

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: P196852

Luminaire Tested: **NAV-AF-04-D-UNV-T4W-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196852  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
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-T4W-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15363 lumens  
Efficiency: N/A  
Efficacy: 119.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

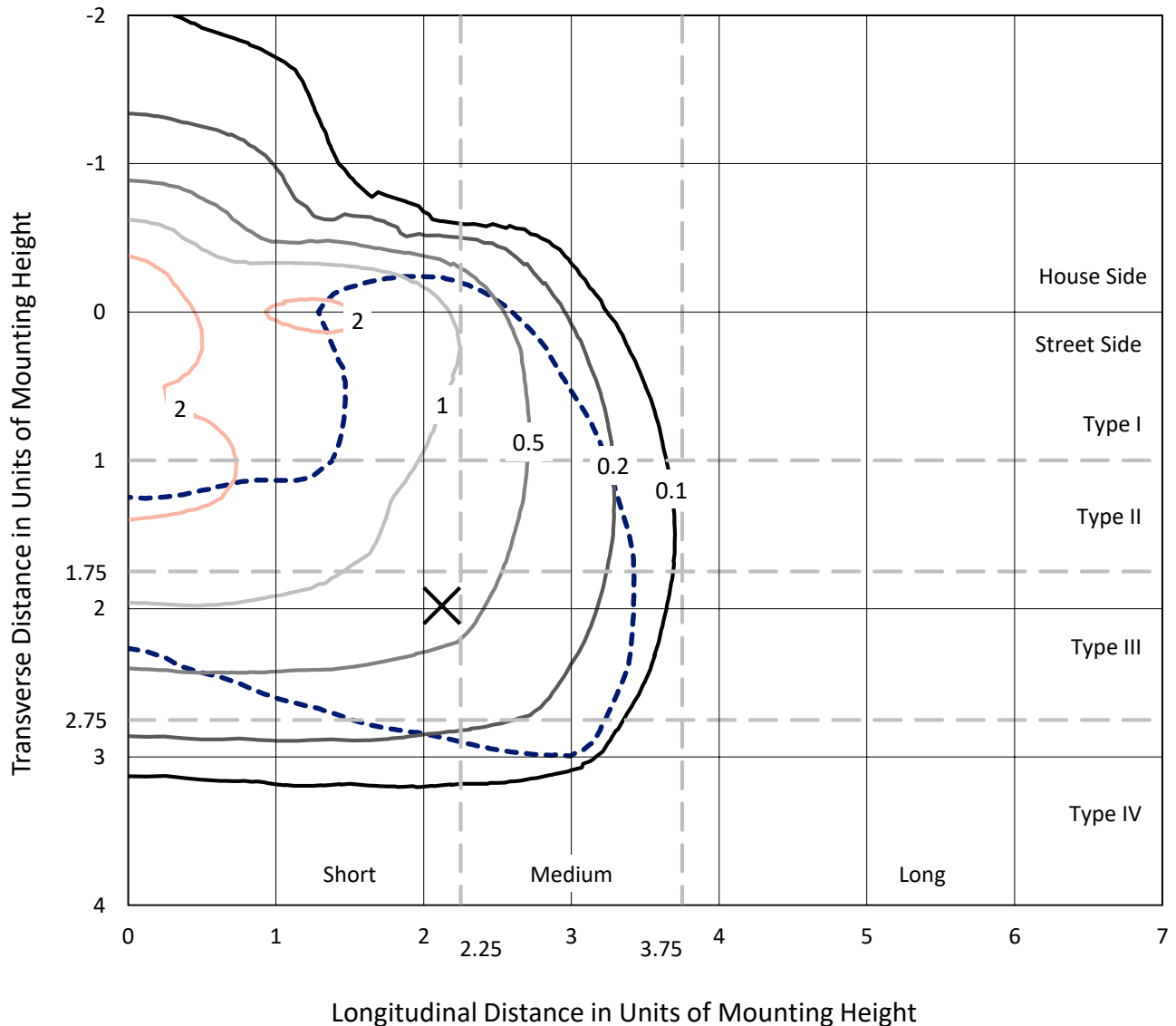
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

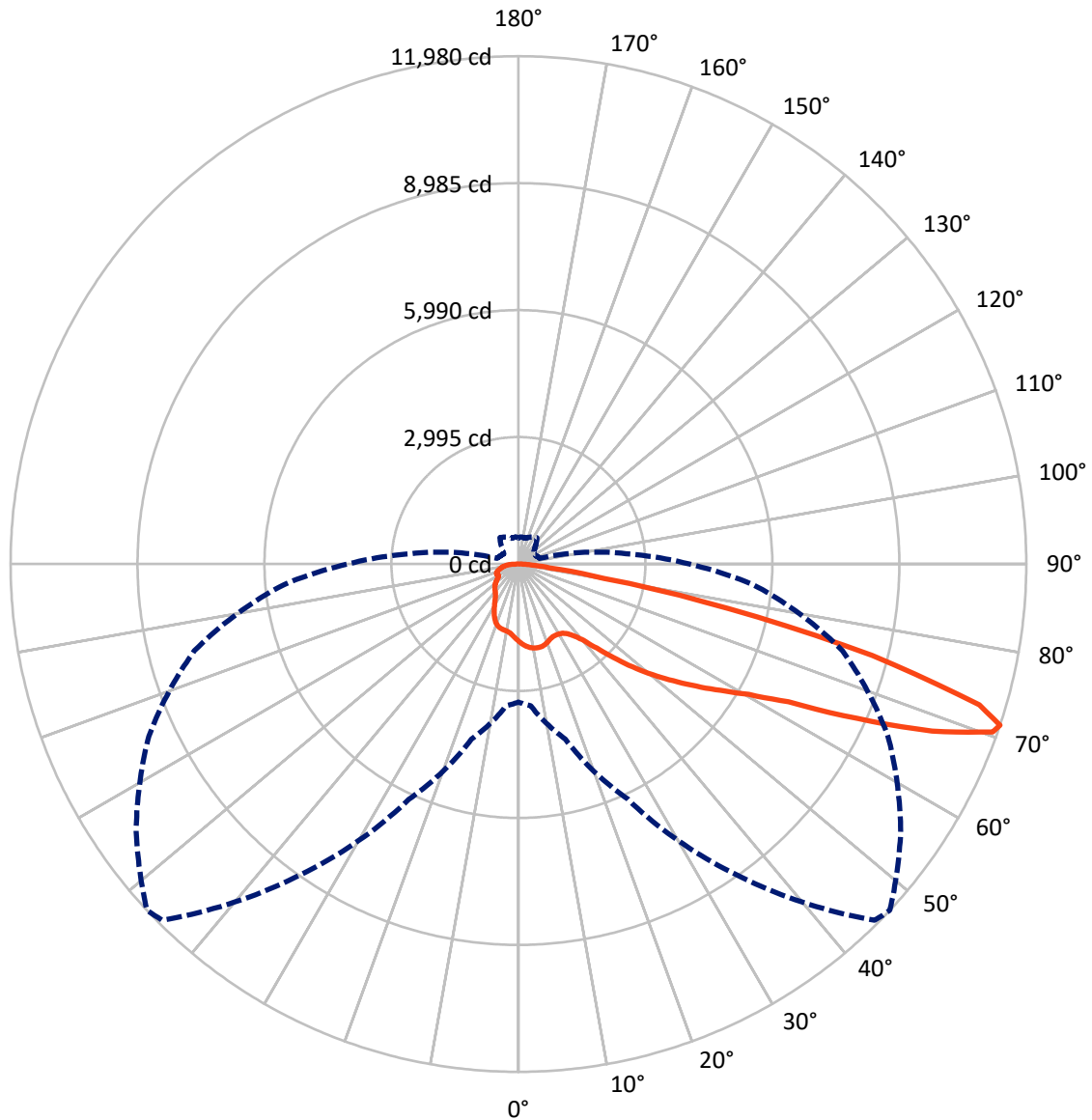
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3292.5	0.0	3292.5
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	12070.5	0.0	12070.5
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	15363.0	0.0	15363.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.4	1.1
10°-20°	510.3	3.3
20°-30°	758.3	4.9
30°-40°	1088.8	7.1
40°-50°	1930.5	12.6
50°-60°	3303.4	21.5
60°-70°	4689.7	30.5
70°-80°	2568.5	16.7
80°-90°	339.0	2.2
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°	15363.0	100.0
0°-180°	15363.0	100.0



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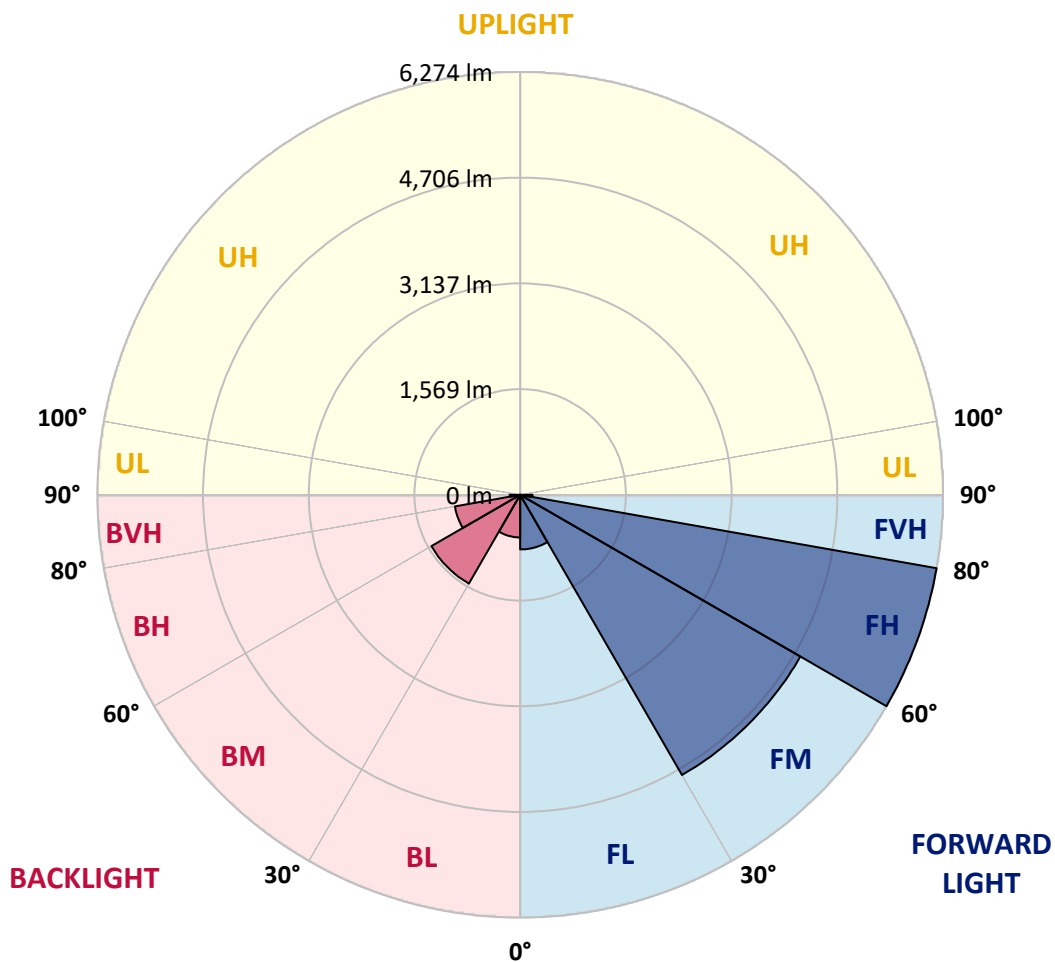
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	810.8	5.3			
FM	(30°-60°)	4801.4	31.3			
FH	(60°-80°)	6274.4	40.8			G3/7500
FVH	(80°-90°)	183.9	1.2			G2/225
BL	(0°-30°)	632.3	4.1	B2/1000		
BM	(30°-60°)	1521.3	9.9	B2/2500		
BH	(60°-80°)	983.8	6.4	B2/1000		G2/1000
BVH	(80°-90°)	155.1	1.0			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0
2.5°	1938.4	1934.4	1936.4	1929.4	1912.6	1894.7	1894.7	1875.7	1855.8	1835.9	1813.9
5°	2058.9	2052.9	2047.9	2026.0	1993.2	1956.3	1950.4	1912.6	1871.7	1830.8	1791.1
7.5°	2159.4	2153.5	2138.5	2098.8	2050.9	1996.1	1989.2	1939.5	1885.7	1828.9	1773.2
10°	2231.1	2227.1	2198.3	2147.5	2091.8	2027.0	2015.1	1964.3	1900.6	1829.9	1759.2
12.5°	2271.0	2265.0	2230.1	2170.4	2104.7	2039.0	2027.0	1978.2	1905.6	1827.9	1745.3
15°	2255.0	2252.1	2219.2	2158.4	2092.8	2035.9	2026.0	1976.3	1902.5	1821.0	1732.3
17.5°	2187.4	2194.3	2168.4	2108.7	2054.9	2015.1	2004.2	1957.4	1887.7	1804.0	1712.4
20°	2093.7	2101.7	2088.7	2028.1	1997.2	1971.2	1965.2	1927.5	1862.8	1779.1	1688.5
22.5°	1994.2	2001.2	2002.1	1945.4	1935.4	1925.4	1920.4	1893.6	1840.8	1764.2	1672.5
25°	1925.4	1933.5	1935.4	1885.7	1891.6	1894.7	1893.6	1874.7	1836.8	1764.2	1674.6
27.5°	1907.5	1911.5	1909.6	1863.8	1874.7	1891.6	1892.6	1888.6	1852.8	1784.1	1702.5
30°	1969.3	1971.2	1946.4	1877.7	1888.6	1910.5	1911.5	1909.6	1886.7	1835.9	1765.2
32.5°	2236.1	2234.2	2148.5	1971.2	1933.5	1941.4	1944.4	1962.3	1964.3	1921.6	1855.8
35°	2642.3	2641.4	2541.7	2239.0	2060.8	2019.1	2023.1	2050.9	2075.8	2047.0	2009.1
37.5°	3089.3	3092.2	3031.6	2621.3	2335.6	2161.4	2157.5	2178.3	2223.2	2233.2	2238.0
40°	3585.2	3600.1	3597.1	3060.5	2721.0	2404.4	2364.5	2340.7	2427.3	2482.1	2552.8
42.5°	4151.7	4147.6	4149.6	3542.3	3161.0	2786.6	2713.0	2601.5	2702.1	2796.6	2951.9
45°	4638.5	4654.5	4666.4	4055.0	3653.8	3223.7	3149.1	2945.9	3036.6	3178.0	3414.9
47.5°	5128.3	5100.4	5122.3	4625.5	4202.4	3722.6	3626.0	3352.2	3436.7	3635.9	3996.2
50°	5698.8	5685.9	5586.3	5370.2	4865.5	4228.4	4101.8	3776.3	3899.7	4165.5	4714.1
52.5°	6210.6	6140.8	6063.2	5955.6	5517.6	4740.0	4579.7	4217.3	4444.3	4773.9	5605.2
55°	6397.6	6350.9	6444.4	6583.9	6207.6	5261.7	5082.5	4732.0	5058.6	5469.7	6653.6
57.5°	6596.7	6612.7	6823.8	7105.5	6860.6	5818.3	5624.1	5341.3	5732.7	6248.3	7825.3
60°	6696.4	6760.1	7181.2	7709.9	7481.8	6428.5	6242.3	6041.3	6480.2	7108.5	8994.2
62.5°	6713.3	6798.8	7395.2	7922.0	8337.1	7363.4	7148.4	6930.4	7414.3	8059.3	9840.4
65°	6402.7	6534.0	7376.3	8182.8	9116.6	8925.5	8789.1	8408.8	8664.6	8896.7	9984.7
67.5°	5489.7	5633.1	6646.6	8075.3	9741.9	10546.4	10520.5	9958.9	9630.3	9220.2	8914.6
70°	4029.2	4144.6	5118.4	6903.4	9469.1	11818.7	11864.5	10963.5	9900.2	8533.2	6628.6
71°	3258.5	3358.1	4276.1	6128.9	8937.4	11884.3	11979.9	11008.3	9619.4	7913.0	5549.4
72.5°	2028.1	2083.8	2839.4	4625.5	7695.9	11207.4	11368.7	10434.8	8735.3	6688.5	3922.6
75°	765.6	787.5	1053.4	2040.0	4593.7	8419.7	8614.9	7886.2	6136.9	3818.1	1641.7
77.5°	411.2	422.2	522.7	848.3	1840.8	4826.6	5077.5	4498.1	2944.0	1336.1	671.1
80°	275.8	282.8	361.4	502.8	846.2	1837.8	2047.0	1806.0	1102.1	762.6	477.9
82.5°	178.2	182.3	246.0	330.5	546.7	646.2	737.7	770.6	688.0	546.7	288.8
85°	117.5	120.5	162.2	211.1	338.4	318.6	326.5	427.1	468.9	360.4	147.4
87.5°	67.7	69.7	97.6	108.5	152.3	119.4	129.5	203.1	278.7	234.9	84.6
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0	1827.0
2.5°	1804.0	1796.0	1778.0	1767.2	1762.3	1760.1	1758.2	1762.3	1762.3	1760.1	1756.3
5°	1771.2	1756.3	1726.4	1705.4	1694.5	1691.6	1695.4	1700.5	1703.5	1703.5	1700.5
7.5°	1747.3	1725.3	1685.6	1656.7	1639.8	1634.7	1645.7	1663.6	1675.6	1681.6	1682.6
10°	1727.4	1697.5	1653.6	1623.8	1609.8	1607.9	1621.9	1644.7	1669.6	1680.5	1682.6
12.5°	1709.5	1675.6	1627.8	1599.9	1589.9	1594.9	1613.9	1634.7	1663.6	1679.6	1680.5
15°	1692.5	1657.7	1606.8	1578.0	1576.1	1584.0	1602.0	1618.7	1640.7	1660.6	1660.6
17.5°	1672.5	1634.7	1582.0	1555.1	1555.1	1562.1	1574.0	1582.9	1597.0	1615.8	1614.9
20°	1648.7	1609.8	1556.1	1528.2	1522.3	1518.2	1518.2	1520.3	1532.3	1549.2	1552.1
22.5°	1630.8	1591.0	1534.2	1500.3	1473.5	1447.5	1436.6	1432.6	1443.7	1459.4	1463.5
25°	1630.8	1591.0	1527.2	1470.5	1404.7	1355.1	1334.0	1328.1	1339.1	1354.0	1360.0
27.5°	1657.7	1617.8	1543.2	1443.7	1323.1	1243.5	1218.6	1213.7	1223.6	1235.5	1241.5
30°	1720.4	1681.6	1588.9	1412.7	1232.6	1128.0	1100.1	1095.1	1100.1	1105.1	1112.0
32.5°	1824.9	1792.1	1663.6	1384.9	1141.0	1023.4	989.7	981.7	983.7	984.7	990.7
35°	1995.2	1980.3	1763.2	1352.0	1054.4	937.9	903.0	887.0	886.1	891.0	898.0
37.5°	2255.9	2265.0	1891.6	1304.2	982.7	877.2	842.3	826.3	818.4	828.3	836.3
40°	2624.4	2645.2	2040.0	1239.5	923.9	841.3	804.4	789.5	778.6	775.5	779.6
42.5°	3103.3	3097.3	2191.3	1156.8	860.2	817.4	778.6	762.6	744.7	721.7	716.8
45°	3670.8	3585.2	2317.7	1055.3	787.5	794.6	754.7	732.8	704.8	671.1	667.0
47.5°	4340.8	4104.9	2395.4	946.8	719.8	764.6	727.7	693.9	653.2	631.2	628.2
50°	5148.2	4713.1	2450.1	836.3	659.1	726.8	690.0	645.1	605.3	599.4	598.3
52.5°	6104.0	5430.9	2517.9	736.7	611.3	678.0	652.1	606.3	574.4	577.4	577.4
55°	7120.4	6173.7	2519.8	658.1	569.5	621.2	624.2	587.4	562.4	572.5	575.5
57.5°	8047.4	6822.8	2321.8	602.3	529.7	576.5	615.2	594.4	575.5	610.3	613.3
60°	8855.8	7322.5	1895.6	556.5	496.8	559.5	635.3	637.2	633.1	727.7	734.8
62.5°	9151.4	7327.6	1346.1	517.7	478.9	569.5	677.0	680.0	680.0	767.6	780.5
65°	8737.4	6717.3	896.0	494.8	467.0	591.4	710.8	697.9	667.0	727.7	713.8
67.5°	7277.8	5228.8	655.1	479.8	450.0	592.4	740.7	707.9	655.1	706.9	683.0
70°	5001.9	3327.3	548.6	466.0	430.1	566.5	756.6	704.8	637.2	659.1	627.2
71°	4026.2	2655.2	520.7	461.0	422.2	551.5	758.6	700.9	628.2	642.1	613.3
72.5°	2652.3	1635.7	486.9	450.0	410.2	525.6	753.7	691.9	616.2	617.4	598.3
75°	1046.3	678.0	438.0	425.1	376.3	483.9	731.7	673.0	593.4	573.5	565.5
77.5°	528.7	443.0	385.2	390.3	336.5	441.1	700.9	642.1	561.5	534.6	528.7
80°	386.3	336.5	329.5	338.4	291.7	399.3	662.1	600.4	520.7	548.6	536.6
82.5°	234.9	205.1	257.9	279.8	243.8	356.4	616.2	551.5	468.9	432.1	418.1
85°	111.6	120.5	186.2	206.1	180.2	284.7	563.6	497.7	409.1	353.5	359.5
87.5°	54.7	66.7	106.5	123.5	118.4	209.1	425.1	386.3	322.6	265.8	259.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)