

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: P196396

Luminaire Tested: **NAV-AF-04-D-UNV-5MQ-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196396  
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-04-D-UNV-5MQ-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16556.1 lumens  
Efficiency: N/A  
Efficacy: 128.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

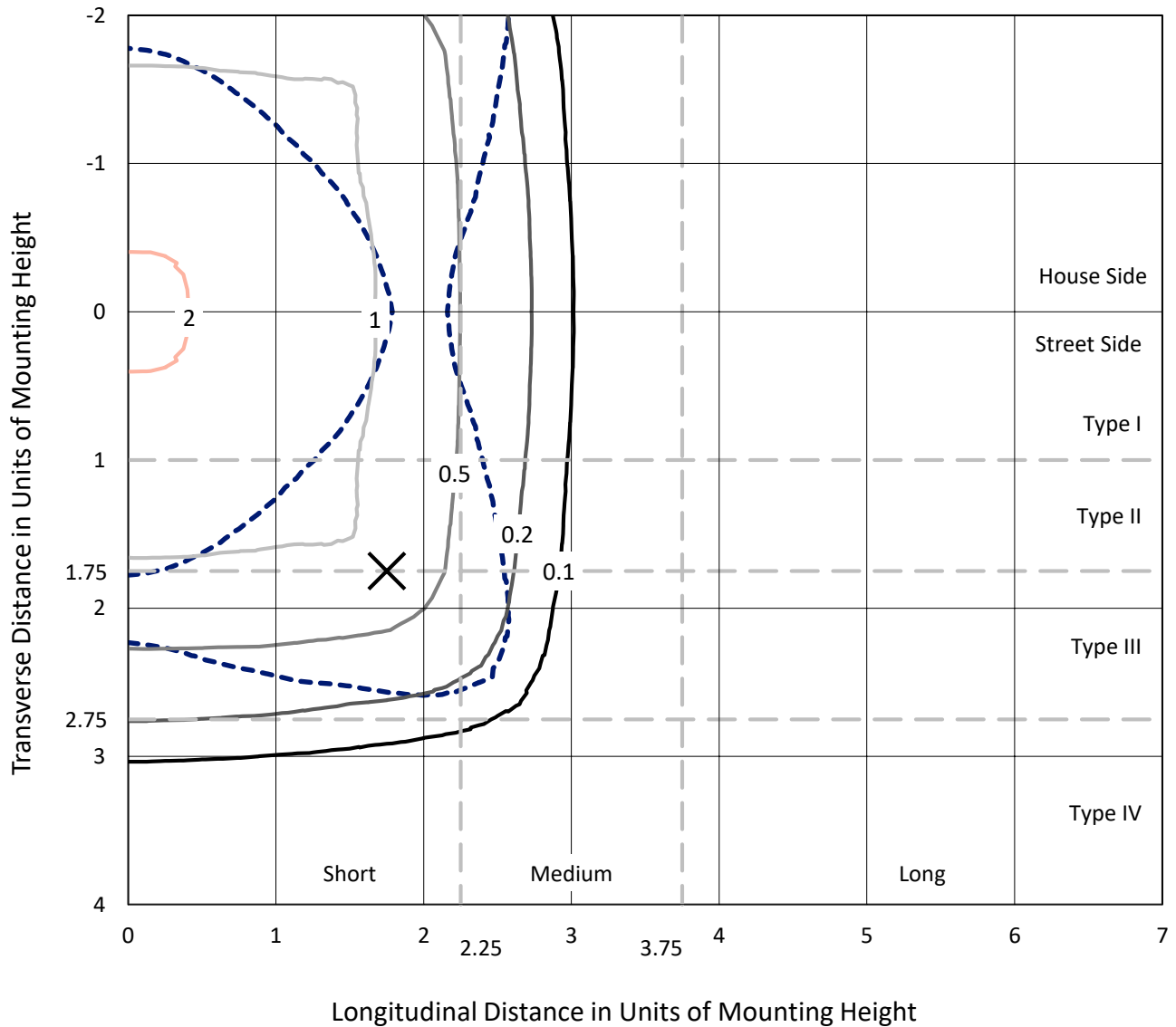
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

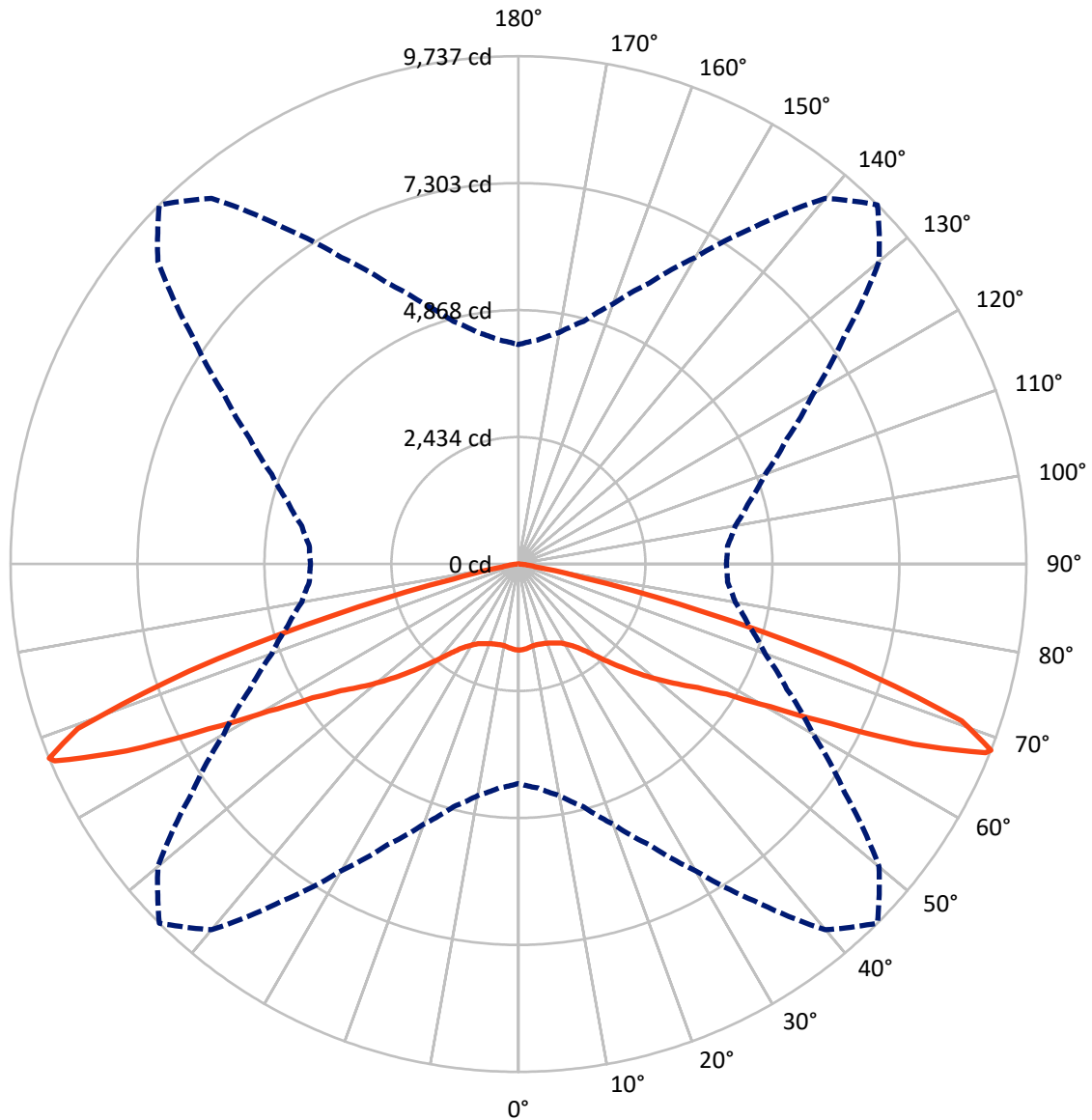
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8278.0	0.0	8278.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8278.0	0.0	8278.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	16556.1	0.0	16556.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.5	0.9
10°-20°	448.2	2.7
20°-30°	762.0	4.6
30°-40°	1246.9	7.5
40°-50°	2228.4	13.5
50°-60°	3763.5	22.7
60°-70°	5835.8	35.2
70°-80°	2006.5	12.1
80°-90°	110.3	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°	16556.1	100.0
0°-180°	16556.1	100.0



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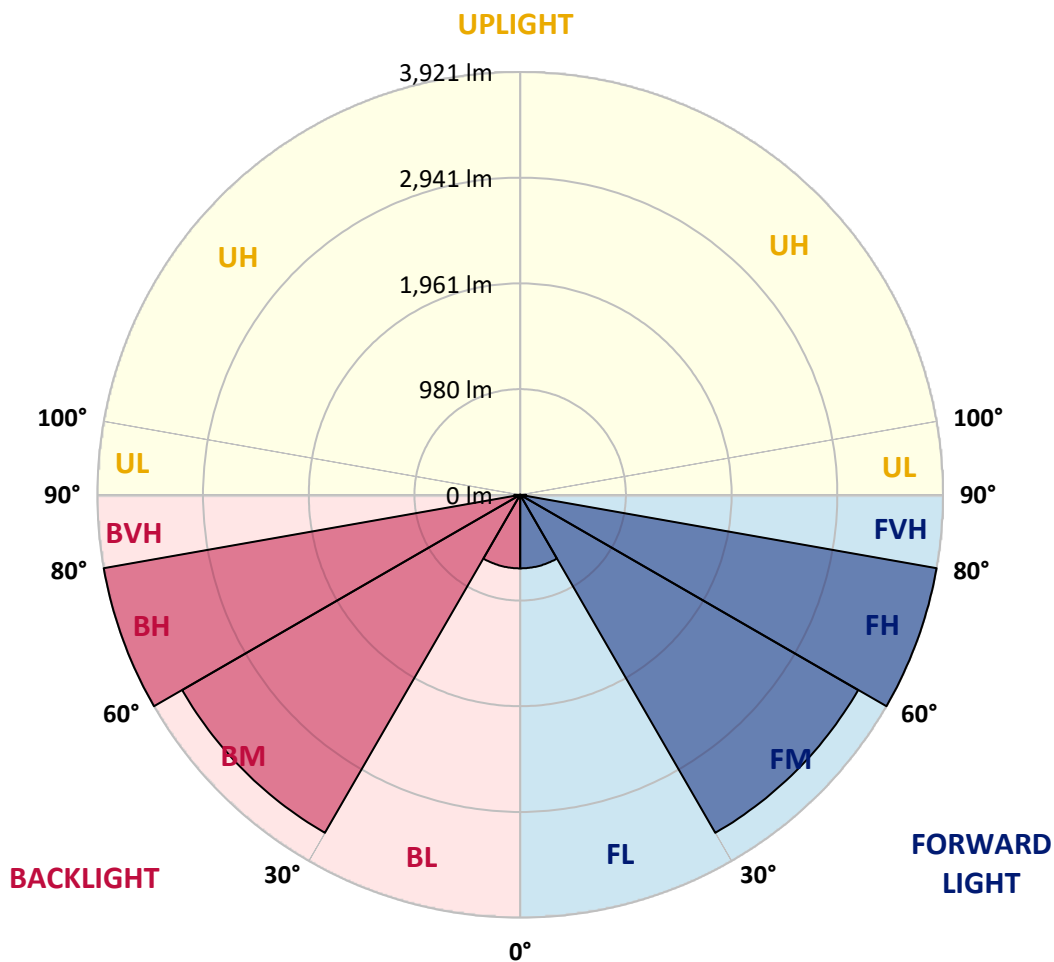
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	682.3	4.1			
FM	(30°-60°)	3619.4	21.9			
FH	(60°-80°)	3921.1	23.7			G2/5000
FVH	(80°-90°)	55.1	0.3			G1/100
BL	(0°-30°)	682.3	4.1	B2/1000		
BM	(30°-60°)	3619.4	21.9	B3/5000		
BH	(60°-80°)	3921.1	23.7	B4/5000		G2/5000
BVH	(80°-90°)	55.1	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6
2.5°	1658.7	1658.7	1660.6	1659.6	1656.6	1653.5	1650.5	1647.4	1645.5	1643.4	1641.4
5°	1641.4	1641.4	1644.5	1642.3	1640.3	1637.4	1635.3	1632.3	1630.2	1628.2	1629.2
7.5°	1619.1	1621.1	1623.1	1622.1	1618.0	1617.0	1614.0	1613.0	1610.9	1608.0	1609.0
10°	1599.8	1600.8	1602.9	1601.8	1600.8	1597.8	1596.8	1595.7	1594.7	1590.7	1589.7
12.5°	1580.6	1582.6	1584.6	1585.6	1584.6	1585.6	1586.7	1587.6	1586.7	1584.6	1584.6
15°	1565.3	1567.4	1570.4	1573.5	1574.4	1580.6	1584.6	1588.6	1591.7	1592.7	1589.7
17.5°	1557.3	1560.2	1564.4	1570.4	1575.5	1582.6	1589.7	1595.7	1600.8	1601.8	1598.8
20°	1556.2	1559.2	1565.3	1572.5	1581.5	1590.7	1601.8	1610.9	1616.1	1619.1	1616.1
22.5°	1563.3	1567.4	1575.5	1584.6	1595.7	1608.0	1622.1	1632.3	1642.3	1646.4	1643.4
25°	1583.6	1587.6	1596.8	1608.0	1620.1	1635.3	1649.5	1662.7	1672.8	1677.9	1673.9
27.5°	1626.3	1627.2	1637.4	1649.5	1663.7	1676.9	1695.1	1701.1	1709.3	1714.4	1709.3
30°	1686.0	1688.0	1697.2	1716.4	1729.6	1746.8	1757.0	1763.0	1772.1	1777.2	1771.1
32.5°	1777.2	1779.3	1787.4	1805.6	1817.7	1830.9	1843.1	1847.1	1856.4	1862.5	1855.3
35°	1906.0	1910.1	1917.2	1929.3	1939.5	1949.6	1958.7	1955.6	1961.7	1969.8	1962.8
37.5°	2082.4	2081.4	2083.3	2092.6	2102.7	2108.7	2122.9	2115.8	2122.0	2129.0	2125.0
40°	2288.2	2288.2	2287.3	2303.4	2307.4	2313.6	2328.8	2319.6	2327.8	2335.9	2328.8
42.5°	2522.4	2526.4	2531.5	2544.6	2555.8	2557.9	2565.0	2560.9	2571.1	2578.2	2571.1
45°	2792.0	2798.1	2804.2	2834.6	2839.7	2843.8	2848.8	2835.6	2846.9	2852.9	2850.9
47.5°	3072.0	3083.1	3096.2	3127.6	3147.9	3157.0	3161.1	3145.9	3146.8	3156.1	3157.0
50°	3388.2	3400.3	3413.6	3449.0	3468.3	3484.5	3489.5	3472.4	3474.3	3481.4	3483.5
52.5°	3680.2	3694.4	3722.8	3770.4	3797.8	3826.2	3828.2	3806.9	3816.0	3821.2	3817.1
55°	3954.9	3973.2	4010.7	4074.5	4124.2	4180.0	4205.3	4182.0	4182.0	4178.0	4175.9
57.5°	4275.4	4295.5	4334.1	4408.1	4477.0	4557.1	4626.0	4649.4	4691.9	4706.2	4683.8
60°	4757.9	4779.1	4818.7	4916.0	5003.2	5119.8	5233.3	5325.7	5475.6	5556.7	5483.7
62.5°	5198.9	5231.4	5324.6	5494.8	5683.4	5899.5	6149.8	6328.3	6601.0	6736.8	6553.4
65°	5098.5	5164.3	5346.9	5614.5	6003.9	6472.2	6982.2	7471.9	8035.6	8324.5	7951.5
67.5°	4453.7	4509.4	4706.2	5017.4	5503.1	6148.8	6941.7	7955.5	9118.3	9659.7	8999.6
68°	4207.3	4311.8	4507.5	4816.7	5306.4	5941.0	6787.5	7882.5	9151.8	9736.7	9024.0
70°	3226.0	3263.5	3451.1	3728.8	4257.1	4879.5	5734.2	6982.2	8416.8	9019.0	8286.0
72.5°	1532.9	1555.2	1676.9	1950.6	2286.1	2793.1	3547.3	4724.4	6017.0	6643.6	5912.6
75°	561.7	566.7	595.1	660.0	785.7	976.3	1338.2	2070.3	3064.8	3654.8	3077.0
77.5°	303.0	304.2	315.3	331.5	353.8	379.1	433.9	582.0	938.7	1277.5	991.5
80°	190.5	189.6	200.7	213.9	229.1	241.3	246.4	263.7	297.0	347.8	319.4
82.5°	97.4	106.4	131.7	146.0	168.3	172.3	167.2	166.3	176.5	190.5	196.6
85°	53.7	47.6	69.9	93.3	101.4	104.5	105.4	99.3	97.4	95.3	100.4
87.5°	27.5	25.3	30.4	46.7	49.7	40.5	41.5	35.5	24.4	24.4	25.3
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°	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6	1651.6
2.5°	1639.3	1640.3	1638.4	1638.4	1638.4	1639.3	1638.4	1637.4
5°	1626.3	1628.2	1628.2	1629.2	1630.2	1630.2	1630.2	1630.2
7.5°	1606.8	1608.0	1609.9	1609.9	1609.9	1609.9	1609.9	1609.9
10°	1588.6	1586.7	1585.6	1583.6	1583.6	1580.6	1581.5	1582.6
12.5°	1579.6	1575.5	1573.5	1570.4	1568.4	1565.3	1565.3	1566.3
15°	1583.6	1577.4	1571.4	1569.4	1567.4	1565.3	1563.3	1564.4
17.5°	1591.7	1584.6	1577.4	1573.5	1569.4	1566.3	1565.3	1566.3
20°	1609.0	1598.8	1587.6	1580.6	1572.5	1570.4	1567.4	1570.4
22.5°	1632.3	1620.1	1605.9	1592.7	1583.6	1579.6	1575.5	1578.5
25°	1660.6	1647.4	1633.3	1618.0	1608.0	1604.9	1599.8	1599.8
27.5°	1700.2	1689.0	1676.9	1662.7	1652.5	1649.5	1641.4	1641.4
30°	1763.0	1751.9	1740.7	1728.6	1718.4	1715.4	1705.2	1705.2
32.5°	1846.2	1834.0	1827.0	1816.8	1808.7	1803.6	1791.5	1790.4
35°	1957.7	1946.6	1945.5	1938.5	1930.3	1931.3	1919.1	1917.2
37.5°	2117.9	2108.7	2111.8	2105.8	2098.7	2104.7	2097.6	2097.6
40°	2322.7	2319.6	2322.7	2318.6	2319.6	2320.6	2314.5	2316.7
42.5°	2570.0	2561.9	2580.1	2578.2	2575.1	2583.2	2569.0	2558.9
45°	2855.0	2851.8	2870.1	2873.2	2867.1	2872.2	2846.9	2845.7
47.5°	3164.1	3164.1	3180.3	3178.4	3172.3	3173.2	3142.9	3123.6
50°	3486.6	3484.5	3500.7	3496.7	3488.5	3487.5	3456.1	3436.9
52.5°	3822.1	3822.1	3845.4	3834.2	3815.0	3805.9	3767.4	3742.0
55°	4193.2	4188.1	4195.2	4158.7	4121.2	4093.8	4046.2	4026.9
57.5°	4662.5	4603.7	4553.1	4506.4	4453.7	4421.2	4365.6	4345.2
60°	5328.7	5171.5	5103.6	5010.3	4923.1	4879.5	4805.6	4766.0
62.5°	6251.3	5990.6	5806.1	5600.3	5401.7	5261.7	5149.2	5099.5
65°	7317.7	6750.0	6280.7	5839.6	5465.4	5168.5	5003.2	4951.5
67.5°	7723.3	6681.1	5871.0	5238.4	4784.3	4430.4	4232.7	4191.1
68°	7637.1	6522.9	5681.5	5033.6	4577.4	4220.5	4023.9	3986.4
70°	6736.8	5503.1	4614.9	3970.2	3544.4	3204.7	3065.9	3005.9
72.5°	4592.6	3534.2	2710.9	2168.6	1850.2	1635.3	1507.6	1464.0
75°	2113.8	1428.4	954.1	712.7	605.3	553.5	513.9	503.9
77.5°	616.4	448.1	385.2	356.8	335.5	317.3	304.2	303.0
80°	293.1	274.8	266.6	248.3	229.1	211.9	199.7	201.8
82.5°	196.6	191.6	191.6	173.4	142.9	122.7	101.4	91.2
85°	104.5	108.5	114.6	108.5	94.3	69.9	45.7	49.7
87.5°	35.5	40.5	42.6	41.5	37.4	28.4	21.3	21.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)