

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: P196893

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196893
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17268 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

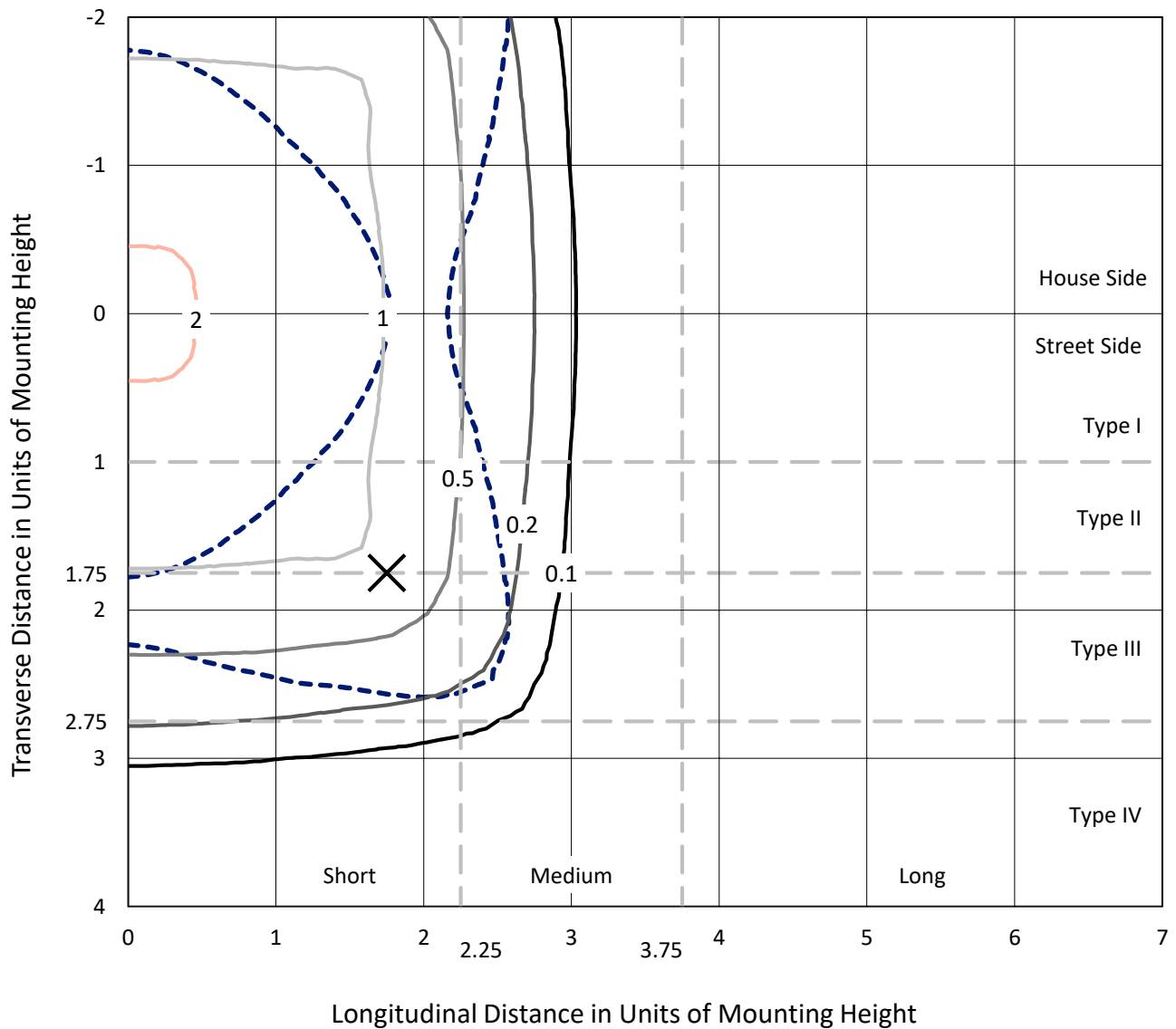
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196893
 CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030-1200

Iso-Footcandle Lines of Horizontal Illumination

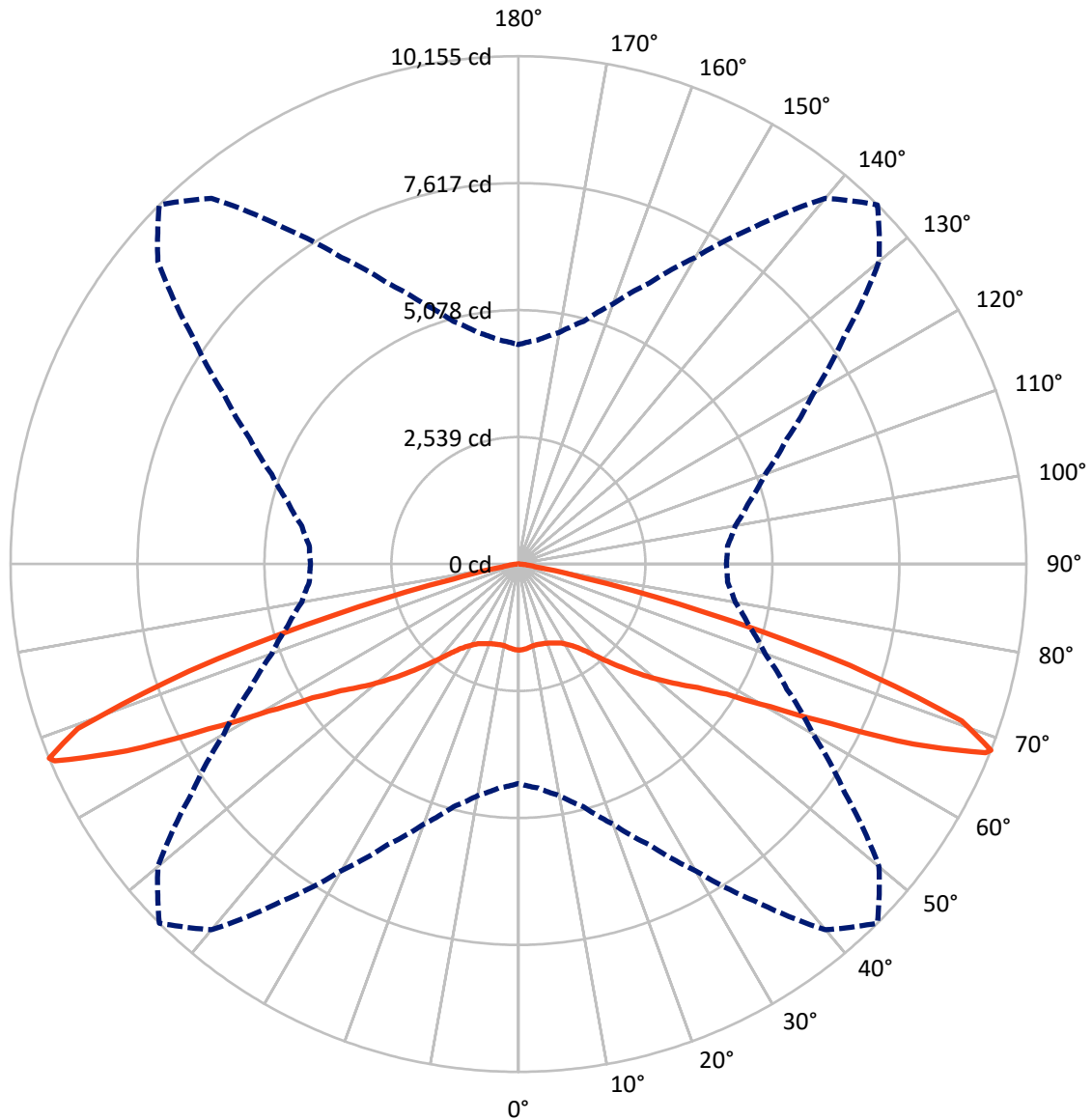
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P196893
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P196893

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8634.0	0.0	8634.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8634.0	0.0	8634.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	17268.0	0.0	17268.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.2	0.9
10°-20°	467.5	2.7
20°-30°	794.7	4.6
30°-40°	1300.6	7.5
40°-50°	2324.3	13.5
50°-60°	3925.3	22.7
60°-70°	6086.7	35.2
70°-80°	2092.8	12.1
80°-90°	115.0	0.7
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°	17268.0	100.0
0°-180°	17268.0	100.0



REPORT NUMBER: P196893

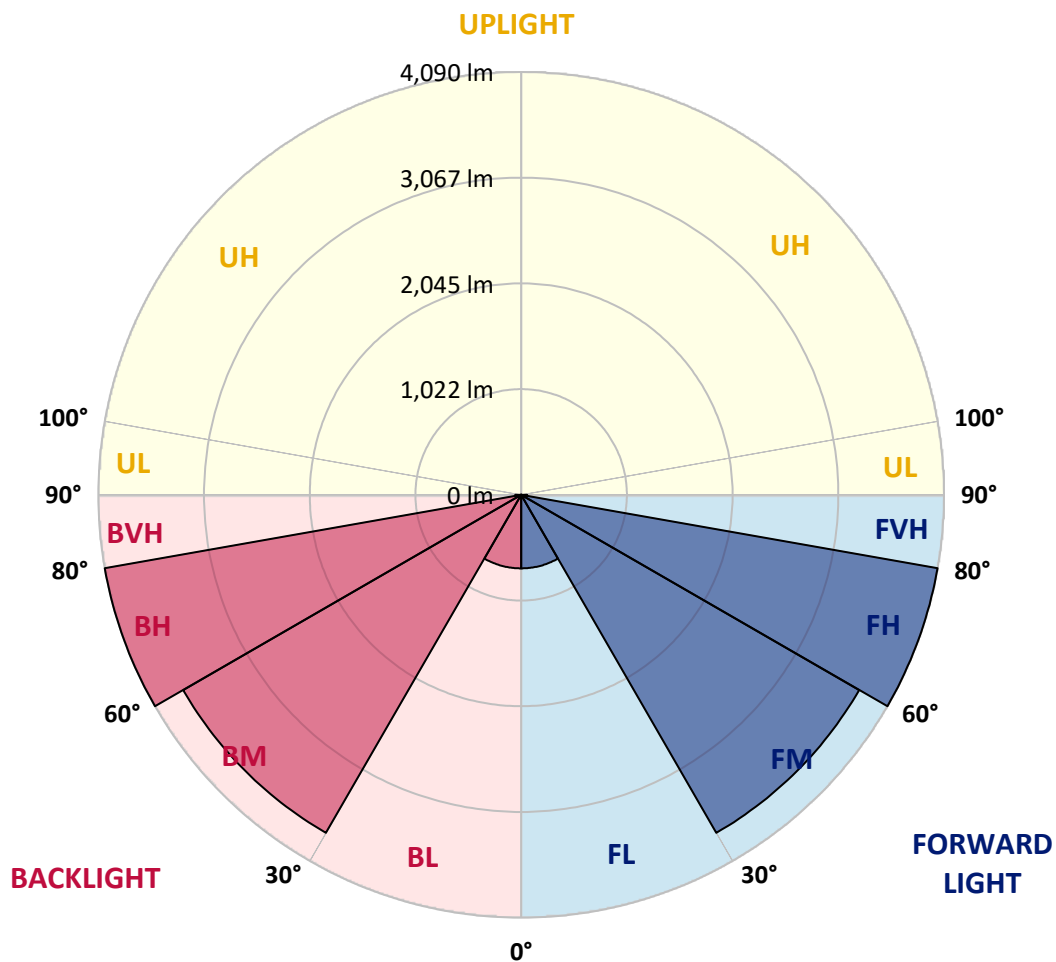
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	711.7	4.1			
FM	(30°-60°)	3775.1	21.9			
FH	(60°-80°)	4089.7	23.7			G2/5000
FVH	(80°-90°)	57.5	0.3			G1/100
BL	(0°-30°)	711.7	4.1	B2/1000		
BM	(30°-60°)	3775.1	21.9	B3/5000		
BH	(60°-80°)	4089.7	23.7	B4/5000		G2/5000
BVH	(80°-90°)	57.5	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





REPORT NUMBER: P196893

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5
2.5°	1729.9	1729.9	1732.1	1731.0	1727.8	1724.6	1721.5	1718.3	1716.2	1714.1	1712.0
5°	1712.0	1712.0	1715.1	1713.0	1710.9	1707.7	1705.6	1702.4	1700.3	1698.2	1699.3
7.5°	1688.7	1690.8	1692.9	1691.9	1687.6	1686.6	1683.4	1682.4	1680.2	1677.1	1678.1
10°	1668.6	1669.7	1671.8	1670.7	1669.7	1666.5	1665.4	1664.4	1663.3	1659.1	1658.0
12.5°	1648.5	1650.6	1652.7	1653.8	1652.7	1653.8	1654.9	1655.9	1654.9	1652.7	1652.7
15°	1632.7	1634.8	1637.9	1641.1	1642.2	1648.5	1652.7	1657.0	1660.1	1661.2	1658.0
17.5°	1624.2	1627.4	1631.6	1637.9	1643.2	1650.6	1658.0	1664.4	1669.7	1670.7	1667.5
20°	1623.1	1626.3	1632.7	1640.1	1649.6	1659.1	1670.7	1680.2	1685.5	1688.7	1685.5
22.5°	1630.5	1634.8	1643.2	1652.7	1664.4	1677.1	1691.9	1702.4	1713.0	1717.2	1714.1
25°	1651.7	1655.9	1665.4	1677.1	1689.8	1705.6	1720.4	1734.2	1744.7	1750.0	1745.8
27.5°	1696.1	1697.2	1707.7	1720.4	1735.2	1749.0	1768.0	1774.3	1782.8	1788.1	1782.8
30°	1758.5	1760.6	1770.1	1790.2	1804.0	1821.9	1832.5	1838.9	1848.4	1853.7	1847.3
32.5°	1853.7	1855.8	1864.2	1883.3	1896.0	1909.7	1922.4	1926.6	1936.1	1942.5	1935.1
35°	1987.9	1992.2	1999.6	2012.3	2022.8	2033.4	2042.9	2039.8	2046.1	2054.6	2047.2
37.5°	2171.9	2170.9	2173.0	2182.5	2193.1	2199.4	2214.2	2206.8	2213.2	2220.6	2216.3
40°	2386.6	2386.6	2385.5	2402.5	2406.7	2413.0	2428.9	2419.4	2427.8	2436.3	2428.9
42.5°	2630.9	2635.1	2640.4	2654.1	2665.8	2667.9	2675.3	2671.0	2681.6	2689.0	2681.6
45°	2912.1	2918.5	2924.8	2956.5	2961.8	2966.1	2971.3	2957.6	2969.2	2975.6	2973.5
47.5°	3204.0	3215.6	3229.4	3262.1	3283.3	3292.8	3297.0	3281.2	3282.2	3291.7	3292.8
50°	3533.9	3546.6	3560.3	3597.3	3617.4	3634.3	3639.6	3621.7	3623.8	3631.2	3633.3
52.5°	3838.4	3853.2	3882.8	3932.5	3961.1	3990.7	3992.8	3970.6	3980.1	3985.4	3981.2
55°	4125.0	4144.0	4183.1	4249.8	4301.6	4359.7	4386.2	4361.9	4361.9	4357.6	4355.5
57.5°	4459.1	4480.3	4520.5	4597.7	4669.6	4753.1	4825.0	4849.3	4893.7	4908.5	4885.3
60°	4962.5	4984.7	5025.9	5127.4	5218.4	5340.0	5458.4	5554.6	5711.1	5795.7	5719.6
62.5°	5422.4	5456.3	5553.6	5731.2	5927.9	6153.1	6414.3	6600.4	6884.9	7026.5	6835.2
65°	5317.8	5386.5	5576.8	5856.0	6262.0	6750.6	7282.4	7793.2	8381.1	8682.5	8293.3
67.5°	4645.2	4703.4	4908.5	5233.2	5739.7	6413.2	7240.1	8297.6	9510.4	10075.1	9386.7
68°	4388.3	4497.2	4701.3	5023.8	5534.5	6196.5	7079.4	8221.4	9545.3	10155.4	9412.1
70°	3364.7	3403.8	3599.5	3889.2	4440.1	5089.4	5980.8	7282.4	8778.7	9406.8	8642.3
72.5°	1598.8	1622.1	1749.0	2034.5	2384.5	2913.2	3699.9	4927.6	6275.8	6929.3	6166.9
75°	585.8	591.1	620.7	688.4	819.5	1018.3	1395.8	2159.2	3196.6	3812.0	3209.3
77.5°	316.2	317.2	328.9	345.8	369.0	395.5	452.6	607.0	979.2	1332.3	1034.2
80°	198.8	197.7	209.4	223.1	239.0	251.7	257.0	274.9	309.8	362.7	333.1
82.5°	101.5	111.0	137.5	152.3	175.5	179.8	174.5	173.4	184.0	198.8	205.1
85°	56.0	49.7	73.0	97.3	105.7	108.9	110.0	103.6	101.5	99.4	104.7
87.5°	28.6	26.4	31.7	48.6	51.8	42.3	43.4	37.0	25.4	25.4	26.4
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: P196893

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5	1722.5
2.5°	1709.8	1710.9	1708.8	1708.8	1708.8	1709.8	1708.8	1707.7
5°	1696.1	1698.2	1698.2	1699.3	1700.3	1700.3	1700.3	1700.3
7.5°	1676.0	1677.1	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2
10°	1657.0	1654.9	1653.8	1651.7	1651.7	1648.5	1649.6	1650.6
12.5°	1647.5	1643.2	1641.1	1637.9	1635.8	1632.7	1632.7	1633.7
15°	1651.7	1645.3	1639.0	1636.9	1634.8	1632.7	1630.5	1631.6
17.5°	1660.1	1652.7	1645.3	1641.1	1636.9	1633.7	1632.7	1633.7
20°	1678.1	1667.5	1655.9	1648.5	1640.1	1637.9	1634.8	1637.9
22.5°	1702.4	1689.8	1675.0	1661.2	1651.7	1647.5	1643.2	1646.4
25°	1732.1	1718.3	1703.5	1687.6	1677.1	1673.9	1668.6	1668.6
27.5°	1773.3	1761.7	1749.0	1734.2	1723.6	1720.4	1712.0	1712.0
30°	1838.9	1827.2	1815.6	1802.9	1792.3	1789.2	1778.6	1778.6
32.5°	1925.6	1912.9	1905.5	1894.9	1886.4	1881.1	1868.5	1867.4
35°	2041.9	2030.2	2029.2	2021.8	2013.3	2014.4	2001.7	1999.6
37.5°	2208.9	2199.4	2202.6	2196.3	2188.9	2195.2	2187.8	2187.8
40°	2422.5	2419.4	2422.5	2418.3	2419.4	2420.4	2414.1	2416.2
42.5°	2680.6	2672.1	2691.1	2689.0	2685.8	2694.3	2679.5	2668.9
45°	2977.7	2974.5	2993.6	2996.7	2990.4	2995.7	2969.2	2968.2
47.5°	3300.2	3300.2	3317.1	3315.0	3308.7	3309.7	3278.0	3257.9
50°	3636.5	3634.3	3651.3	3647.0	3638.6	3637.5	3604.7	3584.6
52.5°	3986.5	3986.5	4010.8	3999.2	3979.1	3969.5	3929.4	3902.9
55°	4373.5	4368.2	4375.6	4337.5	4298.4	4269.9	4220.2	4200.1
57.5°	4863.1	4801.7	4748.9	4700.2	4645.2	4611.4	4553.2	4532.1
60°	5557.8	5393.9	5323.0	5225.8	5134.8	5089.4	5012.2	4970.9
62.5°	6520.0	6248.3	6055.8	5841.2	5633.9	5488.0	5370.6	5318.8
65°	7632.4	7040.3	6550.7	6090.7	5700.5	5390.7	5218.4	5164.4
67.5°	8055.4	6968.4	6123.5	5463.7	4990.0	4620.9	4414.7	4371.4
68°	7965.5	6803.4	5925.8	5250.1	4774.2	4402.0	4196.9	4157.8
70°	7026.5	5739.7	4813.4	4140.9	3696.7	3342.5	3197.6	3135.2
72.5°	4790.1	3686.2	2827.5	2261.8	1929.8	1705.6	1572.4	1526.9
75°	2204.7	1489.9	995.0	743.4	631.3	577.4	536.1	525.5
77.5°	642.9	467.4	401.8	372.2	350.0	331.0	317.2	316.2
80°	305.6	286.6	278.1	259.1	239.0	221.0	208.3	210.4
82.5°	205.1	199.9	199.9	180.8	149.1	127.9	105.7	95.2
85°	108.9	113.1	119.5	113.1	98.3	73.0	47.6	51.8
87.5°	37.0	42.3	44.4	43.4	39.1	29.6	22.2	22.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)