

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: P196780

Luminaire Tested: **NAV-AF-04-D-UNV-T3-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196780  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)  
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-T3-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15550.9 lumens  
Efficiency: N/A  
Efficacy: 120.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

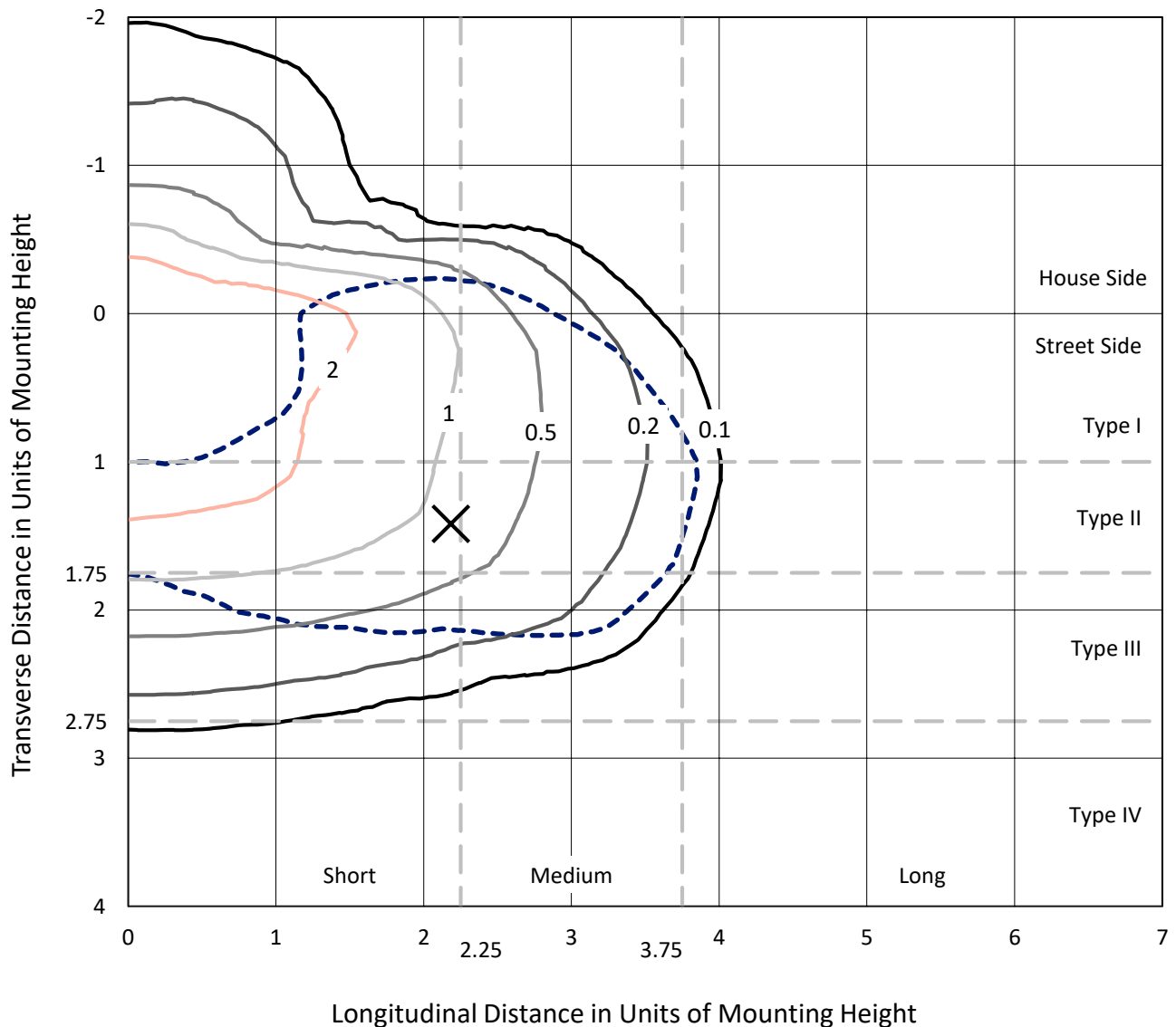
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196780  
 CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030-600

### Iso-Footcandle Lines of Horizontal Illumination

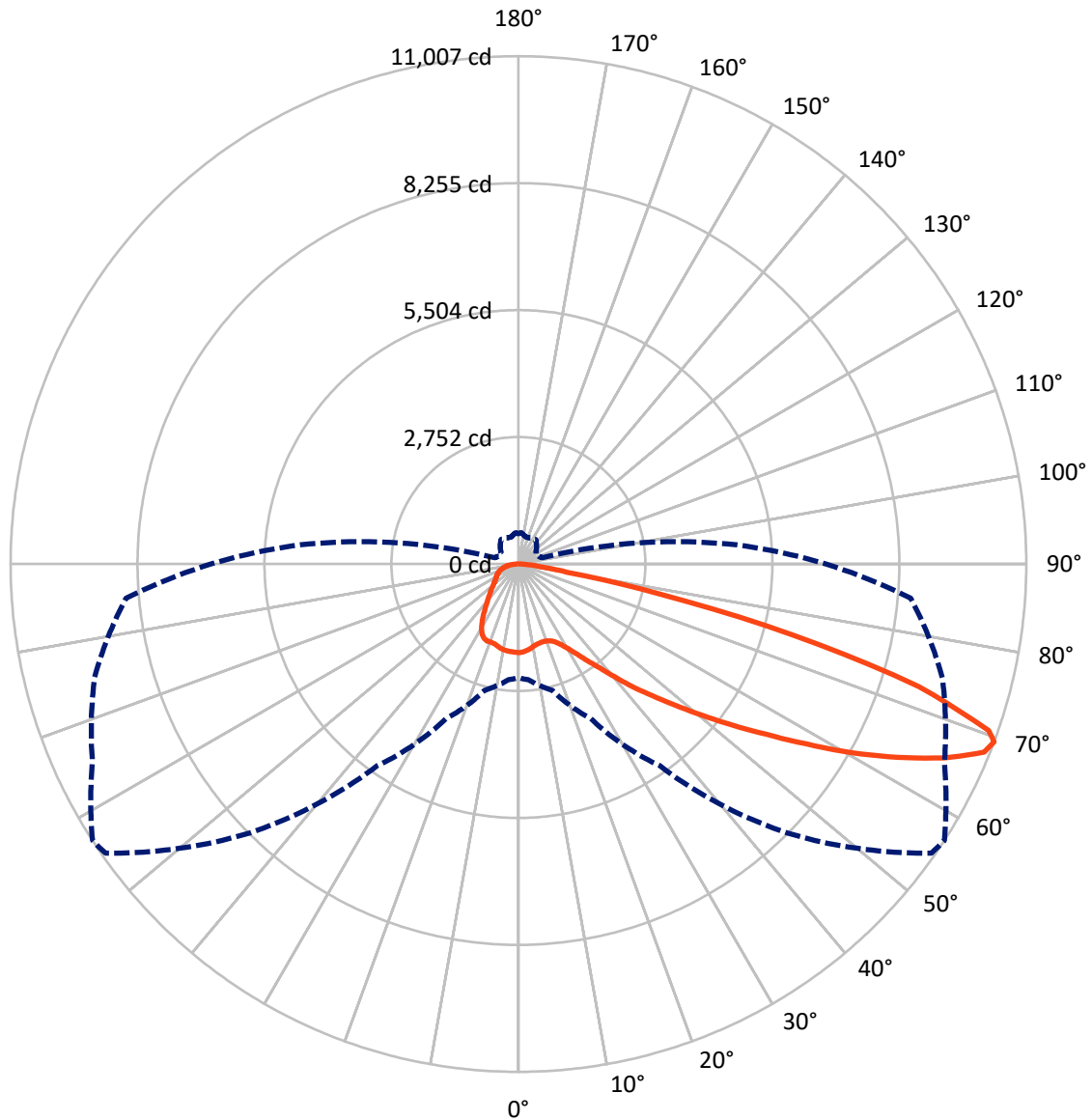
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P196780  
CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030-600

### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P196780

CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3431.5	0.0	3431.5
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	12119.3	0.0	12119.3
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	15550.9	0.0	15550.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.9	1.2
10°-20°	511.5	3.3
20°-30°	850.8	5.5
30°-40°	1389.4	8.9
40°-50°	2344.9	15.1
50°-60°	3647.6	23.5
60°-70°	4345.1	27.9
70°-80°	2024.2	13.0
80°-90°	257.5	1.7
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°	15550.9	100.0
0°-180°	15550.9	100.0



REPORT NUMBER: P196780

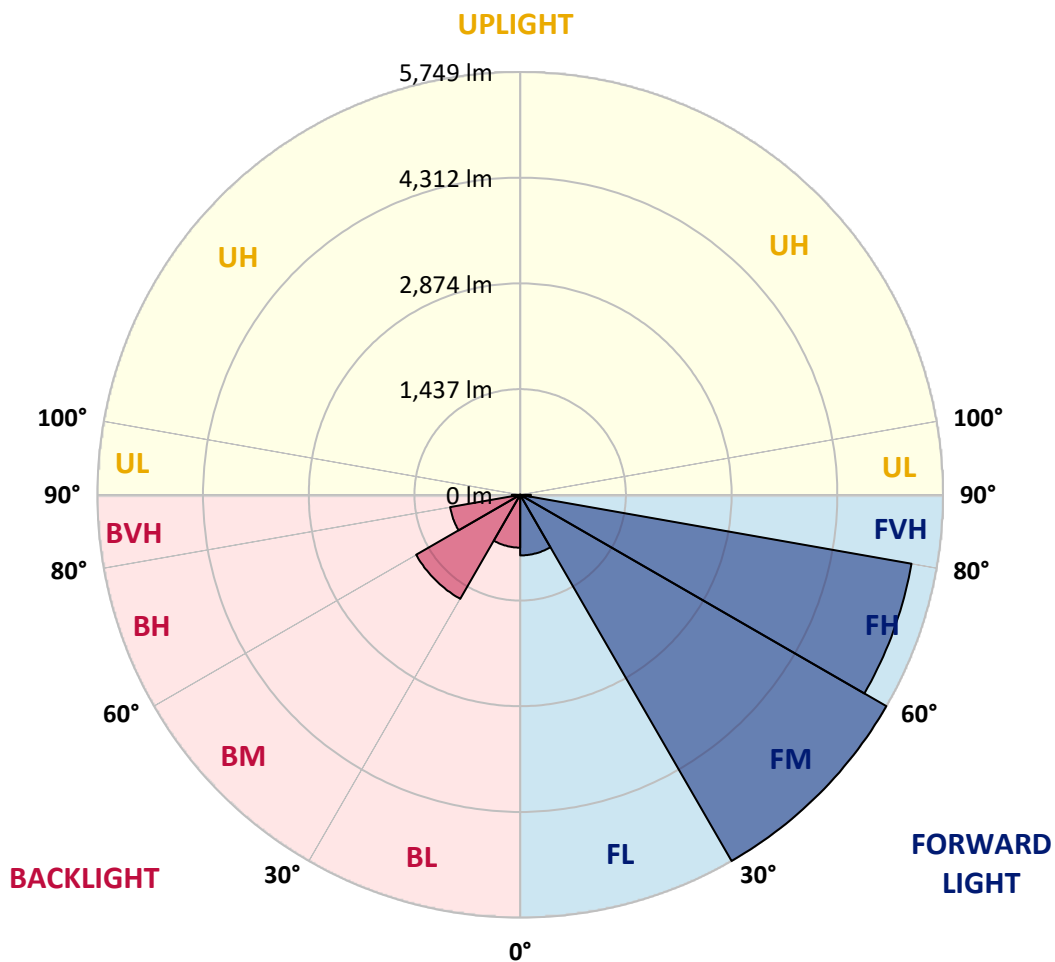
CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030-600

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	823.5	5.3			
FM	(30°-60°)	5748.7	37.0			
FH	(60°-80°)	5402.4	34.7			G3/7500
FVH	(80°-90°)	144.7	0.9			G2/225
BL	(0°-30°)	718.6	4.6	B2/1000		
BM	(30°-60°)	1633.2	10.5	B2/2500		
BH	(60°-80°)	967.0	6.2	B2/1000		G2/1000
BVH	(80°-90°)	112.7	0.7			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 III Short





REPORT NUMBER: P196780  
 CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5
2.5°	1910.5	1910.5	1915.6	1915.6	1915.6	1913.4	1907.5	1909.6	1905.5	1902.5	1897.7
5°	1871.7	1873.7	1879.7	1881.7	1884.6	1885.6	1885.6	1884.6	1885.6	1885.6	1882.6
7.5°	1818.0	1819.9	1827.0	1830.8	1839.8	1847.8	1851.7	1851.7	1856.8	1860.6	1861.8
10°	1785.1	1785.1	1789.0	1789.0	1796.0	1800.0	1812.9	1811.9	1825.9	1838.9	1844.9
12.5°	1781.0	1781.0	1779.1	1772.0	1768.2	1767.2	1780.1	1782.1	1803.0	1825.9	1836.8
15°	1794.0	1794.0	1788.0	1774.2	1759.2	1752.2	1765.2	1769.1	1792.1	1818.9	1835.9
17.5°	1835.9	1834.9	1821.9	1794.0	1768.2	1757.2	1761.2	1765.2	1786.1	1816.9	1837.8
20°	1928.4	1928.4	1900.6	1849.8	1805.0	1779.1	1773.2	1776.1	1791.1	1819.9	1846.8
22.5°	2090.6	2093.7	2043.9	1960.3	1883.6	1828.9	1805.0	1807.9	1814.9	1842.7	1872.7
25°	2329.6	2321.6	2251.0	2132.5	2013.1	1919.4	1870.7	1873.7	1873.7	1899.6	1930.4
27.5°	2582.6	2584.5	2482.9	2355.5	2198.2	2058.9	1981.2	1980.3	1979.2	2004.2	2036.9
30°	2868.3	2869.2	2751.8	2604.4	2424.3	2246.1	2129.6	2128.6	2119.6	2150.4	2193.3
32.5°	3180.9	3179.9	3043.5	2877.3	2677.1	2475.0	2323.7	2322.7	2315.8	2357.5	2409.2
35°	3527.3	3527.3	3392.0	3186.9	2970.8	2745.8	2570.6	2569.6	2573.6	2630.3	2679.1
37.5°	3944.5	3953.4	3790.2	3541.3	3305.3	3065.4	2861.3	2855.3	2825.5	2921.0	3001.7
40°	4379.5	4404.5	4235.2	3944.5	3689.5	3441.6	3216.7	3212.8	3186.9	3288.3	3418.8
42.5°	4850.4	4907.2	4719.0	4422.4	4144.5	3876.7	3650.8	3639.9	3540.2	3698.5	3902.6
45°	5467.7	5504.6	5231.8	4963.0	4701.1	4395.5	4126.6	4067.9	3968.4	4171.4	4436.3
47.5°	5887.9	5870.0	5699.6	5519.4	5351.2	5058.4	4645.3	4570.7	4449.2	4718.1	5009.7
50°	6148.7	6161.5	6066.1	6057.2	6048.1	5844.1	5230.8	5141.2	5000.8	5319.4	5659.8
52.5°	6320.8	6262.2	6279.1	6482.3	6728.0	6630.5	5892.8	5793.3	5648.9	5967.5	6351.8
55°	6249.2	6171.6	6327.9	6728.0	7306.5	7328.4	6619.6	6517.0	6393.7	6656.4	7184.2
57.5°	5952.6	5991.3	6238.2	6794.9	7701.8	7953.6	7454.9	7350.3	7107.5	7374.2	7974.7
60°	5535.4	5614.1	5991.3	6689.3	7978.5	8440.5	8371.8	8302.1	7883.9	8073.1	8804.8
62.5°	5087.4	5165.0	5629.0	6509.1	7854.1	8871.6	9271.8	9229.0	8741.2	8746.1	9331.5
65°	4425.3	4457.2	4931.1	6017.2	7508.7	9260.9	10172.8	10135.0	9560.5	9320.6	9478.9
67.5°	3342.1	3382.0	3771.2	4749.9	6457.3	9049.8	10892.6	10886.6	10053.3	9533.6	9128.4
69°	2468.0	2516.8	2834.4	3687.6	5339.3	8245.4	10926.5	11007.1	10186.8	9511.8	8536.1
70°	1805.9	1861.8	2155.4	2926.9	4447.3	7357.3	10636.7	10810.0	10136.0	9373.4	8074.2
72.5°	767.5	786.5	930.9	1321.2	2255.9	4436.3	8712.4	9076.7	9154.3	8398.6	6308.0
75°	480.8	486.9	543.6	678.0	1003.5	1834.9	5641.9	6138.7	6834.6	6516.0	4223.2
77.5°	362.4	367.3	400.2	467.0	623.3	684.9	2617.5	3121.1	3914.6	3833.0	2101.7
80°	277.7	280.8	302.6	339.5	439.0	429.1	849.3	1067.3	1633.8	1441.5	743.7
82.5°	218.1	219.1	237.9	245.0	306.7	288.7	426.1	474.8	660.0	548.6	363.4
85°	193.2	196.1	215.0	179.1	196.1	174.3	234.0	253.9	350.4	330.5	137.3
87.5°	98.6	103.6	180.2	153.3	98.6	82.6	102.6	110.5	142.4	154.3	66.7
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: P196780

CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030-600

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5	1921.5
2.5°	1898.6	1899.6	1902.5	1907.5	1915.6	1925.4	1937.3	1949.3	1956.3	1961.3	1959.3
5°	1882.6	1883.6	1889.6	1898.6	1908.5	1923.4	1943.4	1958.3	1969.3	1976.2	1975.2
7.5°	1862.8	1865.7	1877.6	1887.6	1901.5	1913.4	1929.4	1943.4	1954.3	1961.3	1960.3
10°	1847.8	1850.8	1865.7	1878.6	1890.6	1892.6	1889.6	1885.6	1884.6	1889.6	1887.6
12.5°	1840.8	1846.8	1860.6	1869.7	1864.7	1845.8	1823.9	1814.9	1811.9	1821.9	1822.9
15°	1842.7	1847.8	1859.7	1853.8	1827.0	1795.0	1783.1	1790.0	1796.0	1802.0	1803.0
17.5°	1847.8	1850.8	1853.8	1831.8	1794.0	1773.2	1769.1	1762.2	1744.3	1734.3	1733.3
20°	1856.8	1860.6	1855.8	1821.0	1787.1	1759.2	1711.4	1668.6	1627.8	1605.9	1597.0
22.5°	1887.6	1890.6	1875.7	1841.8	1790.0	1699.4	1602.9	1529.2	1466.5	1432.6	1419.8
25°	1948.3	1953.3	1932.4	1889.6	1754.1	1596.0	1459.4	1360.0	1281.3	1240.5	1229.5
27.5°	2054.8	2059.9	2036.9	1925.4	1670.6	1457.5	1292.2	1193.6	1126.0	1091.2	1086.1
30°	2214.1	2221.1	2200.3	1924.5	1543.2	1281.3	1128.9	1071.3	1032.4	1008.6	1007.5
32.5°	2435.2	2461.1	2375.4	1890.6	1385.9	1103.1	1005.5	985.6	966.7	950.8	950.8
35°	2715.9	2776.8	2548.7	1819.9	1212.6	981.5	936.8	917.9	894.1	877.2	875.0
37.5°	3051.4	3146.0	2672.2	1694.5	1063.3	922.9	895.1	864.1	826.3	793.4	785.5
40°	3512.3	3534.3	2732.9	1490.4	951.7	891.0	856.1	817.4	769.6	732.7	728.8
42.5°	3975.3	3903.7	2720.9	1271.3	888.1	862.2	816.3	773.5	730.7	700.0	700.0
45°	4502.0	4226.2	2630.3	1051.3	830.3	829.3	779.6	738.7	705.9	683.0	678.0
47.5°	5005.7	4515.9	2473.9	889.1	770.6	796.5	755.6	722.8	692.9	671.1	667.0
50°	5617.0	4851.4	2307.8	775.5	712.8	767.5	745.7	728.8	700.0	662.1	658.1
52.5°	6224.4	5243.7	2179.2	690.0	662.1	744.7	751.7	753.7	726.8	653.2	648.1
55°	6876.4	5662.8	2043.9	623.3	620.3	733.7	765.6	763.6	750.6	655.1	647.2
57.5°	7496.8	6084.0	1841.8	576.5	587.4	722.8	768.6	736.7	713.8	665.1	652.1
60°	8010.5	6432.4	1545.2	543.6	559.5	700.9	748.7	700.9	662.1	663.1	651.0
62.5°	8260.3	6530.0	1181.7	505.8	536.6	665.1	719.8	674.0	638.2	667.0	660.0
65°	8070.1	6252.3	842.3	470.9	508.7	623.3	702.9	651.0	626.2	686.9	678.9
67.5°	7387.1	5495.6	611.3	440.1	481.9	580.3	671.1	630.2	614.2	701.9	684.0
69°	6661.4	4744.9	529.7	422.2	462.9	557.6	650.1	619.3	605.3	681.0	655.1
70°	6058.1	4166.5	488.8	411.2	447.0	544.5	634.1	612.3	596.3	656.1	625.2
72.5°	4343.7	2693.0	411.2	378.4	405.3	515.7	599.3	586.4	562.4	592.4	572.4
75°	2624.3	1405.7	349.4	344.5	361.4	476.0	558.6	542.6	518.7	521.7	511.8
77.5°	1205.6	649.1	292.7	304.7	315.6	426.1	508.7	490.8	468.9	461.0	461.9
80°	528.6	379.3	245.0	259.8	265.8	383.3	454.9	435.1	411.2	454.0	421.0
82.5°	285.7	220.0	191.2	201.1	218.1	333.6	395.2	369.4	346.5	403.1	325.6
85°	115.5	112.5	129.5	139.5	151.4	240.0	330.5	303.6	275.8	246.9	240.9
87.5°	49.8	53.7	63.7	67.7	80.7	149.3	222.1	194.2	195.1	167.2	164.2
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)