	1852.2	1872.3	1888.7	1897.3	1905.9	1904.0
17.5°	1868.5	1884.8	1900.1	1920.3	1940.4	1949.9	1959.6	1958.6
20°	1935.6	1948.1	1956.7	1968.2	1987.4	1997.9	2006.5	2003.7
22.5°	2012.3	2016.1	2017.1	2020.9	2036.3	2048.8	2060.2	2063.1
25°	2095.7	2092.9	2087.1	2084.2	2094.8	2108.2	2122.5	2126.4
27.5°	2199.2	2189.6	2175.3	2163.7	2166.6	2183.9	2200.2	2204.0
30°	2329.7	2307.6	2276.9	2254.9	2251.0	2269.2	2286.5	2292.2
32.5°	2478.2	2448.5	2406.3	2372.7	2358.4	2374.7	2390.0	2398.6
35°	2654.7	2622.0	2571.2	2528.1	2505.1	2515.6	2542.4	2552.1
37.5°	2863.6	2818.5	2762.0	2707.3	2669.0	2670.9	2699.7	2711.2
40°	3094.6	3029.5	2957.6	2889.5	2833.9	2830.1	2856.0	2864.6
42.5°	3335.3	3251.9	3167.6	3078.4	3009.3	2996.9	3030.5	3031.4
45°	3594.1	3486.8	3382.3	3278.8	3206.8	3184.8	3217.4	3221.3
47.5°	3870.2	3736.0	3612.3	3500.2	3422.6	3388.0	3419.7	3425.5
50°	4157.9	4018.9	3875.0	3750.4	3659.4	3617.2	3654.6	3658.4
52.5°	4442.6	4311.2	4168.4	4025.6	3915.3	3867.4	3911.5	3925.0
55°	4729.3	4602.7	4468.5	4325.6	4186.6	4144.5	4192.4	4206.8
57.5°	5027.4	4905.7	4783.9	4640.1	4505.0	4440.7	4492.5	4512.5
60°	5356.3	5248.9	5133.8	4989.0	4855.8	4781.1	4825.2	4848.2
62.5°	5679.3	5657.3	5552.8	5402.3	5233.5	5158.7	5196.2	5212.4
65°	5706.1	6063.7	6058.9	5909.4	5673.6	5548.0	5558.5	5566.2
67.5°	4980.4	5801.1	6325.5	6372.5	6109.8	5913.3	5890.3	5895.1
70°	3526.1	4652.6	5765.7	6496.1	6599.7	6447.2	6397.4	6405.1
71°	2825.3	3992.1	5217.3	6199.9	6592.0	6547.9	6520.1	6540.2
72.5°	1803.4	2941.3	4133.9	5309.3	6061.8	6277.5	6309.2	6321.6
75°	654.8	1265.5	2141.8	3068.8	3889.5	4454.1	4764.7	4789.7
77.5°	351.8	453.5	700.8	1046.9	1315.3	1459.1	1476.4	1483.1
80°	258.8	300.0	343.2	392.1	422.8	428.5	418.0	396.0
82.5°	183.1	207.0	224.3	241.6	254.1	243.5	202.2	154.4
85°	106.4	116.9	126.5	135.1	137.1	129.4	85.3	70.0
87.5°	42.1	46.0	45.0	50.8	48.9	45.0	33.6	28.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)