

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: P196942

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196942
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-04-D-UNV-5WQ-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22721 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G3

Input Watts (W): 258
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

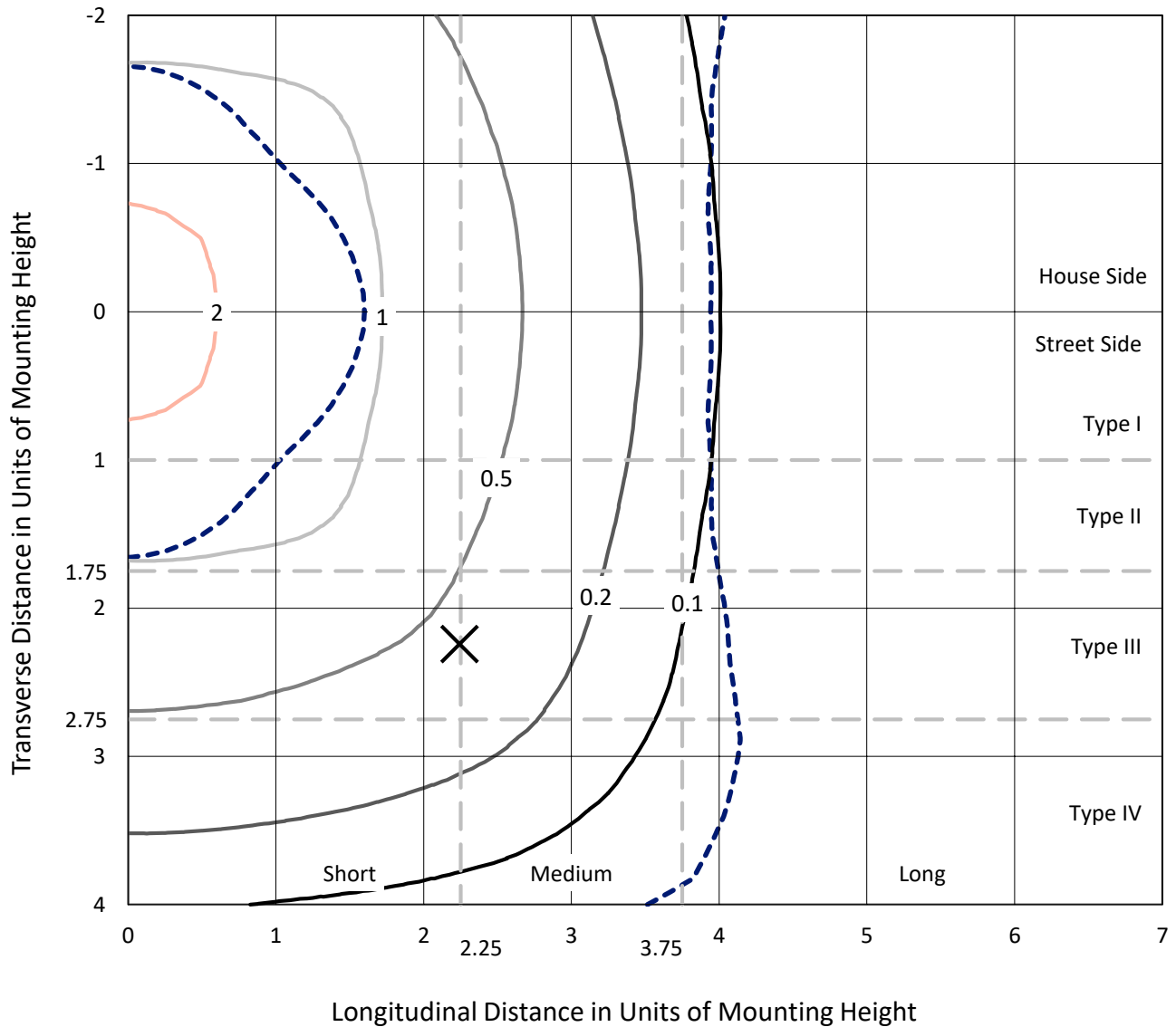


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Iso-Footcandle Lines of Horizontal Illumination

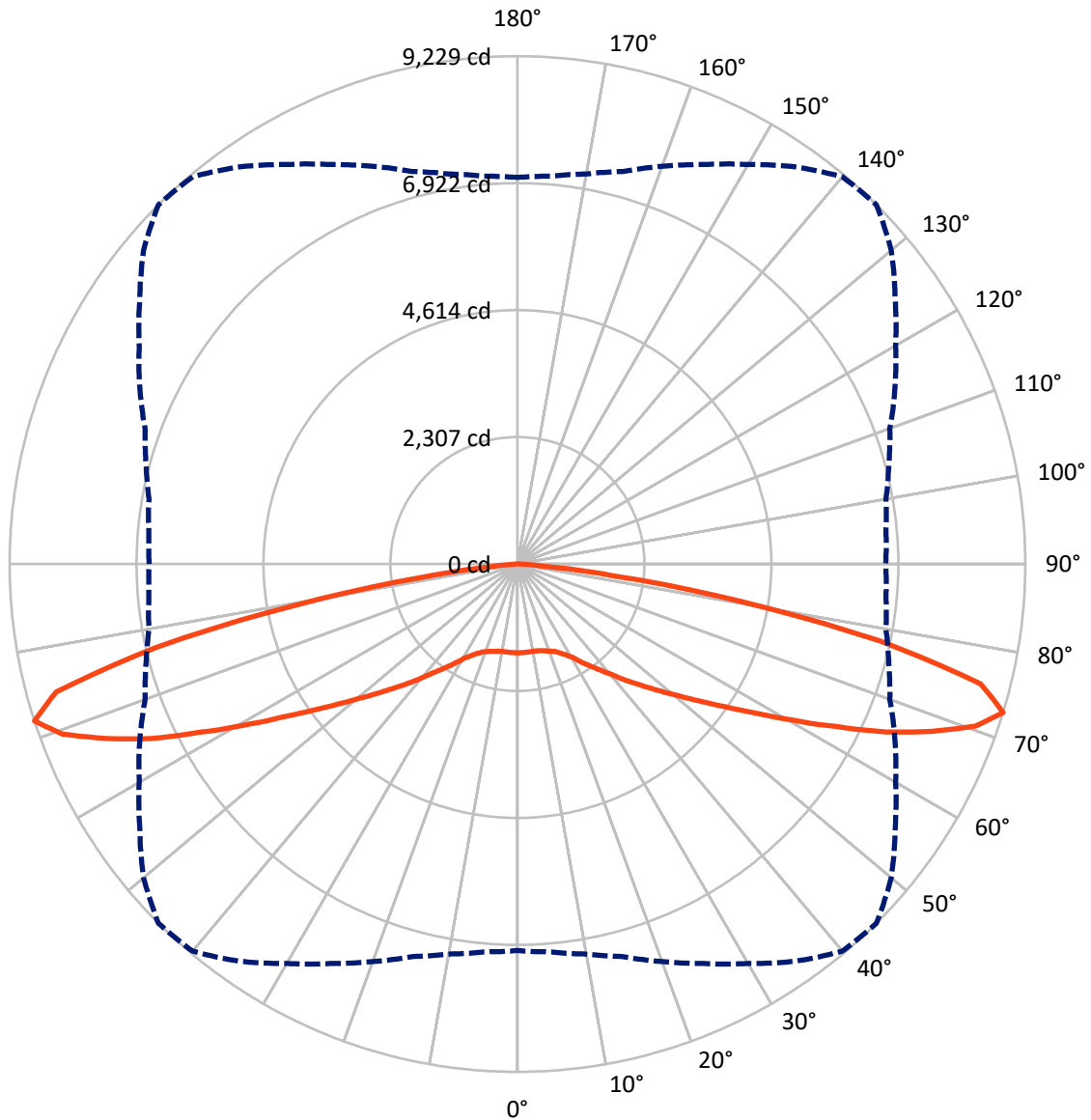
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 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	11360.5	0.0	11360.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	11360.5	0.0	11360.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	22721.0	0.0	22721.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.2	0.7
10°-20°	466.6	2.1
20°-30°	842.4	3.7
30°-40°	1436.8	6.3
40°-50°	2446.2	10.8
50°-60°	3936.8	17.3
60°-70°	6547.0	28.8
70°-80°	6333.5	27.9
80°-90°	557.4	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°	22721.0	100.0
0°-180°	22721.0	100.0



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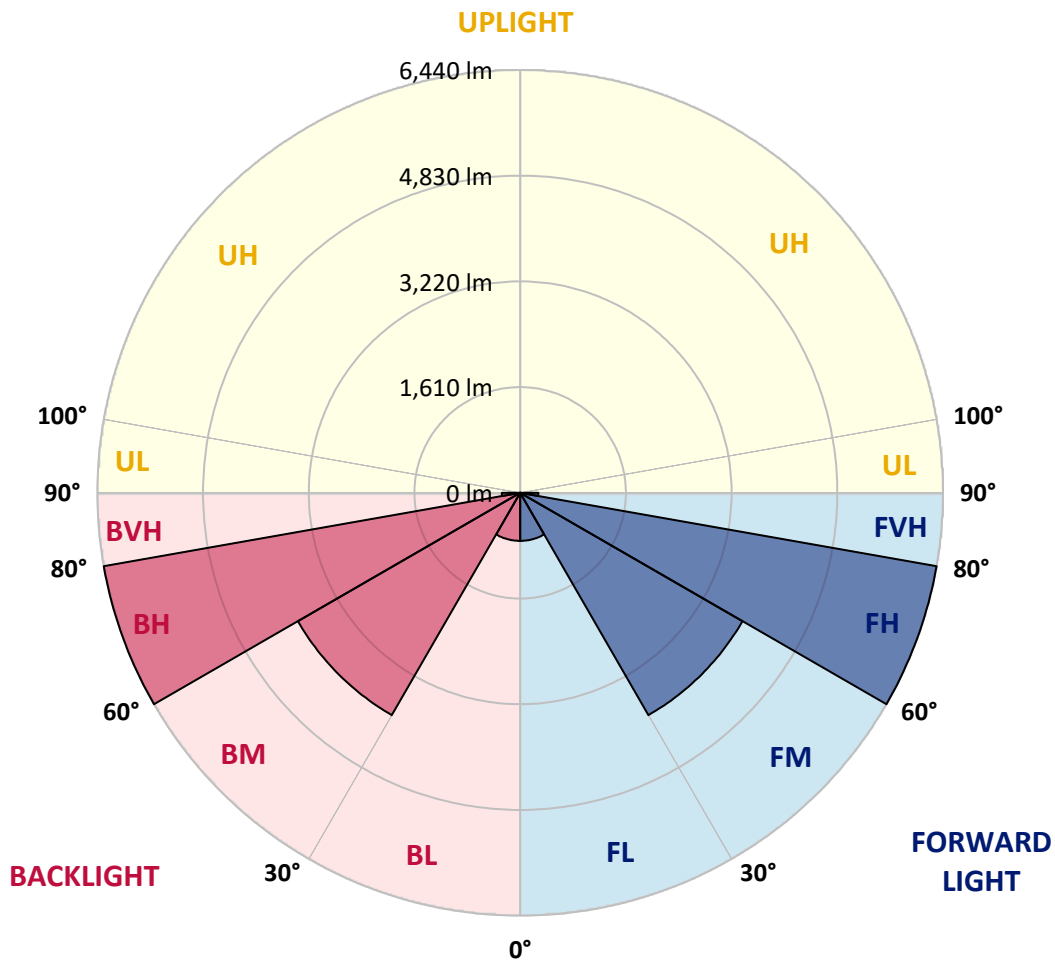
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	731.6	3.2			
FM	(30°-60°)	3909.9	17.2			
FH	(60°-80°)	6440.3	28.3			G3/7500
FVH	(80°-90°)	278.7	1.2			G3/500
BL	(0°-30°)	731.6	3.2	B2/1000		
BM	(30°-60°)	3909.9	17.2	B3/5000		
BH	(60°-80°)	6440.3	28.3	B5		G3/7500
BVH	(80°-90°)	278.7	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°	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3
2.5°	1627.9	1627.9	1629.3	1627.9	1625.1	1623.7	1619.5	1616.7	1613.9	1612.5	1609.7
5°	1629.3	1629.3	1630.7	1629.3	1626.5	1623.7	1620.9	1616.7	1613.9	1611.1	1609.7
7.5°	1634.9	1636.3	1637.7	1636.3	1630.7	1627.9	1623.7	1619.5	1613.9	1611.1	1608.3
10°	1646.1	1646.1	1646.1	1644.7	1640.5	1634.9	1629.3	1625.1	1618.1	1611.1	1606.9
12.5°	1654.5	1655.8	1655.8	1653.1	1647.5	1640.5	1634.9	1630.7	1625.1	1619.5	1615.3
15°	1667.0	1667.0	1665.6	1660.0	1651.7	1646.1	1643.3	1641.9	1640.5	1637.7	1633.5
17.5°	1692.2	1690.8	1686.6	1678.2	1668.4	1664.2	1661.4	1661.4	1661.4	1660.0	1657.2
20°	1728.6	1728.6	1723.0	1709.0	1700.6	1696.4	1692.2	1692.2	1692.2	1688.0	1683.8
22.5°	1787.3	1788.7	1780.3	1763.5	1752.3	1744.0	1738.4	1734.2	1730.0	1727.2	1720.2
25°	1867.0	1865.6	1855.8	1834.9	1826.5	1818.1	1806.9	1799.9	1794.3	1790.1	1781.7
27.5°	1950.9	1949.5	1938.4	1920.2	1914.6	1902.0	1893.6	1883.8	1876.8	1869.8	1861.4
30°	2058.6	2051.6	2043.2	2029.3	2026.5	2016.7	2005.5	1991.5	1980.3	1969.1	1959.3
32.5°	2155.1	2155.1	2142.5	2135.5	2141.1	2136.9	2138.3	2129.9	2123.0	2118.8	2109.0
35°	2289.4	2289.4	2283.8	2275.4	2276.8	2267.0	2265.6	2267.0	2272.6	2272.6	2261.4
37.5°	2468.4	2471.2	2453.0	2450.2	2443.2	2429.2	2422.2	2425.0	2437.6	2444.6	2429.2
40°	2690.8	2696.3	2690.8	2672.6	2664.2	2640.4	2626.4	2626.4	2636.2	2643.2	2637.6
42.5°	2910.3	2920.1	2910.3	2896.3	2889.3	2871.2	2864.2	2869.8	2882.4	2890.7	2882.4
45°	3155.1	3162.1	3149.5	3132.7	3124.3	3114.5	3110.3	3114.5	3128.5	3136.9	3134.1
47.5°	3395.6	3405.4	3390.0	3383.0	3383.0	3373.2	3384.4	3395.6	3408.2	3427.8	3419.4
50°	3630.6	3643.1	3633.4	3634.8	3645.9	3664.1	3685.1	3707.5	3729.9	3750.8	3753.6
52.5°	3840.3	3859.9	3861.3	3886.5	3921.5	3949.4	4008.2	4057.1	4110.3	4128.4	4120.0
55°	4061.3	4087.9	4122.8	4162.0	4217.9	4275.3	4374.6	4462.7	4532.6	4576.0	4569.0
57.5°	4377.4	4403.9	4440.3	4504.6	4588.5	4666.9	4802.5	4939.6	5045.9	5111.6	5079.4
60°	4787.1	4815.1	4862.7	4931.2	5040.3	5146.6	5332.6	5529.8	5694.8	5770.3	5711.6
62.5°	5329.8	5356.3	5387.1	5478.0	5599.7	5736.7	5970.3	6223.4	6433.2	6505.9	6423.4
65°	6103.1	6135.3	6145.1	6219.2	6338.1	6465.4	6717.1	7002.4	7241.5	7360.4	7195.4
67.5°	6974.4	6987.0	7026.2	7112.9	7234.6	7349.2	7547.8	7817.7	8047.1	8112.8	7936.6
70°	7484.9	7510.1	7578.6	7698.9	7844.3	8024.7	8241.5	8532.4	8792.5	8823.3	8599.5
72.5°	7023.4	7075.1	7196.8	7384.2	7689.1	8009.3	8382.7	8812.1	9185.5	9228.8	8869.4
75°	5633.2	5692.0	5837.4	6043.0	6403.8	6879.3	7419.2	8063.9	8623.3	8694.6	8219.1
77.5°	3002.6	3075.3	3286.5	3563.4	4078.1	4707.4	5357.7	6093.4	6568.9	6729.7	6387.0
80°	756.6	795.8	897.9	1060.1	1408.3	1916.0	2476.8	3268.3	3858.5	4108.9	3858.5
82.5°	293.7	323.1	351.0	370.6	404.2	474.1	654.5	1067.1	1437.7	1770.5	1532.8
85°	113.3	120.3	173.4	197.2	197.2	216.8	248.9	293.7	363.6	397.2	332.8
87.5°	44.8	48.9	60.1	92.3	95.1	83.9	89.5	100.7	76.9	64.3	72.7
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°	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3	1615.3
2.5°	1608.3	1606.9	1604.1	1605.5	1604.1	1604.1	1604.1	1604.1
5°	1606.9	1606.9	1604.1	1604.1	1604.1	1605.5	1604.1	1604.1
7.5°	1605.5	1604.1	1601.3	1599.9	1599.9	1598.5	1598.5	1598.5
10°	1602.7	1599.9	1597.1	1595.7	1595.7	1592.9	1592.9	1592.9
12.5°	1609.7	1605.5	1602.7	1601.3	1601.3	1601.3	1602.7	1602.7
15°	1629.3	1620.9	1616.7	1615.3	1616.7	1619.5	1620.9	1622.3
17.5°	1650.3	1641.9	1634.9	1632.1	1633.5	1637.7	1641.9	1644.7
20°	1676.8	1669.8	1661.4	1658.6	1658.6	1664.2	1667.0	1671.2
22.5°	1714.6	1709.0	1702.0	1697.8	1695.0	1702.0	1706.2	1709.0
25°	1774.7	1769.1	1763.5	1759.3	1757.9	1764.9	1767.7	1769.1
27.5°	1854.4	1848.8	1846.0	1844.7	1840.5	1843.3	1847.4	1846.0
30°	1957.9	1962.1	1957.9	1957.9	1950.9	1953.7	1950.9	1948.1
32.5°	2096.4	2092.2	2079.6	2071.2	2061.4	2061.4	2057.2	2053.0
35°	2234.8	2220.9	2213.9	2218.1	2213.9	2216.7	2209.7	2202.7
37.5°	2398.5	2390.1	2388.7	2401.3	2398.5	2401.3	2401.3	2391.5
40°	2615.2	2609.6	2619.4	2640.4	2648.8	2647.4	2650.2	2637.6
42.5°	2864.2	2854.4	2858.6	2876.8	2886.5	2889.3	2887.9	2876.8
45°	3113.1	3115.9	3115.9	3135.5	3145.3	3150.9	3141.1	3136.9
47.5°	3394.2	3398.4	3388.6	3401.2	3404.0	3413.8	3405.4	3398.4
50°	3718.7	3703.3	3680.9	3685.1	3685.1	3682.3	3672.5	3664.1
52.5°	4080.9	4045.9	4004.0	3990.0	3974.6	3959.2	3939.6	3924.3
55°	4493.5	4433.3	4357.8	4322.8	4293.5	4258.5	4213.7	4198.4
57.5°	4971.7	4868.3	4767.6	4704.6	4629.1	4583.0	4525.6	4522.8
60°	5539.5	5399.7	5222.1	5128.4	5052.9	4998.3	4955.0	4938.2
62.5°	6195.5	5954.9	5763.3	5662.6	5574.5	5540.9	5486.4	5493.4
65°	6868.1	6623.4	6437.4	6356.3	6273.8	6251.4	6201.0	6219.2
67.5°	7596.8	7395.4	7191.2	7115.7	7040.2	7017.8	6966.0	6981.4
70°	8249.9	7993.9	7761.8	7613.6	7484.9	7381.4	7315.7	7289.1
72.5°	8379.9	7936.6	7571.6	7201.0	6987.0	6799.6	6722.7	6693.3
75°	7529.6	6841.6	6321.3	5886.4	5645.8	5373.1	5343.8	5303.2
77.5°	5857.0	5073.8	4444.5	3885.1	3562.0	3229.2	3114.5	3027.8
80°	3493.5	2685.2	2081.0	1458.7	1190.1	958.0	900.6	840.5
82.5°	1250.3	801.4	539.8	421.0	376.2	346.8	324.5	295.1
85°	302.1	254.5	240.5	218.2	215.4	183.2	130.1	116.1
87.5°	96.5	88.1	89.5	85.3	89.5	67.1	54.5	48.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)