

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: P270559

Luminaire Tested: **NAV-AF-04-D-UNV-T4W-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270559  
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-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16923.7 lumens  
Efficiency: N/A  
Efficacy: 99.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

Input Watts (W): 171  
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

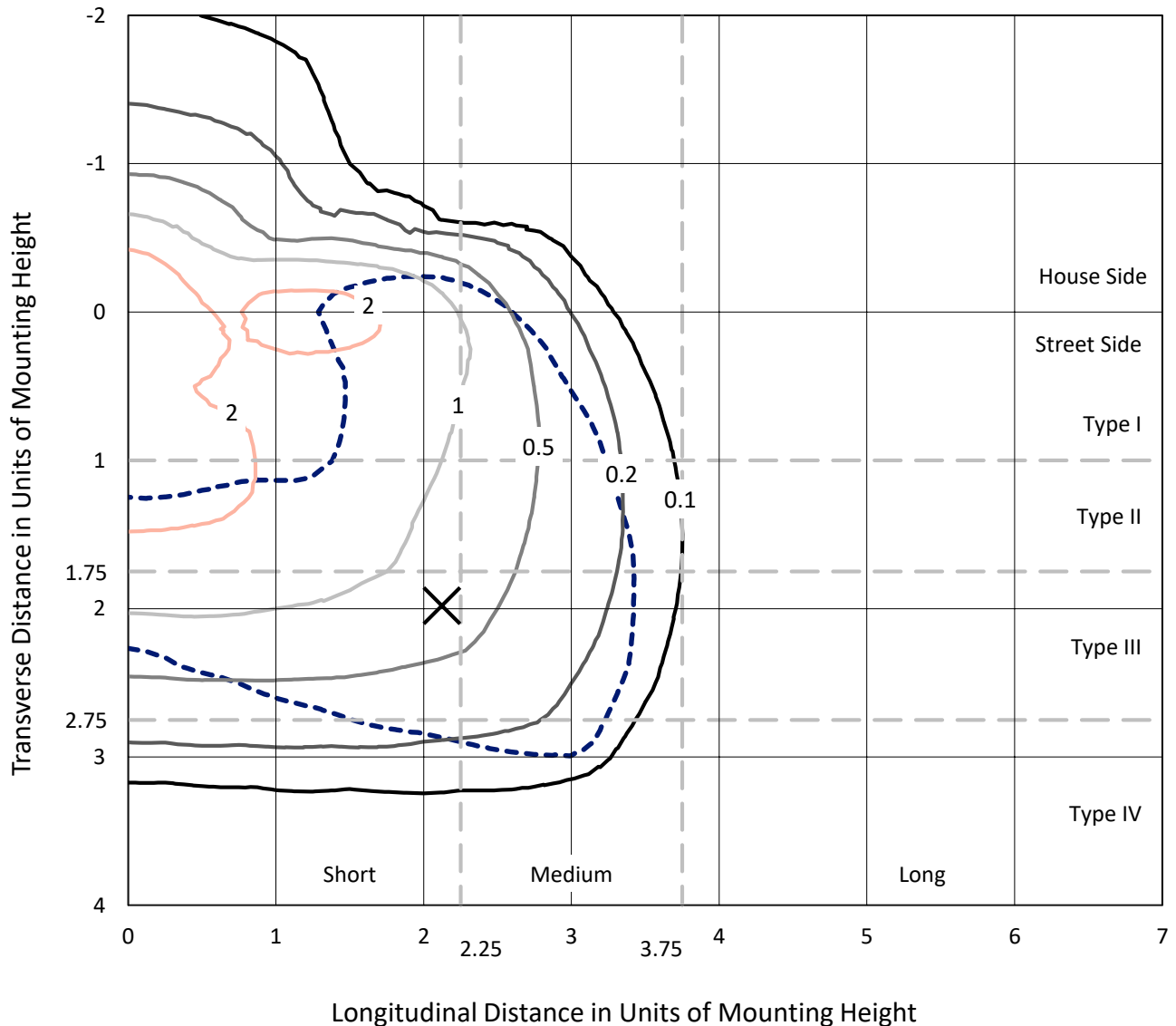


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### Iso-Footcandle Lines of Horizontal Illumination

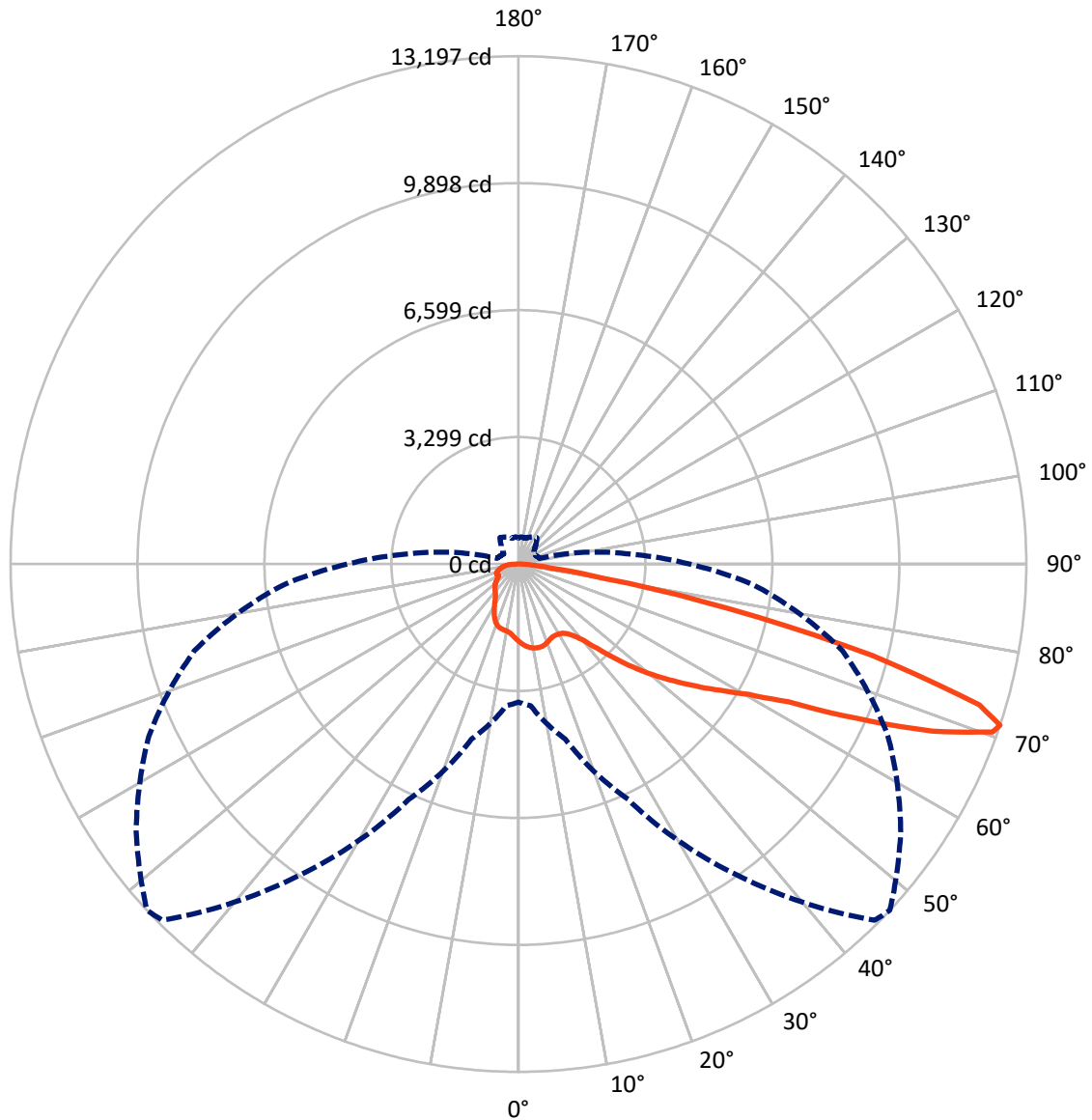
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 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	3627.0	0.0	3627.0
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	13296.7	0.0	13296.7
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	16923.7	0.0	16923.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.2	1.1
10°-20°	562.2	3.3
20°-30°	835.3	4.9
30°-40°	1199.4	7.1
40°-50°	2126.6	12.6
50°-60°	3639.0	21.5
60°-70°	5166.1	30.5
70°-80°	2829.4	16.7
80°-90°	373.5	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°	16923.7	100.0
0°-180°	16923.7	100.0

**Coefficient of Utilization**



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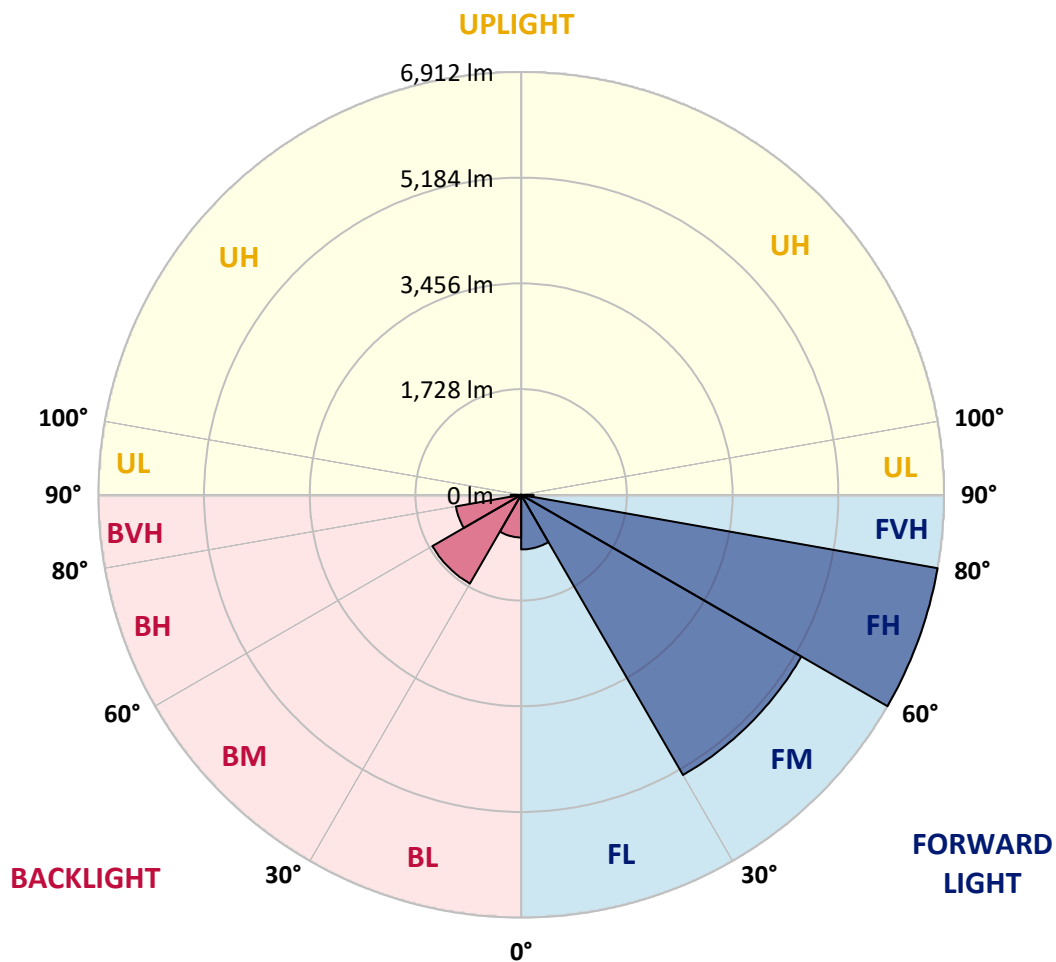
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	893.2	5.3			
FM	(30°-60°)	5289.2	31.3			
FH	(60°-80°)	6911.8	40.8			G3/7500
FVH	(80°-90°)	202.6	1.2			G2/225
BL	(0°-30°)	696.5	4.1	B2/1000		
BM	(30°-60°)	1675.9	9.9	B2/2500		
BH	(60°-80°)	1083.7	6.4	B3/2500		G3/2500
BVH	(80°-90°)	170.9	1.0			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6
2.5°	2135.4	2131.0	2133.1	2125.5	2106.9	2087.1	2087.1	2066.2	2044.4	2022.4	1998.3
5°	2268.0	2261.5	2256.1	2231.8	2195.6	2155.0	2148.4	2106.9	2061.9	2017.0	1973.0
7.5°	2378.8	2372.2	2355.7	2311.9	2259.2	2199.0	2191.2	2136.4	2077.2	2014.7	1953.3
10°	2457.9	2453.5	2421.7	2365.6	2304.2	2232.9	2219.8	2163.8	2093.7	2015.7	1938.0
12.5°	2501.7	2495.1	2456.7	2390.8	2318.4	2246.1	2232.9	2179.2	2099.2	2013.6	1922.6
15°	2484.2	2480.8	2444.6	2377.8	2305.3	2242.8	2231.8	2177.0	2095.8	2005.9	1908.3
17.5°	2409.6	2417.2	2388.8	2322.8	2263.6	2219.8	2207.8	2156.2	2079.3	1987.3	1886.4
20°	2306.5	2315.2	2301.0	2234.1	2200.0	2171.6	2164.9	2123.2	2052.0	1959.8	1860.1
22.5°	2196.7	2204.4	2205.5	2143.0	2132.0	2121.1	2115.6	2086.0	2027.8	1943.5	1842.6
25°	2121.1	2129.8	2132.0	2077.2	2083.8	2087.1	2086.0	2065.2	2023.5	1943.5	1844.7
27.5°	2101.3	2105.7	2103.6	2053.0	2065.2	2083.8	2084.8	2080.6	2040.9	1965.3	1875.4
30°	2169.3	2171.6	2144.2	2068.4	2080.6	2104.5	2105.7	2103.6	2078.3	2022.4	1944.6
32.5°	2463.2	2461.0	2366.8	2171.6	2129.8	2138.7	2141.9	2161.7	2163.8	2116.6	2044.4
35°	2910.8	2909.6	2799.9	2466.6	2270.2	2224.2	2228.5	2259.2	2286.6	2254.8	2213.2
37.5°	3403.1	3406.5	3339.5	2887.7	2572.9	2381.0	2376.6	2399.6	2449.0	2460.0	2465.5
40°	3949.4	3965.7	3962.6	3371.3	2997.4	2648.7	2604.7	2578.4	2673.8	2734.1	2812.1
42.5°	4573.5	4569.0	4571.1	3902.1	3482.1	3069.8	2988.7	2865.8	2976.5	3080.7	3251.9
45°	5109.6	5127.3	5140.5	4467.0	4025.0	3551.2	3469.0	3245.2	3345.1	3500.8	3761.8
47.5°	5649.4	5618.5	5642.8	5095.5	4629.3	4100.8	3994.4	3692.8	3785.9	4005.3	4402.4
50°	6277.7	6263.4	6153.7	5915.8	5359.7	4657.8	4518.6	4160.0	4296.0	4588.7	5193.0
52.5°	6841.4	6764.6	6679.1	6560.7	6078.1	5221.6	5045.1	4645.8	4895.9	5258.9	6174.6
55°	7047.7	6996.1	7099.1	7252.7	6838.2	5796.3	5598.9	5212.8	5572.5	6025.6	7329.5
57.5°	7267.0	7284.5	7517.0	7827.4	7557.6	6409.3	6195.5	5884.0	6315.1	6883.2	8620.3
60°	7376.6	7446.8	7910.7	8493.1	8241.9	7081.6	6876.5	6655.1	7138.7	7830.6	9907.9
62.5°	7395.2	7489.6	8146.5	8726.8	9184.0	8111.4	7874.5	7634.3	8167.4	8878.0	10840.1
65°	7053.1	7197.8	8125.7	9014.0	10042.8	9832.2	9682.0	9263.1	9544.9	9800.4	10999.1
67.5°	6047.4	6205.3	7321.8	8895.6	10731.5	11617.7	11589.3	10970.6	10608.8	10156.9	9820.2
70°	4438.4	4565.7	5638.3	7604.8	10431.1	13019.3	13069.8	12077.3	10906.0	9400.1	7302.1
71°	3589.5	3699.3	4710.5	6751.5	9845.5	13091.7	13197.0	12126.6	10596.6	8716.9	6113.1
72.5°	2234.1	2295.4	3127.9	5095.5	8477.8	12345.9	12523.6	11494.9	9622.7	7367.9	4321.1
75°	843.4	867.6	1160.3	2247.2	5060.3	9275.1	9490.1	8687.2	6760.3	4206.0	1808.5
77.5°	452.9	465.1	575.9	934.3	2027.8	5317.0	5593.3	4955.1	3243.1	1471.9	739.1
80°	303.7	311.4	398.0	553.9	932.3	2024.6	2254.8	1989.4	1214.1	840.2	526.4
82.5°	196.3	200.7	270.8	364.2	602.1	711.7	812.6	848.9	757.8	602.1	318.1
85°	129.4	132.7	178.8	232.5	372.8	351.0	359.7	470.5	516.5	397.1	162.4
87.5°	74.6	76.7	107.4	119.6	167.9	131.6	142.7	223.8	307.1	258.8	93.2
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°	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6	2012.6
2.5°	1987.3	1978.4	1958.8	1946.6	1941.1	1939.0	1936.8	1941.1	1941.1	1939.0	1934.6
5°	1951.1	1934.6	1901.7	1878.7	1866.7	1863.4	1867.8	1873.2	1876.5	1876.5	1873.2
7.5°	1924.8	1900.6	1856.7	1824.9	1806.3	1800.8	1812.9	1832.6	1845.7	1852.3	1853.6
10°	1902.8	1869.9	1821.7	1788.7	1773.4	1771.2	1786.5	1811.8	1839.2	1851.2	1853.6
12.5°	1883.0	1845.7	1793.1	1762.5	1751.4	1756.9	1777.8	1800.8	1832.6	1850.1	1851.2
15°	1864.4	1826.1	1770.1	1738.3	1736.2	1744.9	1764.6	1783.2	1807.4	1829.4	1829.4
17.5°	1842.6	1800.8	1742.7	1713.1	1713.1	1720.8	1734.0	1743.8	1759.2	1780.0	1779.0
20°	1816.3	1773.4	1714.1	1683.6	1676.9	1672.6	1672.6	1674.7	1687.8	1706.5	1709.8
22.5°	1796.4	1752.7	1690.2	1652.8	1623.1	1594.6	1582.5	1578.2	1590.3	1607.8	1612.2
25°	1796.4	1752.7	1682.3	1619.9	1547.5	1492.7	1469.6	1463.0	1475.0	1491.5	1498.2
27.5°	1826.1	1782.1	1700.0	1590.3	1457.6	1369.8	1342.3	1336.9	1347.8	1361.0	1367.6
30°	1895.2	1852.3	1750.3	1556.3	1357.8	1242.5	1212.0	1206.5	1212.0	1217.4	1225.1
32.5°	2010.2	1974.1	1832.6	1525.5	1256.9	1127.5	1090.2	1081.4	1083.5	1084.7	1091.3
35°	2197.9	2181.4	1942.3	1489.4	1161.5	1033.1	994.8	977.1	976.1	981.6	989.3
37.5°	2485.3	2495.1	2083.8	1436.7	1082.5	966.2	927.8	910.3	901.4	912.5	921.2
40°	2890.9	2914.0	2247.2	1365.5	1017.8	926.7	886.2	869.6	857.6	854.4	858.7
42.5°	3418.5	3411.9	2413.9	1274.4	947.6	900.5	857.6	840.2	820.3	795.1	789.6
45°	4043.7	3949.4	2553.3	1162.5	867.6	875.2	831.3	807.1	776.5	739.1	734.9
47.5°	4781.8	4521.9	2638.7	1043.0	792.9	842.3	801.6	764.4	719.5	695.3	692.1
50°	5671.2	5191.9	2699.0	921.2	726.0	800.6	760.1	710.6	666.8	660.3	659.1
52.5°	6724.2	5982.7	2773.6	811.6	673.4	746.9	718.4	667.9	632.9	636.1	636.1
55°	7843.8	6800.9	2775.9	724.9	627.3	684.4	687.7	647.0	619.7	630.6	633.9
57.5°	8865.0	7515.8	2557.6	663.5	583.4	635.0	677.9	654.8	633.9	672.3	675.5
60°	9755.5	8066.5	2088.2	613.1	547.2	616.3	699.7	701.9	697.5	801.6	809.5
62.5°	10081.1	8072.0	1482.8	570.3	527.6	627.3	745.9	749.0	749.0	845.6	859.9
65°	9625.0	7399.7	987.1	545.1	514.4	651.5	783.1	768.8	734.9	801.6	786.3
67.5°	8017.2	5760.0	721.7	528.7	495.8	652.6	816.0	779.8	721.7	778.7	752.4
70°	5510.1	3665.3	604.3	513.3	473.8	624.1	833.4	776.5	701.9	726.0	690.9
71°	4435.2	2925.1	573.6	507.8	465.1	607.7	835.8	772.2	692.1	707.3	675.5
72.5°	2921.6	1801.9	536.3	495.8	451.8	579.0	830.3	762.2	678.8	679.9	659.1
75°	1152.6	746.9	482.6	468.2	414.6	533.1	806.0	741.5	653.6	631.7	623.0
77.5°	582.5	488.0	424.4	429.8	370.7	485.9	772.2	707.3	618.6	589.0	582.5
80°	425.5	370.7	363.1	372.8	321.4	439.8	729.3	661.3	573.6	604.3	591.2
82.5°	258.8	226.0	284.0	308.2	268.8	392.6	678.8	607.7	516.5	476.0	460.7
85°	122.9	132.7	205.2	227.0	198.5	313.7	620.8	548.3	450.8	389.3	396.0
87.5°	60.4	73.5	117.4	136.1	130.6	230.3	468.2	425.5	355.3	292.8	286.2
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)