

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: P196863

Luminaire Tested: **NAV-AF-03-D-UNV-T4W-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196863
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-03-D-UNV-T4W-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17312.1 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

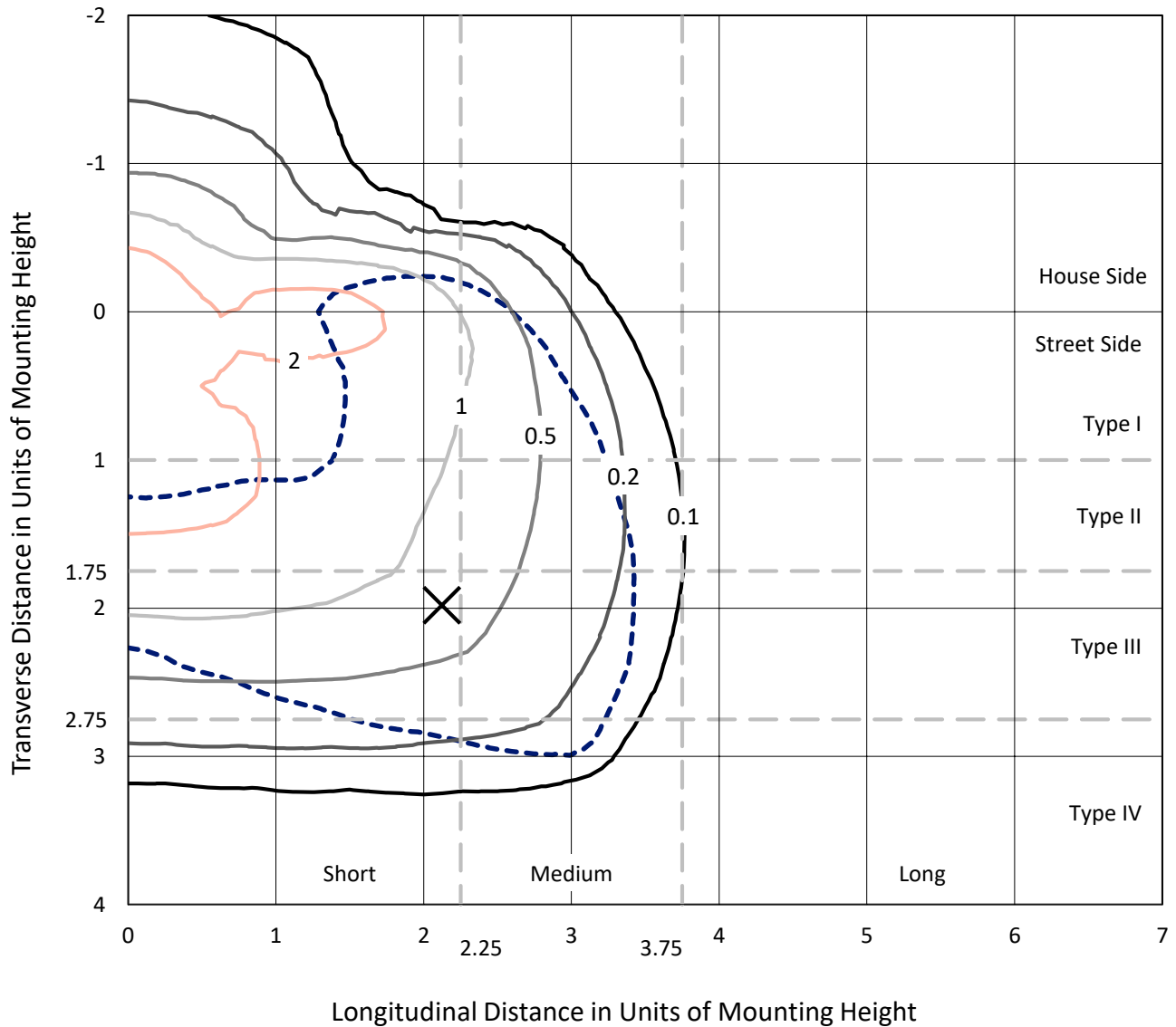
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196863
 CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030

Iso-Footcandle Lines of Horizontal Illumination

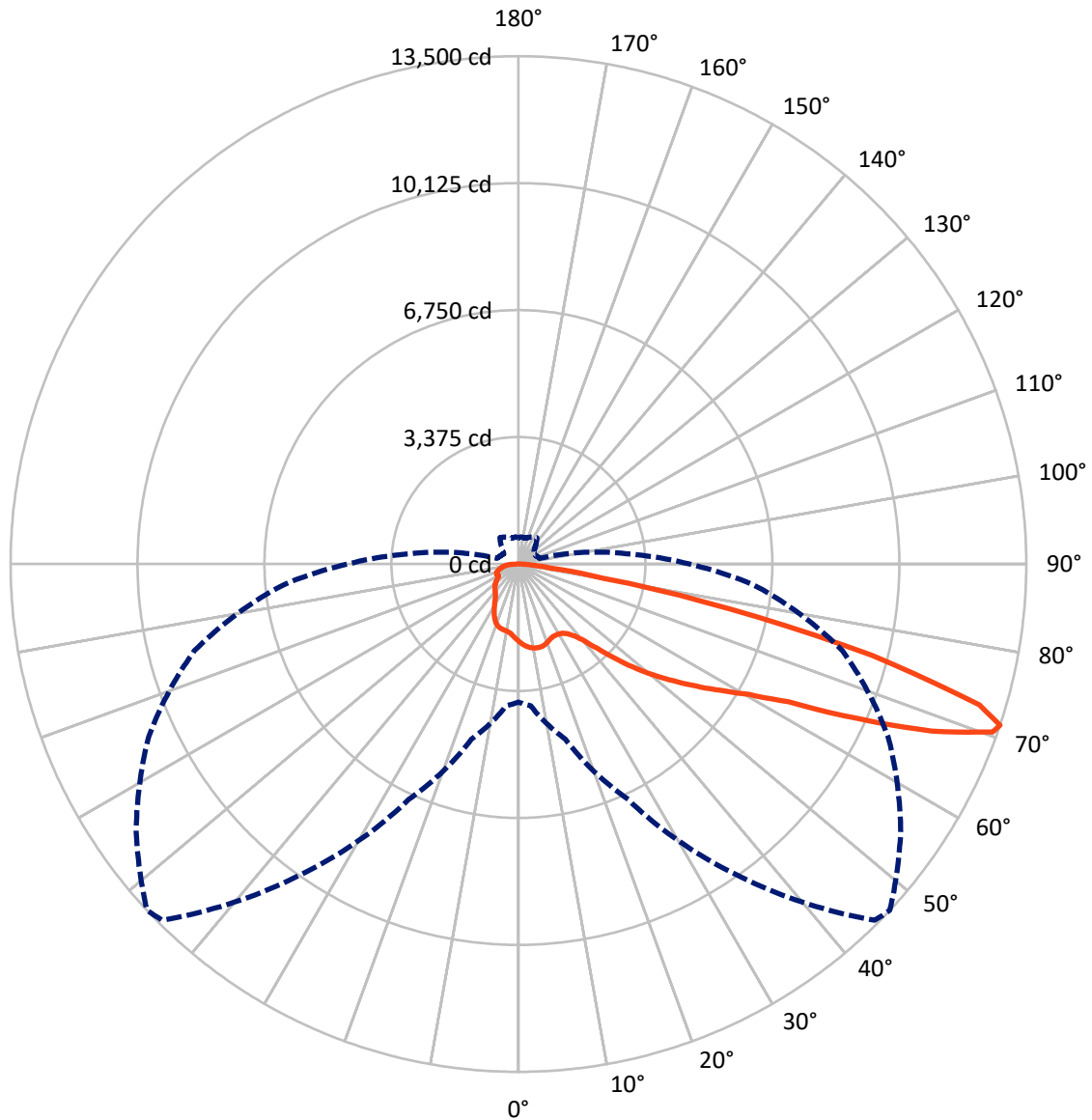
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P196863
CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196863

CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3710.2	0.0	3710.2
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	13601.9	0.0	13601.9
	% Fixture	78.6	0.0	78.6
Total	Lumens	17312.1	0.0	17312.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.6	1.1
10°-20°	575.1	3.3
20°-30°	854.5	4.9
30°-40°	1227.0	7.1
40°-50°	2175.4	12.6
50°-60°	3722.5	21.5
60°-70°	5284.7	30.5
70°-80°	2894.4	16.7
80°-90°	382.1	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°	17312.1	100.0
0°-180°	17312.1	100.0



REPORT NUMBER: P196863

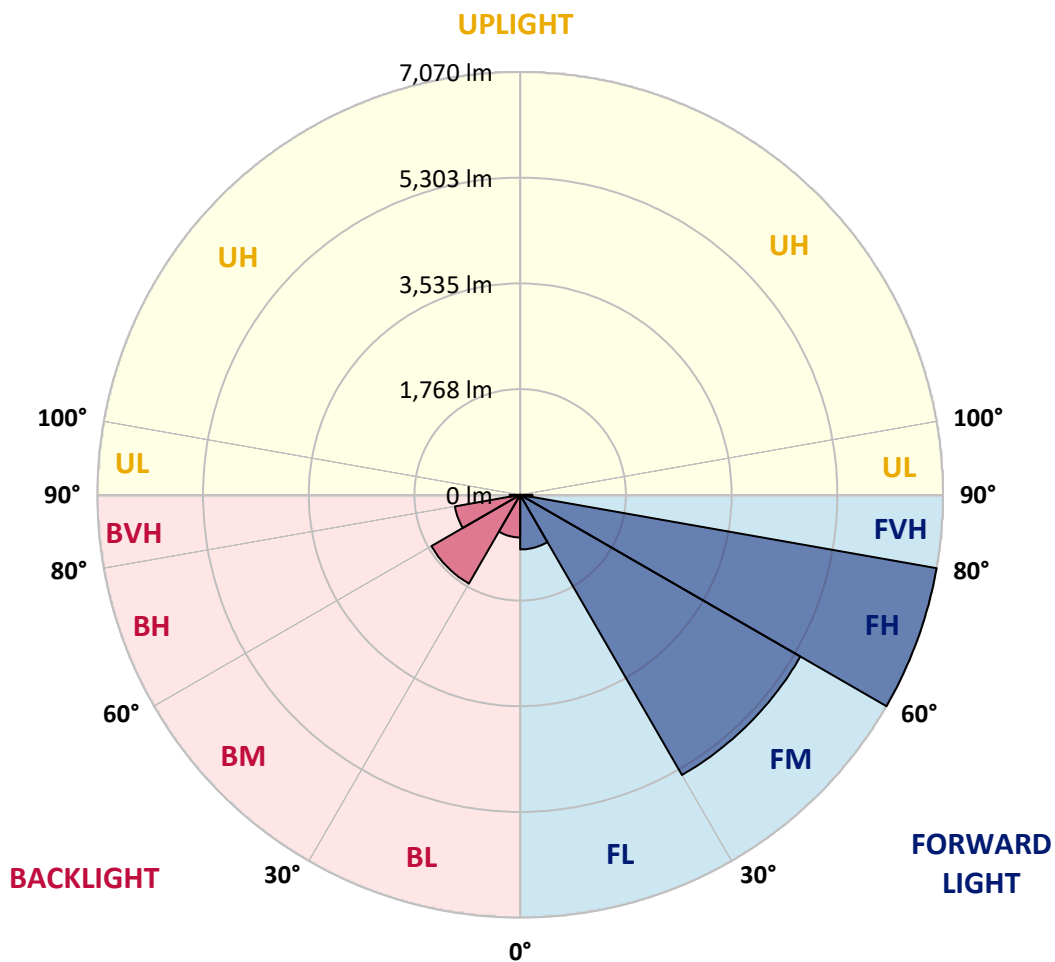
CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	913.7	5.3			
FM	(30°-60°)	5410.6	31.3			
FH	(60°-80°)	7070.4	40.8			G3/7500
FVH	(80°-90°)	207.2	1.2			G2/225
BL	(0°-30°)	712.5	4.1	B2/1000		
BM	(30°-60°)	1714.3	9.9	B2/2500		
BH	(60°-80°)	1108.6	6.4	B3/2500		G3/2500
BVH	(80°-90°)	174.8	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





REPORT NUMBER: P196863

CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7
2.5°	2184.3	2179.8	2182.1	2174.3	2155.1	2135.0	2135.0	2113.7	2091.2	2068.9	2044.1
5°	2320.1	2313.3	2307.8	2283.1	2246.1	2204.6	2197.9	2155.1	2109.1	2063.2	2018.3
7.5°	2433.4	2426.6	2409.8	2365.0	2311.2	2249.4	2241.6	2185.5	2124.9	2060.9	1998.2
10°	2514.2	2509.6	2477.1	2420.0	2357.2	2284.2	2270.7	2213.5	2141.7	2062.0	1982.4
12.5°	2559.1	2552.3	2513.1	2445.8	2371.7	2297.7	2284.2	2229.2	2147.4	2059.9	1966.6
15°	2541.2	2537.8	2500.7	2432.3	2358.3	2294.3	2283.1	2227.0	2144.0	2052.0	1952.1
17.5°	2464.8	2472.6	2443.5	2376.2	2315.6	2270.7	2258.4	2205.7	2127.2	2032.9	1929.7
20°	2359.4	2368.3	2353.8	2285.3	2250.5	2221.3	2214.6	2172.0	2099.1	2004.8	1902.7
22.5°	2247.1	2255.0	2256.2	2192.2	2181.1	2169.8	2164.2	2133.9	2074.4	1988.0	1884.8
25°	2169.8	2178.7	2181.1	2124.9	2131.6	2135.0	2133.9	2112.5	2069.9	1988.0	1887.0
27.5°	2149.5	2154.0	2151.9	2100.2	2112.5	2131.6	2132.7	2128.3	2087.8	2010.5	1918.5
30°	2219.2	2221.3	2193.4	2116.0	2128.3	2153.0	2154.0	2151.9	2125.9	2068.9	1989.2
32.5°	2519.8	2517.6	2421.0	2221.3	2178.7	2187.7	2191.0	2211.3	2213.5	2165.3	2091.2
35°	2977.6	2976.4	2864.2	2523.2	2322.3	2275.3	2279.7	2311.2	2339.1	2306.7	2264.0
37.5°	3481.3	3484.6	3416.2	2954.0	2631.9	2435.7	2431.1	2454.7	2505.2	2516.5	2522.0
40°	4040.0	4056.8	4053.4	3448.8	3066.2	2709.4	2664.5	2637.6	2735.2	2796.9	2876.6
42.5°	4678.4	4673.9	4676.1	3991.8	3562.1	3140.2	3057.2	2931.5	3044.8	3151.5	3326.5
45°	5227.0	5244.9	5258.4	4569.6	4117.4	3632.8	3548.6	3319.8	3421.8	3581.1	3848.1
47.5°	5778.9	5747.6	5772.1	5212.4	4735.7	4194.8	4086.0	3777.4	3872.8	4097.2	4503.3
50°	6421.8	6407.2	6295.1	6051.6	5482.7	4764.8	4622.2	4255.4	4394.5	4694.1	5312.1
52.5°	6998.5	6919.9	6832.4	6711.2	6217.6	5341.3	5160.8	4752.4	5008.2	5379.6	6316.4
55°	7209.4	7156.7	7262.1	7419.1	6995.1	5929.3	5727.4	5332.4	5700.4	6163.8	7497.7
57.5°	7433.8	7451.7	7689.5	8007.1	7731.0	6556.4	6337.7	6019.1	6460.0	7041.1	8818.2
60°	7546.0	7617.8	8092.3	8688.1	8431.1	7244.2	7034.3	6807.7	7302.5	8010.5	10135.3
62.5°	7565.0	7661.5	8333.5	8927.0	9394.8	8297.5	8055.3	7809.7	8354.8	9081.8	11088.9
65°	7215.1	7363.1	8312.2	9220.9	10273.3	10057.9	9904.3	9475.6	9764.0	10025.4	11251.6
67.5°	6186.2	6347.8	7489.8	9099.7	10977.9	11884.3	11855.1	11222.4	10852.1	10390.0	10045.6
70°	4540.4	4670.5	5767.7	7779.4	10670.5	13318.1	13369.8	12354.5	11156.3	9615.9	7469.6
71°	3671.9	3784.2	4818.6	6906.5	10071.4	13392.2	13500.0	12405.0	10839.8	8916.9	6253.6
72.5°	2285.3	2348.2	3199.6	5212.4	8672.4	12629.3	12811.0	11758.7	9843.6	7537.0	4420.3
75°	862.7	887.4	1187.0	2298.9	5176.4	9488.0	9707.9	8886.6	6915.4	4302.5	1850.0
77.5°	463.4	475.8	589.0	955.9	2074.4	5439.0	5721.7	5068.7	3317.4	1505.6	756.2
80°	310.8	318.6	407.2	566.5	953.7	2071.0	2306.7	2035.2	1242.0	859.5	538.5
82.5°	200.8	205.3	277.1	372.5	615.9	728.1	831.4	868.4	775.2	615.9	325.4
85°	132.4	135.7	182.9	237.8	381.5	359.0	367.9	481.3	528.4	406.1	166.1
87.5°	76.3	78.5	110.0	122.3	171.6	134.6	145.9	228.9	314.1	264.7	95.4
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: P196863
 CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7	2058.7
2.5°	2032.9	2023.9	2003.7	1991.4	1985.8	1983.5	1981.3	1985.8	1985.8	1983.5	1979.0
5°	1995.8	1979.0	1945.4	1921.9	1909.6	1906.1	1910.6	1916.2	1919.5	1919.5	1916.2
7.5°	1969.0	1944.3	1899.4	1866.8	1847.8	1842.2	1854.5	1874.7	1888.2	1894.9	1895.9
10°	1946.6	1912.8	1863.5	1829.9	1814.1	1811.8	1827.6	1853.4	1881.5	1893.8	1895.9
12.5°	1926.4	1888.2	1834.4	1802.9	1791.7	1797.4	1818.6	1842.2	1874.7	1892.7	1893.8
15°	1907.2	1868.0	1810.8	1778.2	1776.0	1785.0	1805.2	1824.2	1848.8	1871.4	1871.4
17.5°	1884.8	1842.2	1782.7	1752.4	1752.4	1760.2	1773.8	1783.8	1799.5	1820.8	1819.7
20°	1857.9	1814.1	1753.5	1722.2	1715.4	1710.9	1710.9	1713.1	1726.7	1745.6	1749.0
22.5°	1837.7	1792.8	1728.8	1690.7	1660.4	1631.2	1618.9	1614.5	1626.8	1644.7	1649.2
25°	1837.7	1792.8	1721.1	1657.0	1583.0	1526.9	1503.4	1496.7	1509.0	1525.8	1532.6
27.5°	1868.0	1823.1	1739.0	1626.8	1491.1	1401.2	1373.2	1367.6	1378.9	1392.3	1399.1
30°	1938.7	1894.9	1790.5	1592.0	1388.9	1271.1	1239.6	1234.1	1239.6	1245.3	1253.2
32.5°	2056.5	2019.4	1874.7	1560.5	1285.7	1153.3	1115.2	1106.2	1108.4	1109.5	1116.3
35°	2248.3	2231.5	1986.9	1523.5	1188.0	1056.9	1017.5	999.6	998.5	1004.1	1012.0
37.5°	2542.3	2552.3	2131.6	1469.6	1107.4	988.4	949.1	931.2	922.2	933.4	942.4
40°	2957.3	2980.9	2298.9	1396.8	1041.1	948.1	906.6	889.7	877.4	874.0	878.5
42.5°	3497.0	3490.3	2469.4	1303.7	969.3	921.0	877.4	859.5	839.2	813.4	807.8
45°	4136.4	4040.0	2611.9	1189.2	887.4	895.3	850.4	825.7	794.4	756.2	751.7
47.5°	4891.5	4625.6	2699.4	1066.9	811.1	861.6	820.1	782.0	736.0	711.3	707.9
50°	5801.3	5311.1	2761.0	942.4	742.8	819.0	777.5	727.0	682.1	675.4	674.2
52.5°	6878.4	6120.0	2837.4	830.3	688.9	764.0	734.9	683.2	647.4	650.7	650.7
55°	8023.9	6957.0	2839.5	741.6	641.7	700.1	703.4	661.9	633.9	645.0	648.5
57.5°	9068.4	7688.5	2616.3	678.7	596.9	649.5	693.4	669.8	648.5	687.7	691.1
60°	9979.4	8251.6	2136.1	627.1	559.9	630.5	715.7	718.1	713.6	820.1	827.9
62.5°	10312.6	8257.3	1516.8	583.5	539.6	641.7	762.8	766.2	766.2	865.0	879.5
65°	9845.9	7569.5	1009.7	557.6	526.2	666.4	801.1	786.4	751.7	820.1	804.3
67.5°	8201.1	5892.3	738.3	540.8	507.1	667.6	834.7	797.7	738.3	796.6	769.6
70°	5636.4	3749.4	618.2	525.1	484.7	638.4	852.7	794.4	718.1	742.8	706.8
71°	4537.0	2992.2	586.7	519.4	475.8	621.5	854.9	789.8	707.9	723.7	691.1
72.5°	2988.8	1843.3	548.6	507.1	462.2	592.4	849.3	779.7	694.5	695.6	674.2
75°	1179.1	764.0	493.7	479.1	424.0	545.2	824.6	758.4	668.6	646.3	637.2
77.5°	595.7	499.2	434.2	439.8	379.2	497.0	789.8	723.7	632.7	602.4	595.7
80°	435.3	379.2	371.4	381.5	328.8	449.9	746.0	676.6	586.7	618.2	604.8
82.5°	264.7	231.1	290.5	315.2	274.9	401.6	694.5	621.5	528.4	486.9	471.2
85°	125.6	135.7	209.8	232.2	203.1	320.9	635.1	560.9	461.1	398.2	405.1
87.5°	61.7	75.2	120.0	139.1	133.6	235.6	479.1	435.3	363.5	299.6	292.9
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)