

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: P196931

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196931  
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-05-D-UNV-5WQ-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20625 lumens  
Efficiency: N/A  
Efficacy: 98.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G3

Input Watts (W): 210  
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

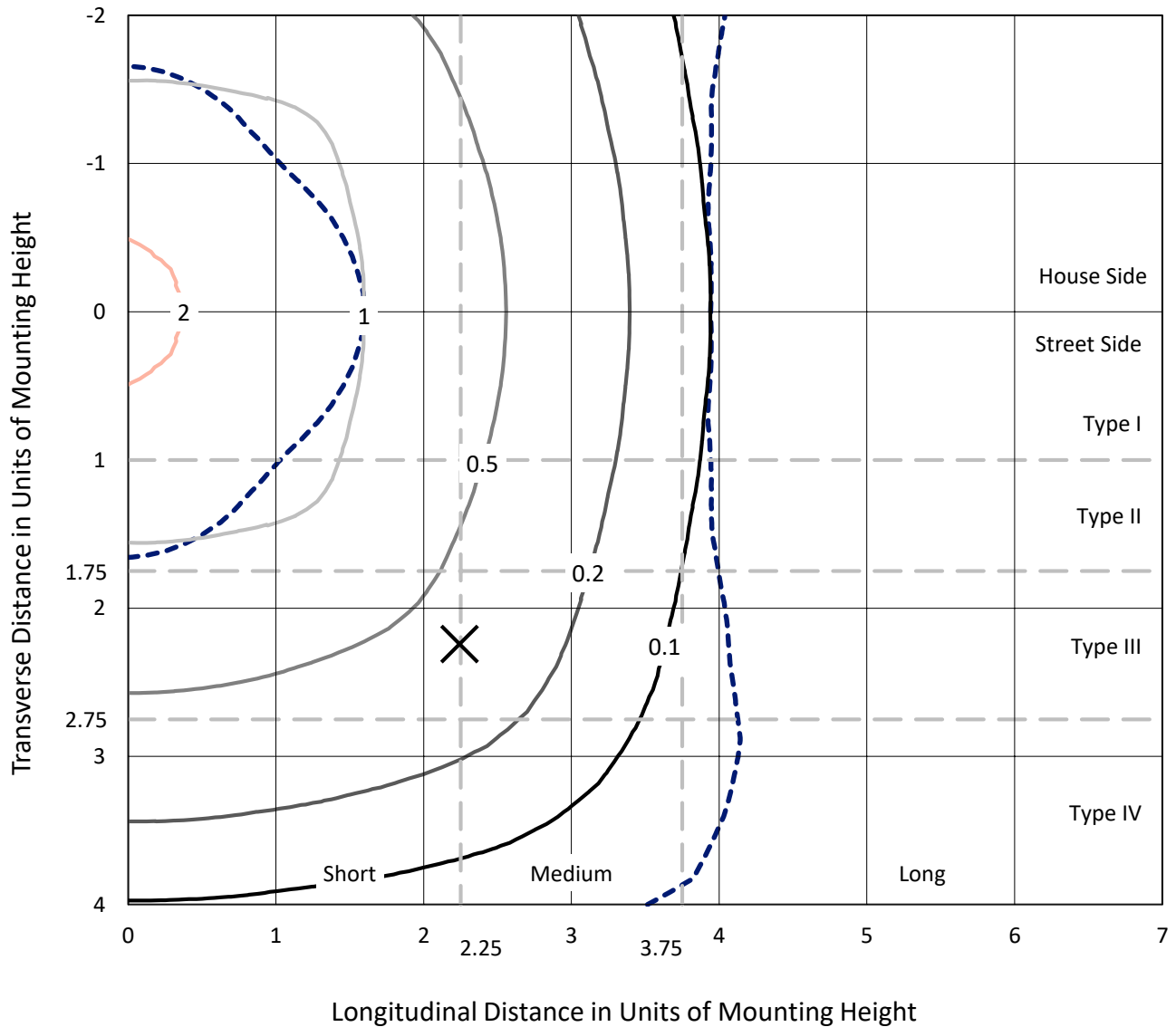


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### Iso-Footcandle Lines of Horizontal Illumination

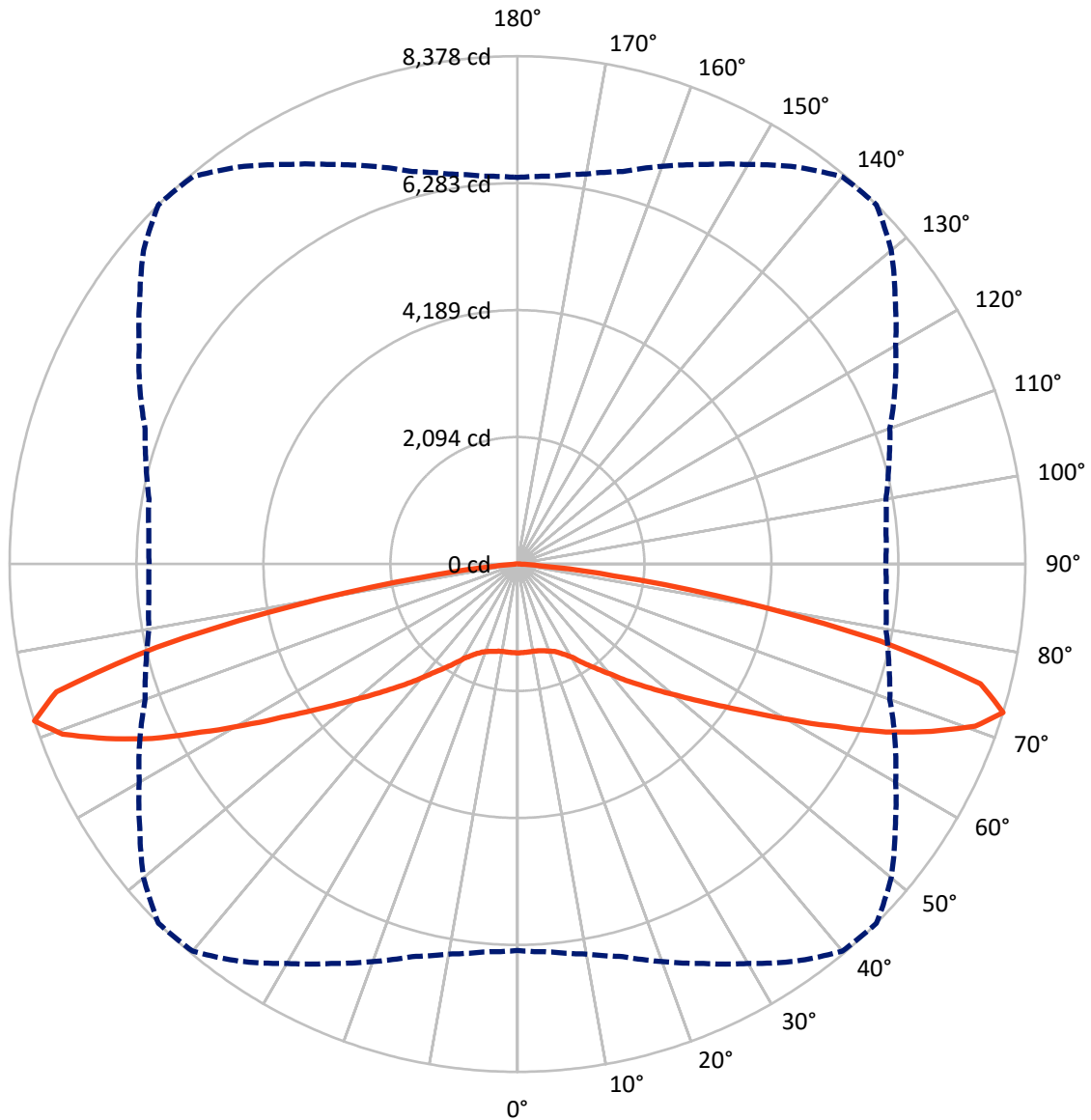
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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
<b>House Side</b>	Lumens	10312.5	0.0	10312.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10312.5	0.0	10312.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	20625.0	0.0	20625.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.0	0.7
10°-20°	423.6	2.1
20°-30°	764.7	3.7
30°-40°	1304.3	6.3
40°-50°	2220.6	10.8
50°-60°	3573.7	17.3
60°-70°	5943.1	28.8
70°-80°	5749.2	27.9
80°-90°	506.0	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°	20625.0	100.0
0°-180°	20625.0	100.0



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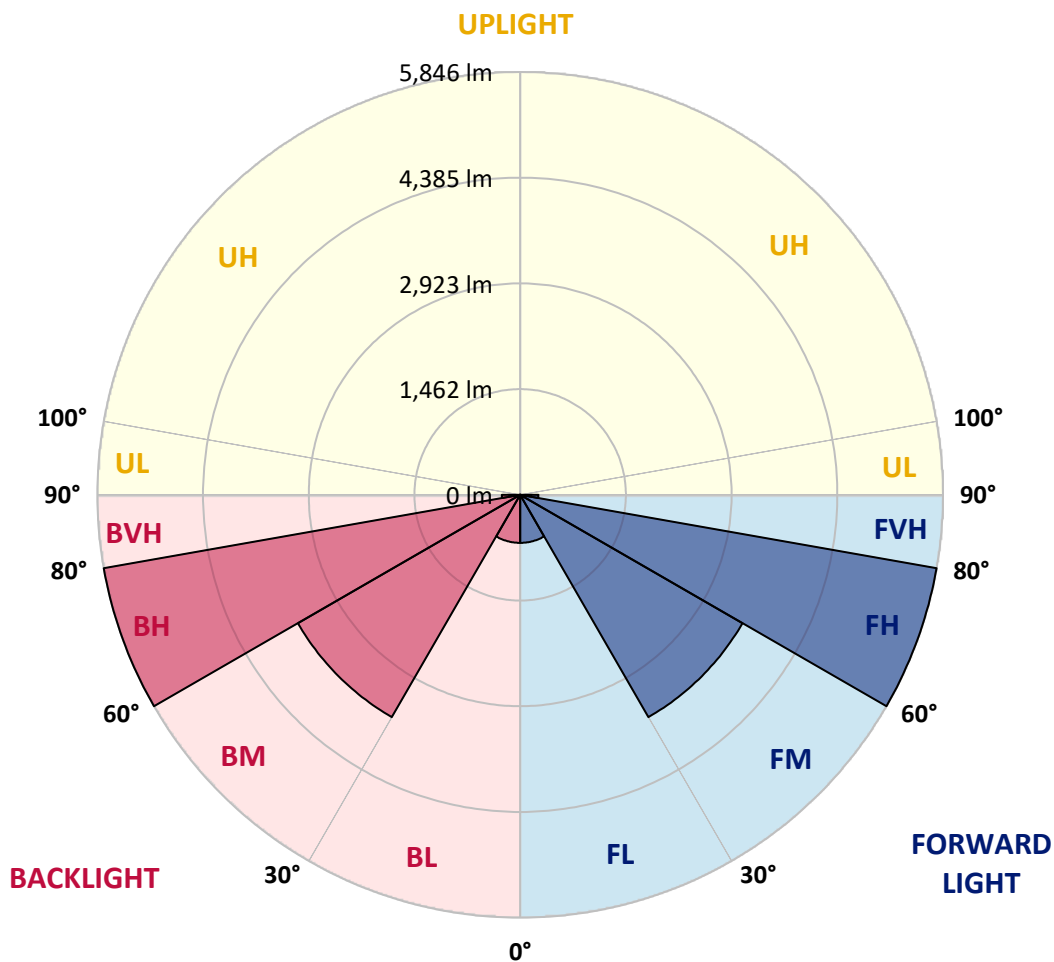
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	664.1	3.2			
FM	(30°-60°)	3549.3	17.2			
FH	(60°-80°)	5846.2	28.3			G3/7500
FVH	(80°-90°)	253.0	1.2			G3/500
BL	(0°-30°)	664.1	3.2	B2/1000		
BM	(30°-60°)	3549.3	17.2	B3/5000		
BH	(60°-80°)	5846.2	28.3	B5		G3/7500
BVH	(80°-90°)	253.0	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°	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3
2.5°	1477.7	1477.7	1479.0	1477.7	1475.2	1473.9	1470.1	1467.6	1465.0	1463.7	1461.2
5°	1479.0	1479.0	1480.2	1479.0	1476.4	1473.9	1471.4	1467.6	1465.0	1462.5	1461.2
7.5°	1484.1	1485.3	1486.6	1485.3	1480.2	1477.7	1473.9	1470.1	1465.0	1462.5	1459.9
10°	1494.2	1494.2	1494.2	1492.9	1489.1	1484.1	1479.0	1475.2	1468.8	1462.5	1458.7
12.5°	1501.8	1503.1	1503.1	1500.6	1495.5	1489.1	1484.1	1480.2	1475.2	1470.1	1466.3
15°	1513.3	1513.3	1512.0	1506.9	1499.3	1494.2	1491.7	1490.4	1489.1	1486.6	1482.8
17.5°	1536.1	1534.8	1531.0	1523.4	1514.5	1510.7	1508.2	1508.2	1508.2	1506.9	1504.4
20°	1569.1	1569.1	1564.0	1551.3	1543.7	1539.9	1536.1	1536.1	1536.1	1532.3	1528.5
22.5°	1622.4	1623.7	1616.1	1600.9	1590.7	1583.1	1578.0	1574.2	1570.4	1567.8	1561.5
25°	1694.8	1693.5	1684.6	1665.6	1658.0	1650.4	1640.2	1633.9	1628.8	1625.0	1617.4
27.5°	1771.0	1769.7	1759.5	1743.0	1738.0	1726.5	1718.9	1710.0	1703.7	1697.3	1689.7
30°	1868.7	1862.4	1854.8	1842.1	1839.5	1830.6	1820.5	1807.8	1797.6	1787.5	1778.6
32.5°	1956.3	1956.3	1944.9	1938.5	1943.6	1939.8	1941.1	1933.5	1927.1	1923.3	1914.4
35°	2078.2	2078.2	2073.1	2065.5	2066.8	2057.9	2056.6	2057.9	2063.0	2063.0	2052.8
37.5°	2240.7	2243.2	2226.7	2224.2	2217.8	2205.1	2198.8	2201.3	2212.8	2219.1	2205.1
40°	2442.5	2447.6	2442.5	2426.0	2418.4	2396.8	2384.1	2384.1	2393.0	2399.4	2394.3
42.5°	2641.8	2650.7	2641.8	2629.2	2622.8	2606.3	2600.0	2605.0	2616.5	2624.1	2616.5
45°	2864.0	2870.4	2858.9	2843.7	2836.1	2827.2	2823.4	2827.2	2839.9	2847.5	2845.0
47.5°	3082.4	3091.3	3077.3	3070.9	3070.9	3062.1	3072.2	3082.4	3093.8	3111.6	3103.9
50°	3295.6	3307.1	3298.2	3299.5	3309.6	3326.1	3345.2	3365.5	3385.8	3404.8	3407.4
52.5°	3486.1	3503.8	3505.1	3528.0	3559.7	3585.1	3638.4	3682.8	3731.1	3747.6	3740.0
55°	3686.7	3710.8	3742.5	3778.1	3828.8	3880.9	3971.0	4051.0	4114.5	4153.8	4147.5
57.5°	3973.6	3997.7	4030.7	4089.1	4165.3	4236.4	4359.5	4483.9	4580.4	4640.1	4610.9
60°	4345.5	4370.9	4414.1	4476.3	4575.3	4671.8	4840.6	5019.6	5169.4	5238.0	5184.7
62.5°	4838.1	4862.2	4890.1	4972.7	5083.1	5207.5	5419.5	5649.3	5839.7	5905.8	5830.9
65°	5540.1	5569.3	5578.2	5645.5	5753.4	5868.9	6097.5	6356.4	6573.5	6681.4	6531.6
67.5°	6331.0	6342.5	6378.0	6456.7	6567.2	6671.3	6851.5	7096.6	7304.8	7364.4	7204.5
70°	6794.4	6817.3	6879.5	6988.6	7120.7	7284.4	7481.2	7745.3	7981.4	8009.3	7806.2
72.5°	6375.5	6422.4	6532.9	6703.0	6979.8	7270.5	7609.4	7999.2	8338.1	8377.5	8051.2
75°	5113.6	5166.9	5298.9	5485.5	5813.1	6244.7	6734.7	7320.0	7827.8	7892.5	7460.9
77.5°	2725.6	2791.6	2983.3	3234.7	3701.9	4273.2	4863.5	5531.2	5962.9	6108.9	5797.8
80°	686.8	722.4	815.0	962.3	1278.4	1739.2	2248.3	2966.8	3502.6	3729.8	3502.6
82.5°	266.6	293.3	318.6	336.4	366.9	430.4	594.1	968.6	1305.1	1607.2	1391.4
85°	102.8	109.2	157.4	179.0	179.0	196.8	226.0	266.6	330.1	360.5	302.1
87.5°	40.6	44.4	54.6	83.8	86.3	76.2	81.2	91.4	69.8	58.4	66.0
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°	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3
2.5°	1459.9	1458.7	1456.1	1457.4	1456.1	1456.1	1456.1	1456.1
5°	1458.7	1458.7	1456.1	1456.1	1456.1	1457.4	1456.1	1456.1
7.5°	1457.4	1456.1	1453.6	1452.3	1452.3	1451.0	1451.0	1451.0
10°	1454.9	1452.3	1449.8	1448.5	1448.5	1446.0	1446.0	1446.0
12.5°	1461.2	1457.4	1454.9	1453.6	1453.6	1453.6	1454.9	1454.9
15°	1479.0	1471.4	1467.6	1466.3	1467.6	1470.1	1471.4	1472.6
17.5°	1498.0	1490.4	1484.1	1481.5	1482.8	1486.6	1490.4	1492.9
20°	1522.1	1515.8	1508.2	1505.6	1505.6	1510.7	1513.3	1517.1
22.5°	1556.4	1551.3	1545.0	1541.2	1538.6	1545.0	1548.8	1551.3
25°	1611.0	1605.9	1600.9	1597.0	1595.8	1602.1	1604.7	1605.9
27.5°	1683.4	1678.3	1675.8	1674.5	1670.7	1673.2	1677.0	1675.8
30°	1777.3	1781.1	1777.3	1777.3	1771.0	1773.5	1771.0	1768.4
32.5°	1903.0	1899.2	1887.8	1880.1	1871.3	1871.3	1867.4	1863.6
35°	2028.7	2016.0	2009.6	2013.4	2009.6	2012.2	2005.8	1999.5
37.5°	2177.2	2169.6	2168.3	2179.7	2177.2	2179.7	2179.7	2170.9
40°	2374.0	2368.9	2377.8	2396.8	2404.4	2403.2	2405.7	2394.3
42.5°	2600.0	2591.1	2594.9	2611.4	2620.3	2622.8	2621.5	2611.4
45°	2825.9	2828.5	2828.5	2846.2	2855.1	2860.2	2851.3	2847.5
47.5°	3081.1	3084.9	3076.0	3087.4	3090.0	3098.9	3091.3	3084.9
50°	3375.6	3361.7	3341.3	3345.2	3345.2	3342.6	3333.7	3326.1
52.5°	3704.4	3672.7	3634.6	3621.9	3607.9	3594.0	3576.2	3562.2
55°	4078.9	4024.3	3955.8	3924.1	3897.4	3865.7	3825.0	3811.1
57.5°	4513.1	4419.2	4327.8	4270.6	4202.1	4160.2	4108.1	4105.6
60°	5028.5	4901.6	4740.3	4655.3	4586.7	4537.2	4497.9	4482.6
62.5°	5623.9	5405.6	5231.6	5140.2	5060.3	5029.8	4980.3	4986.6
65°	6234.6	6012.4	5843.5	5769.9	5695.0	5674.7	5629.0	5645.5
67.5°	6896.0	6713.2	6527.8	6459.3	6390.7	6370.4	6323.4	6337.4
70°	7488.8	7256.5	7045.8	6911.2	6794.4	6700.5	6640.8	6616.7
72.5°	7606.9	7204.5	6873.1	6536.7	6342.5	6172.4	6102.5	6075.9
75°	6835.0	6210.4	5738.2	5343.4	5125.0	4877.5	4850.8	4814.0
77.5°	5316.7	4605.8	4034.5	3526.7	3233.4	2931.3	2827.2	2748.5
80°	3171.2	2437.5	1889.0	1324.1	1080.4	869.6	817.6	763.0
82.5°	1134.9	727.4	490.0	382.1	341.5	314.8	294.5	267.9
85°	274.2	231.1	218.4	198.0	195.5	166.3	118.1	105.4
87.5°	87.6	80.0	81.2	77.4	81.2	60.9	49.5	44.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)