

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: P197261

Luminaire Tested: **NAV-AF-05-D-UNV-T3-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197261  
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-05-D-UNV-T3-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 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: 16171 lumens  
Efficiency: N/A  
Efficacy: 99.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

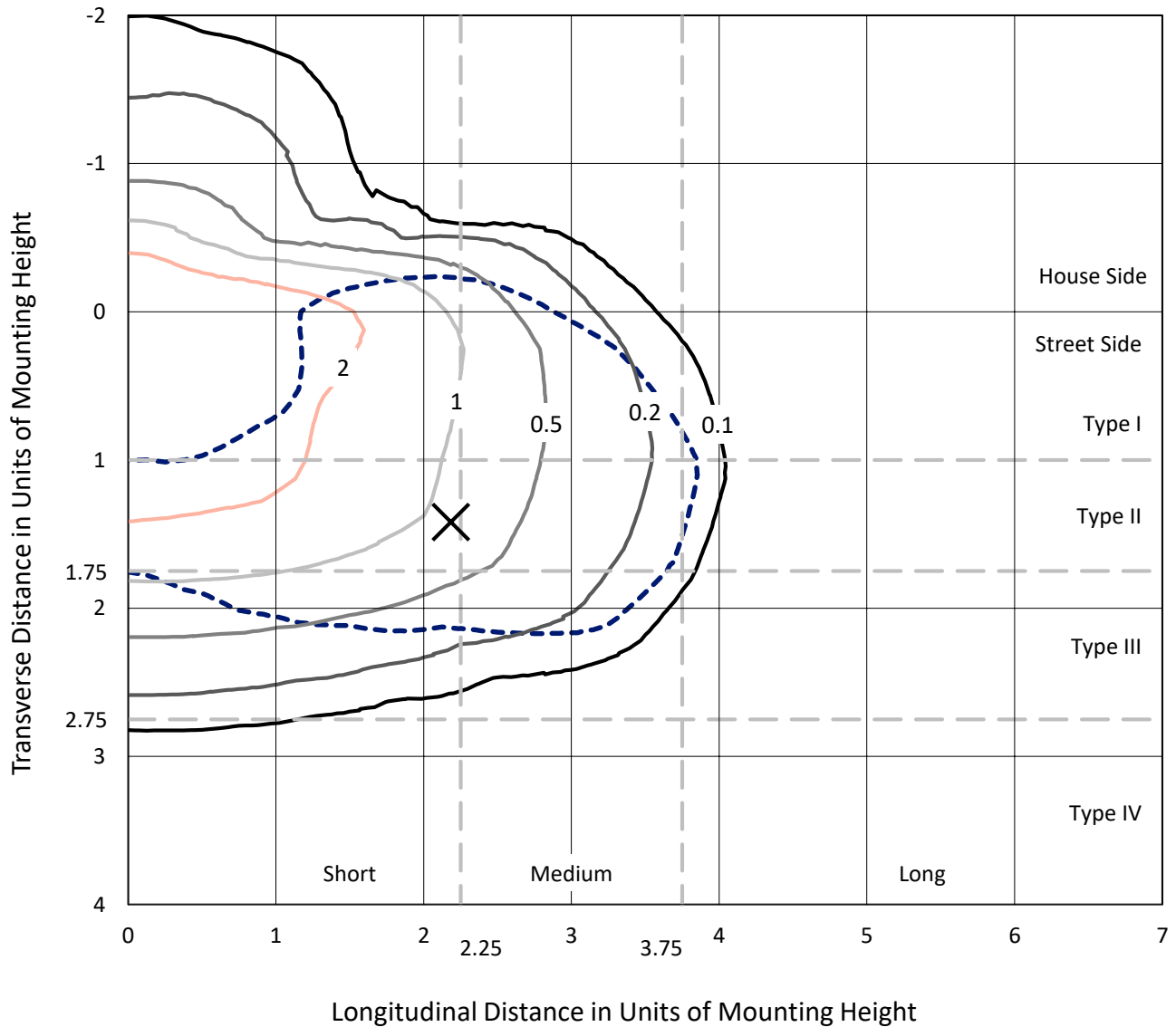
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

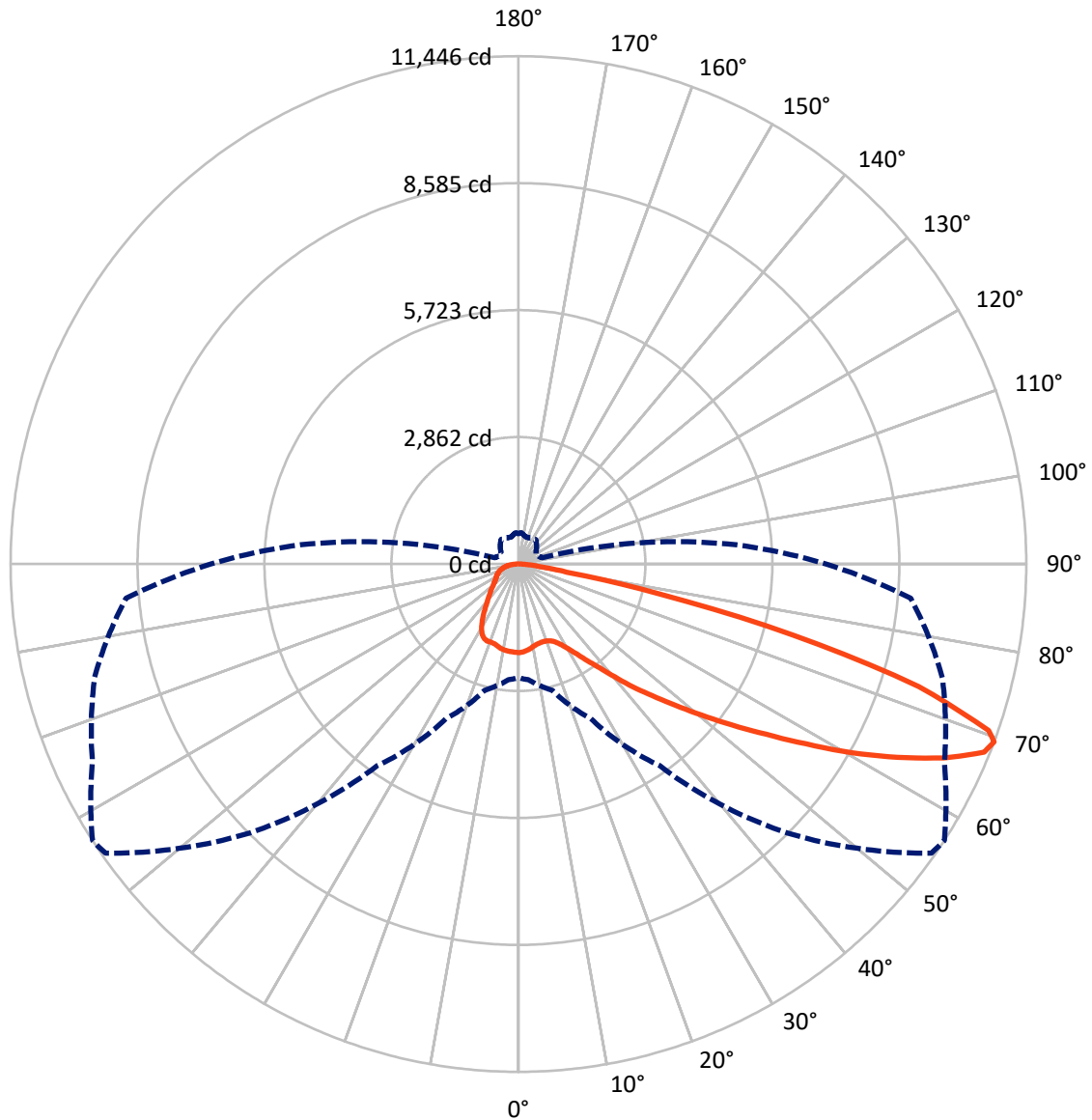
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3568.4	0.0	3568.4
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	12602.6	0.0	12602.6
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	16171.0	0.0	16171.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.1	1.2
10°-20°	531.9	3.3
20°-30°	884.7	5.5
30°-40°	1444.8	8.9
40°-50°	2438.4	15.1
50°-60°	3793.1	23.5
60°-70°	4518.4	27.9
70°-80°	2105.0	13.0
80°-90°	267.7	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°	16171.0	100.0
0°-180°	16171.0	100.0

**Coefficient of Utilization**



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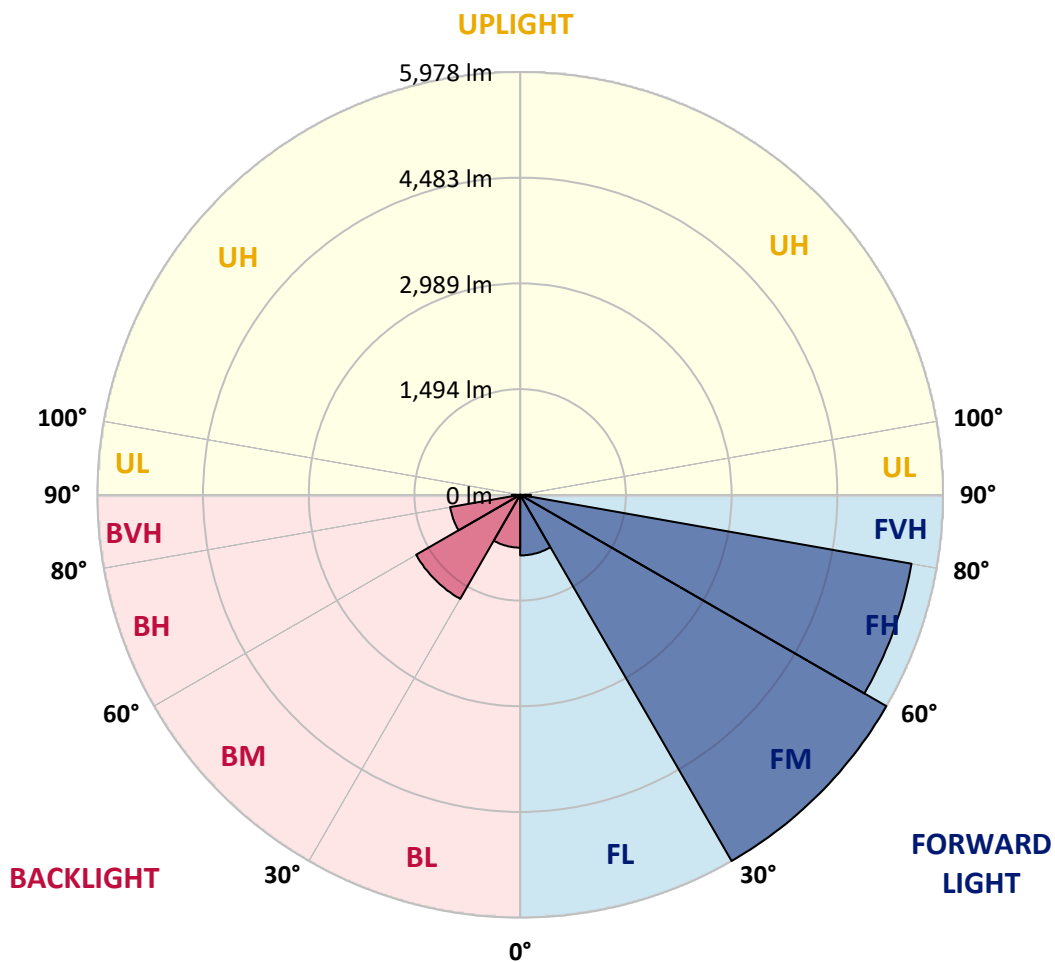
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	856.4	5.3			
FM	(30°-60°)	5977.9	37.0			
FH	(60°-80°)	5617.8	34.7			G3/7500
FVH	(80°-90°)	150.5	0.9			G2/225
BL	(0°-30°)	747.3	4.6	B2/1000		
BM	(30°-60°)	1698.3	10.5	B2/2500		
BH	(60°-80°)	1005.5	6.2	B3/2500		G3/2500
BVH	(80°-90°)	117.2	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1
2.5°	1986.7	1986.7	1991.9	1991.9	1991.9	1989.8	1983.6	1985.7	1981.5	1978.4	1973.2
5°	1946.3	1948.4	1954.6	1956.7	1959.8	1960.8	1960.8	1959.8	1960.8	1960.8	1957.7
7.5°	1890.4	1892.5	1899.7	1903.9	1913.2	1921.5	1925.6	1925.6	1930.8	1934.9	1936.0
10°	1856.3	1856.3	1860.4	1860.4	1867.6	1871.8	1885.2	1884.2	1898.7	1912.2	1918.4
12.5°	1852.1	1852.1	1850.0	1842.8	1838.7	1837.6	1851.1	1853.1	1874.9	1898.7	1910.1
15°	1865.6	1865.6	1859.4	1844.9	1829.3	1822.1	1835.5	1839.7	1863.5	1891.5	1909.1
17.5°	1909.1	1908.0	1894.6	1865.6	1838.7	1827.3	1831.4	1835.5	1857.3	1889.4	1911.1
20°	2005.3	2005.3	1976.3	1923.5	1877.0	1850.0	1843.8	1846.9	1862.5	1892.5	1920.4
22.5°	2174.1	2177.2	2125.4	2038.5	1958.7	1901.8	1877.0	1880.1	1887.3	1916.3	1947.4
25°	2422.5	2414.3	2340.8	2217.6	2093.3	1996.0	1945.3	1948.4	1948.4	1975.3	2007.4
27.5°	2685.5	2687.6	2582.0	2449.5	2285.9	2141.0	2060.2	2059.2	2058.1	2084.0	2118.2
30°	2982.6	2983.7	2861.5	2708.3	2520.9	2335.6	2214.5	2213.4	2204.1	2236.2	2280.7
32.5°	3307.7	3306.7	3164.8	2992.0	2783.9	2573.7	2416.3	2415.3	2408.1	2451.5	2505.4
35°	3668.0	3668.0	3527.2	3313.9	3089.3	2855.3	2673.1	2672.1	2676.2	2735.2	2785.9
37.5°	4101.8	4111.1	3941.3	3682.5	3437.1	3187.6	2975.4	2969.2	2938.1	3037.5	3121.4
40°	4554.2	4580.1	4404.1	4101.8	3836.7	3579.0	3345.0	3340.8	3313.9	3419.5	3555.1
42.5°	5043.9	5102.9	4907.2	4598.7	4309.9	4031.4	3796.4	3785.0	3681.4	3846.1	4058.3
45°	5685.7	5724.0	5440.4	5160.9	4888.6	4570.7	4291.2	4230.1	4126.6	4337.8	4613.2
47.5°	6122.6	6104.0	5927.0	5739.6	5564.6	5260.2	4830.6	4753.0	4626.7	4906.2	5209.5
50°	6393.9	6407.3	6307.9	6298.6	6289.3	6077.1	5439.3	5346.2	5200.2	5531.5	5885.6
52.5°	6573.0	6511.9	6529.5	6740.7	6996.4	6894.9	6127.8	6024.3	5874.2	6205.5	6605.1
55°	6498.4	6417.7	6580.2	6996.4	7597.9	7620.7	6883.6	6776.9	6648.5	6921.9	7470.6
57.5°	6189.9	6230.3	6487.0	7065.8	8008.9	8270.8	7752.2	7643.5	7390.8	7668.3	8292.6
60°	5756.1	5837.9	6230.3	6956.0	8296.7	8777.1	8705.6	8633.2	8198.4	8395.1	9156.0
62.5°	5290.3	5371.0	5853.5	6768.6	8167.3	9225.4	9641.5	9597.0	9089.7	9094.9	9703.7
65°	4601.8	4634.9	5127.7	6257.2	7808.1	9630.1	10578.5	10539.1	9941.8	9692.3	9856.9
67.5°	3475.4	3516.8	3921.6	4939.3	6714.8	9410.7	11327.0	11320.8	10454.2	9913.8	9492.5
69°	2566.5	2617.2	2947.4	3834.7	5552.2	8574.2	11362.2	11446.0	10593.0	9891.0	8876.5
70°	1878.0	1936.0	2241.4	3043.7	4624.6	7650.7	11060.9	11241.0	10540.2	9747.1	8396.1
72.5°	798.2	817.9	968.0	1373.8	2345.9	4613.2	9059.7	9438.6	9519.4	8733.6	6559.5
75°	500.0	506.3	565.3	705.0	1043.6	1908.0	5866.9	6383.5	7107.2	6775.9	4391.6
77.5°	376.8	382.0	416.2	485.5	648.1	712.3	2721.7	3245.6	4070.7	3985.8	2185.5
80°	288.8	291.9	314.7	353.0	456.6	446.2	883.1	1109.8	1698.9	1499.1	773.4
82.5°	226.7	227.8	247.4	254.7	318.9	300.2	443.1	493.8	686.4	570.4	377.9
85°	200.8	203.9	223.6	186.3	203.9	181.2	243.3	264.0	364.4	343.7	142.9
87.5°	102.5	107.7	187.4	159.4	102.5	85.9	106.6	114.9	148.0	160.5	69.4
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°	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1	1998.1
2.5°	1974.3	1975.3	1978.4	1983.6	1991.9	2002.2	2014.6	2027.1	2034.3	2039.5	2037.4
5°	1957.7	1958.7	1965.0	1974.3	1984.6	2000.2	2020.9	2036.4	2047.8	2055.0	2054.0
7.5°	1937.0	1940.1	1952.5	1962.9	1977.4	1989.8	2006.4	2020.9	2032.2	2039.5	2038.5
10°	1921.5	1924.6	1940.1	1953.6	1966.0	1968.1	1965.0	1960.8	1959.8	1965.0	1962.9
12.5°	1914.2	1920.4	1934.9	1944.3	1939.1	1919.4	1896.6	1887.3	1884.2	1894.6	1895.6
15°	1916.3	1921.5	1933.9	1927.7	1899.7	1866.6	1854.2	1861.4	1867.6	1873.9	1874.9
17.5°	1921.5	1924.6	1927.7	1904.9	1865.6	1843.8	1839.7	1832.4	1813.8	1803.5	1802.4
20°	1930.8	1934.9	1929.8	1893.5	1858.3	1829.3	1779.6	1735.1	1692.7	1669.9	1660.6
22.5°	1962.9	1966.0	1950.5	1915.3	1861.4	1767.2	1666.8	1590.2	1525.0	1489.8	1476.3
25°	2026.0	2031.2	2009.5	1965.0	1824.2	1659.5	1517.7	1414.2	1332.4	1290.0	1278.6
27.5°	2136.8	2142.0	2118.2	2002.2	1737.2	1515.6	1343.8	1241.3	1170.9	1134.7	1129.5
30°	2302.5	2309.7	2288.0	2001.2	1604.7	1332.4	1174.0	1114.0	1073.6	1048.7	1047.7
32.5°	2532.3	2559.2	2470.2	1966.0	1441.1	1147.1	1045.6	1024.9	1005.3	988.7	988.7
35°	2824.2	2887.4	2650.3	1892.5	1261.0	1020.8	974.2	954.5	929.7	912.1	910.0
37.5°	3173.1	3271.5	2778.7	1762.0	1105.7	959.7	930.7	898.6	859.3	825.1	816.8
40°	3652.5	3675.2	2841.8	1549.8	989.7	926.6	890.3	850.0	800.3	762.0	757.8
42.5°	4133.9	4059.3	2829.4	1322.0	923.5	896.5	848.9	804.4	759.9	727.8	727.8
45°	4681.5	4394.8	2735.2	1093.3	863.4	862.4	810.6	768.2	734.0	710.2	705.0
47.5°	5205.4	4696.0	2572.7	924.5	801.3	828.2	785.8	751.6	720.6	697.8	693.6
50°	5841.0	5044.9	2399.8	806.5	741.3	798.2	775.4	757.8	727.8	688.5	684.3
52.5°	6472.6	5452.8	2266.2	717.4	688.5	774.4	781.6	783.7	755.8	679.1	674.0
55°	7150.7	5888.7	2125.4	648.1	645.0	763.0	796.1	794.1	780.6	681.2	672.9
57.5°	7795.6	6326.6	1915.3	599.4	610.8	751.6	799.2	766.1	742.3	691.6	678.1
60°	8329.8	6688.9	1606.8	565.3	581.8	728.8	778.5	728.8	688.5	689.5	677.1
62.5°	8589.7	6790.4	1228.9	525.9	558.0	691.6	748.5	700.9	663.6	693.6	686.4
65°	8392.0	6501.5	875.8	489.7	529.0	648.1	730.9	677.1	651.2	714.3	706.1
67.5°	7681.8	5714.7	635.7	457.6	501.1	603.6	697.8	655.3	638.8	729.9	711.2
69°	6927.0	4934.1	550.8	439.0	481.4	579.8	676.0	643.9	629.4	708.1	681.2
70°	6299.7	4332.6	508.3	427.6	464.8	566.3	659.5	636.7	620.1	682.2	650.2
72.5°	4516.9	2800.4	427.6	393.4	421.4	536.3	623.2	609.8	584.9	616.0	595.3
75°	2729.0	1461.8	363.4	358.2	375.8	494.9	580.8	564.2	539.4	542.5	532.1
77.5°	1253.7	675.0	304.4	316.8	328.2	443.1	529.0	510.4	487.6	479.3	480.4
80°	549.7	394.4	254.7	270.2	276.4	398.6	473.1	452.4	427.6	472.1	437.9
82.5°	297.1	228.8	198.8	209.1	226.7	346.8	411.0	384.1	360.3	419.3	338.5
85°	120.1	117.0	134.6	144.9	157.4	249.5	343.7	315.8	286.8	256.7	250.5
87.5°	51.8	55.9	66.3	70.4	83.9	155.3	230.9	201.9	202.9	173.9	170.8
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)