

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: P195441

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195441
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-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15586 lumens
Efficiency: N/A
Efficacy: 125.7 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

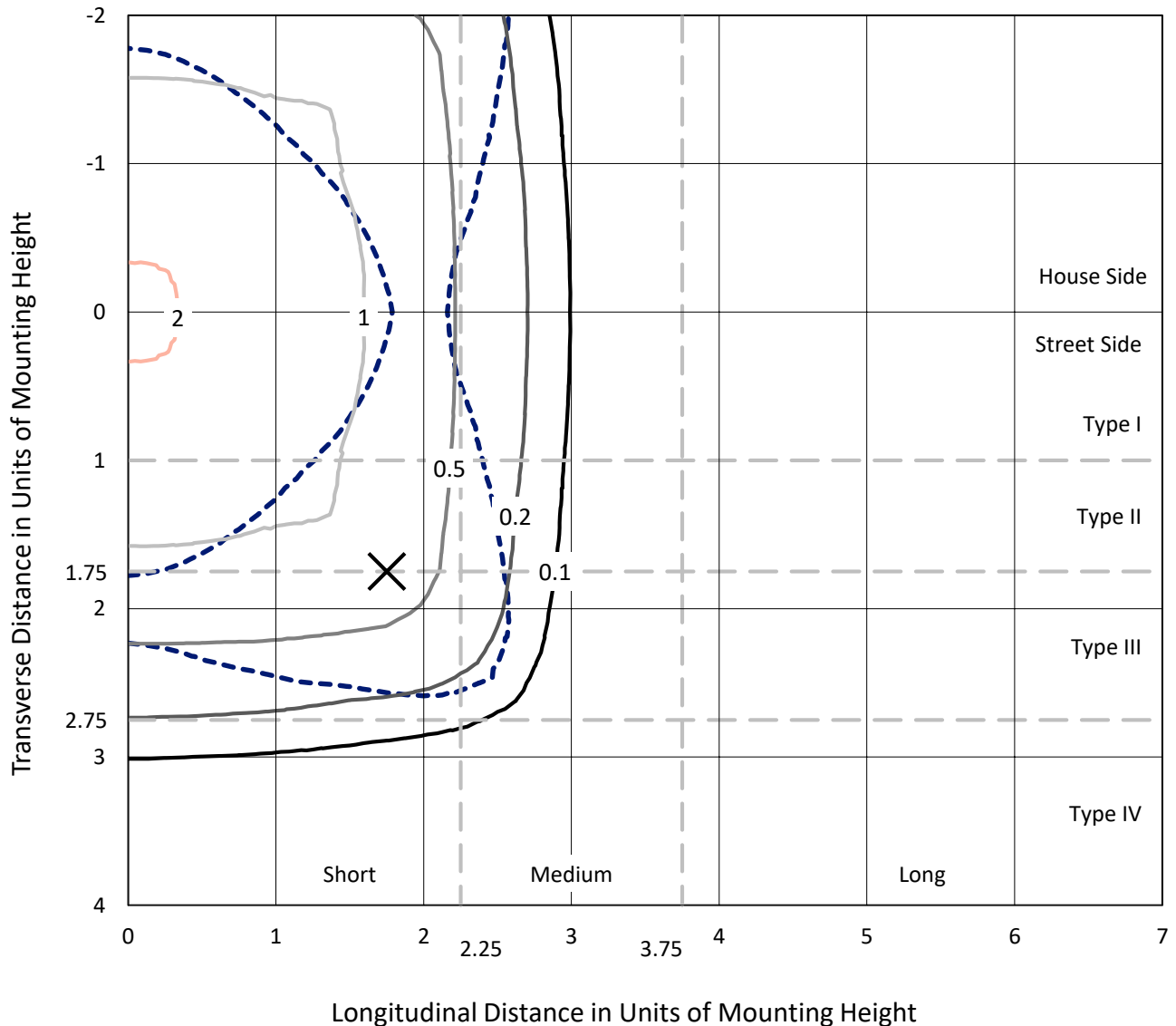
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

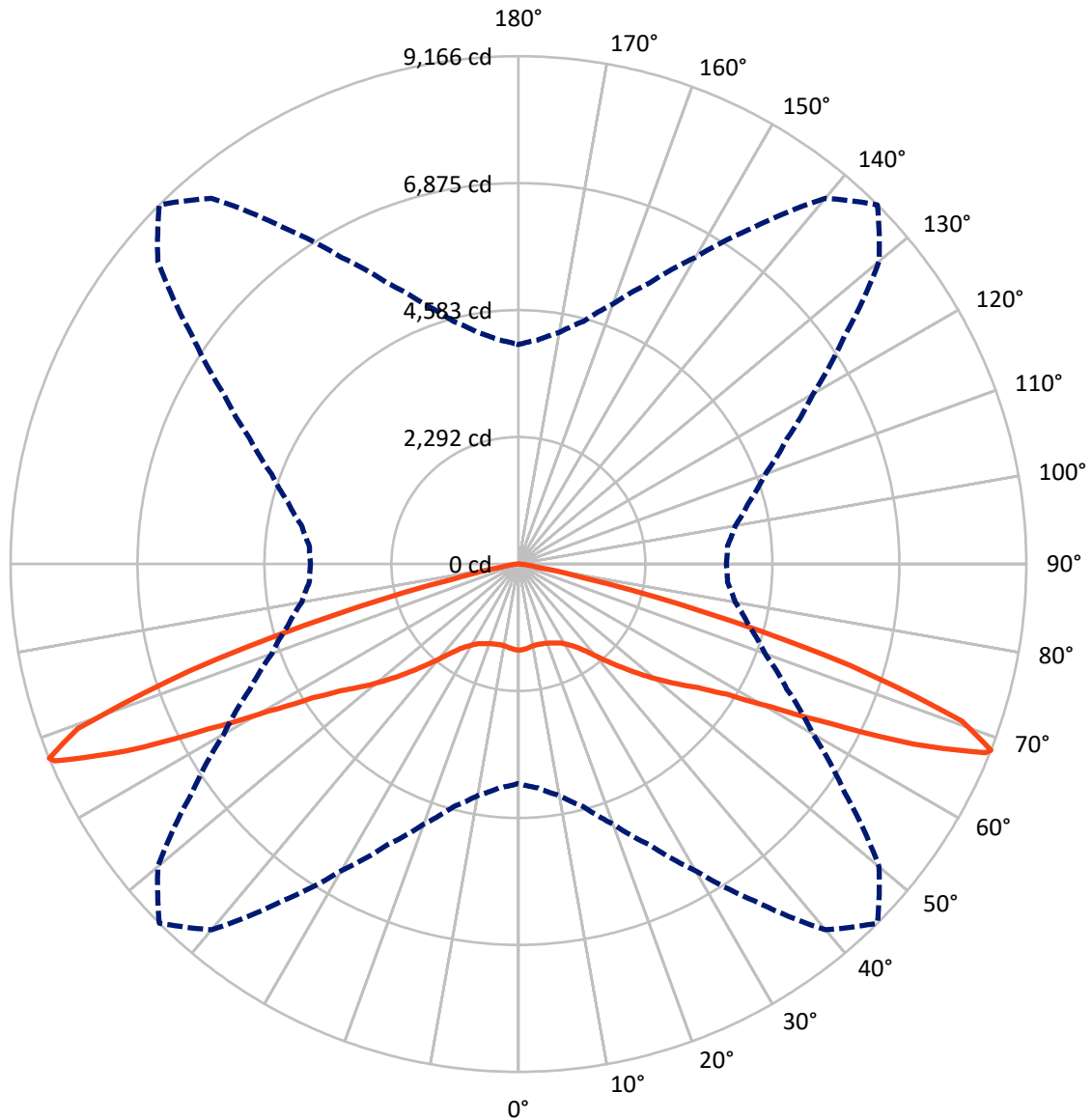
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 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
House Side	Lumens	7793.0	0.0	7793.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7793.0	0.0	7793.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	15586.0	0.0	15586.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.5	0.9
10°-20°	421.9	2.7
20°-30°	717.3	4.6
30°-40°	1173.9	7.5
40°-50°	2097.9	13.5
50°-60°	3543.0	22.7
60°-70°	5493.8	35.2
70°-80°	1888.9	12.1
80°-90°	103.8	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°	15586.0	100.0
0°-180°	15586.0	100.0

Coefficient of Utilization



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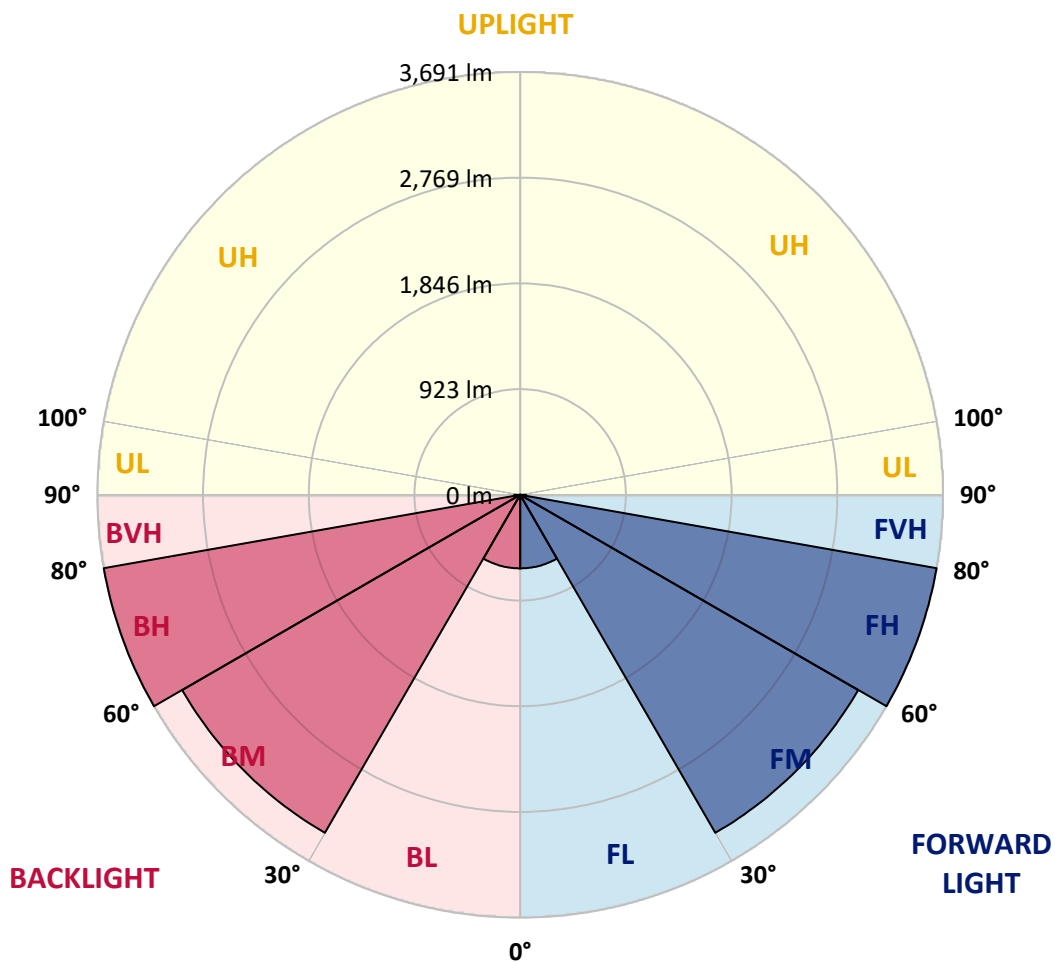
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	642.4	4.1			
FM	(30°-60°)	3407.4	21.9			
FH	(60°-80°)	3691.4	23.7			G2/5000
FVH	(80°-90°)	51.9	0.3			G1/100
BL	(0°-30°)	642.4	4.1	B2/1000		
BM	(30°-60°)	3407.4	21.9	B3/5000		
BH	(60°-80°)	3691.4	23.7	B4/5000		G2/5000
BVH	(80°-90°)	51.9	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°	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7
2.5°	1561.4	1561.4	1563.3	1562.4	1559.5	1556.7	1553.8	1550.9	1549.0	1547.1	1545.2
5°	1545.2	1545.2	1548.1	1546.2	1544.3	1541.4	1539.5	1536.6	1534.7	1532.8	1533.8
7.5°	1524.2	1526.1	1528.0	1527.1	1523.3	1522.3	1519.4	1518.5	1516.6	1513.7	1514.7
10°	1506.1	1507.0	1508.9	1508.0	1507.0	1504.2	1503.2	1502.3	1501.3	1497.5	1496.5
12.5°	1487.9	1489.8	1491.8	1492.7	1491.8	1492.7	1493.7	1494.6	1493.7	1491.8	1491.8
15°	1473.6	1475.5	1478.4	1481.3	1482.2	1487.9	1491.8	1495.6	1498.4	1499.4	1496.5
17.5°	1466.0	1468.9	1472.7	1478.4	1483.2	1489.8	1496.5	1502.3	1507.0	1508.0	1505.1
20°	1465.0	1467.9	1473.6	1480.3	1488.9	1497.5	1508.0	1516.6	1521.3	1524.2	1521.3
22.5°	1471.7	1475.5	1483.2	1491.8	1502.3	1513.7	1527.1	1536.6	1546.2	1550.0	1547.1
25°	1490.8	1494.6	1503.2	1513.7	1525.2	1539.5	1552.8	1565.2	1574.8	1579.6	1575.7
27.5°	1530.9	1531.8	1541.4	1552.8	1566.2	1578.6	1595.8	1601.5	1609.2	1613.9	1609.2
30°	1587.2	1589.1	1597.7	1615.8	1628.2	1644.5	1654.0	1659.7	1668.3	1673.1	1667.4
32.5°	1673.1	1675.0	1682.6	1699.8	1711.3	1723.7	1735.1	1739.0	1747.5	1753.3	1746.6
35°	1794.3	1798.1	1804.8	1816.3	1825.8	1835.3	1843.9	1841.1	1846.8	1854.4	1847.8
37.5°	1960.4	1959.4	1961.3	1969.9	1979.5	1985.2	1998.6	1991.9	1997.6	2004.3	2000.5
40°	2154.1	2154.1	2153.2	2168.4	2172.3	2178.0	2192.3	2183.7	2191.3	2199.0	2192.3
42.5°	2374.6	2378.4	2383.2	2395.6	2406.1	2408.0	2414.7	2410.9	2420.4	2427.1	2420.4
45°	2628.5	2634.2	2639.9	2668.6	2673.3	2677.1	2681.9	2669.5	2680.0	2685.7	2683.8
47.5°	2891.9	2902.4	2914.8	2944.4	2963.5	2972.1	2975.9	2961.6	2962.5	2971.1	2972.1
50°	3189.7	3201.1	3213.5	3246.9	3265.1	3280.3	3285.1	3268.9	3270.8	3277.5	3279.4
52.5°	3464.5	3477.9	3504.6	3549.5	3575.3	3602.0	3603.9	3583.8	3592.4	3597.2	3593.4
55°	3723.2	3740.4	3775.7	3835.8	3882.6	3935.1	3958.9	3937.0	3937.0	3933.2	3931.3
57.5°	4024.8	4043.9	4080.1	4149.8	4214.7	4290.1	4355.0	4377.0	4417.1	4430.4	4409.4
60°	4479.1	4499.1	4536.4	4628.0	4710.1	4819.8	4926.7	5013.6	5154.8	5231.2	5162.5
62.5°	4894.3	4924.8	5012.6	5173.0	5350.5	5553.8	5789.5	5957.5	6214.2	6342.1	6169.4
65°	4799.8	4861.8	5033.6	5285.6	5652.1	6093.0	6573.1	7034.1	7564.7	7836.7	7485.5
67.5°	4192.8	4245.3	4430.4	4723.4	5180.6	5788.6	6534.9	7489.3	8584.1	9093.7	8472.4
68°	3960.8	4059.1	4243.4	4534.4	4995.4	5592.9	6389.8	7420.6	8615.5	9166.2	8495.3
70°	3037.0	3072.3	3248.8	3510.4	4007.6	4593.6	5398.2	6573.1	7923.6	8490.5	7800.5
72.5°	1443.1	1464.1	1578.6	1836.3	2152.2	2629.4	3339.5	4447.6	5664.5	6254.3	5566.2
75°	528.7	533.5	560.2	621.3	739.7	919.1	1259.8	1948.9	2885.2	3440.7	2896.7
77.5°	285.4	286.3	296.8	312.1	333.1	357.0	408.5	547.8	883.8	1202.6	933.4
80°	179.4	178.5	189.0	201.4	215.7	227.2	231.9	248.1	279.6	327.4	300.6
82.5°	91.6	100.2	124.1	137.4	158.4	162.3	157.5	156.5	166.1	179.4	185.2
85°	50.6	44.9	65.9	87.8	95.4	98.3	99.3	93.5	91.6	89.7	94.5
87.5°	25.8	23.9	28.6	43.9	46.8	38.2	39.1	33.4	22.9	22.9	23.9
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°	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7	1554.7
2.5°	1543.3	1544.3	1542.3	1542.3	1542.3	1543.3	1542.3	1541.4
5°	1530.9	1532.8	1532.8	1533.8	1534.7	1534.7	1534.7	1534.7
7.5°	1512.8	1513.7	1515.6	1515.6	1515.6	1515.6	1515.6	1515.6
10°	1495.6	1493.7	1492.7	1490.8	1490.8	1487.9	1488.9	1489.8
12.5°	1487.0	1483.2	1481.3	1478.4	1476.5	1473.6	1473.6	1474.6
15°	1490.8	1485.1	1479.4	1477.4	1475.5	1473.6	1471.7	1472.7
17.5°	1498.4	1491.8	1485.1	1481.3	1477.4	1474.6	1473.6	1474.6
20°	1514.7	1505.1	1494.6	1487.9	1480.3	1478.4	1475.5	1478.4
22.5°	1536.6	1525.2	1511.8	1499.4	1490.8	1487.0	1483.2	1486.0
25°	1563.3	1550.9	1537.6	1523.3	1513.7	1510.8	1506.1	1506.1
27.5°	1600.6	1590.1	1578.6	1565.2	1555.7	1552.8	1545.2	1545.2
30°	1659.7	1649.2	1638.7	1627.3	1617.7	1614.9	1605.3	1605.3
32.5°	1738.0	1726.5	1719.9	1710.3	1702.7	1697.9	1686.5	1685.5
35°	1843.0	1832.5	1831.5	1824.9	1817.2	1818.2	1806.7	1804.8
37.5°	1993.8	1985.2	1988.1	1982.3	1975.6	1981.4	1974.7	1974.7
40°	2186.6	2183.7	2186.6	2182.8	2183.7	2184.7	2178.9	2180.8
42.5°	2419.5	2411.8	2429.0	2427.1	2424.2	2431.9	2418.5	2409.0
45°	2687.6	2684.8	2702.0	2704.8	2699.1	2703.9	2680.0	2679.1
47.5°	2978.7	2978.7	2994.0	2992.1	2986.4	2987.3	2958.7	2940.6
50°	3282.2	3280.3	3295.6	3291.8	3284.2	3283.2	3253.6	3235.5
52.5°	3598.2	3598.2	3620.1	3609.6	3591.5	3582.9	3546.6	3522.8
55°	3947.5	3942.7	3949.4	3915.0	3879.7	3853.9	3809.1	3791.0
57.5°	4389.4	4334.0	4286.3	4242.4	4192.8	4162.2	4109.7	4090.6
60°	5016.4	4868.5	4804.5	4716.7	4634.7	4593.6	4523.9	4486.7
62.5°	5885.0	5639.7	5466.0	5272.2	5085.1	4953.4	4847.5	4800.7
65°	6889.0	6354.5	5912.6	5497.5	5145.3	4865.6	4710.1	4661.4
67.5°	7270.8	6289.6	5527.0	4931.5	4503.9	4170.8	3984.7	3945.6
68°	7189.6	6140.7	5348.6	4738.7	4309.2	3973.2	3788.1	3752.8
70°	6342.1	5180.6	4344.5	3737.5	3336.7	3016.9	2886.2	2829.9
72.5°	4323.5	3327.1	2552.1	2041.5	1741.8	1539.5	1419.2	1378.2
75°	1990.0	1344.8	898.1	671.0	569.8	521.1	483.9	474.3
77.5°	580.3	421.9	362.7	336.0	315.9	298.7	286.3	285.4
80°	275.8	258.6	251.0	233.8	215.7	199.5	188.0	189.9
82.5°	185.2	180.4	180.4	163.2	134.6	115.5	95.4	85.9
85°	98.3	102.1	107.8	102.1	88.8	65.9	42.9	46.8
87.5°	33.4	38.2	40.1	39.1	35.3	26.7	20.0	20.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)