

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: P196820

Luminaire Tested: **NAV-AF-02-D-UNV-T3R-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196820  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-T3R-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13143.9 lumens  
Efficiency: N/A  
Efficacy: 101.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

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

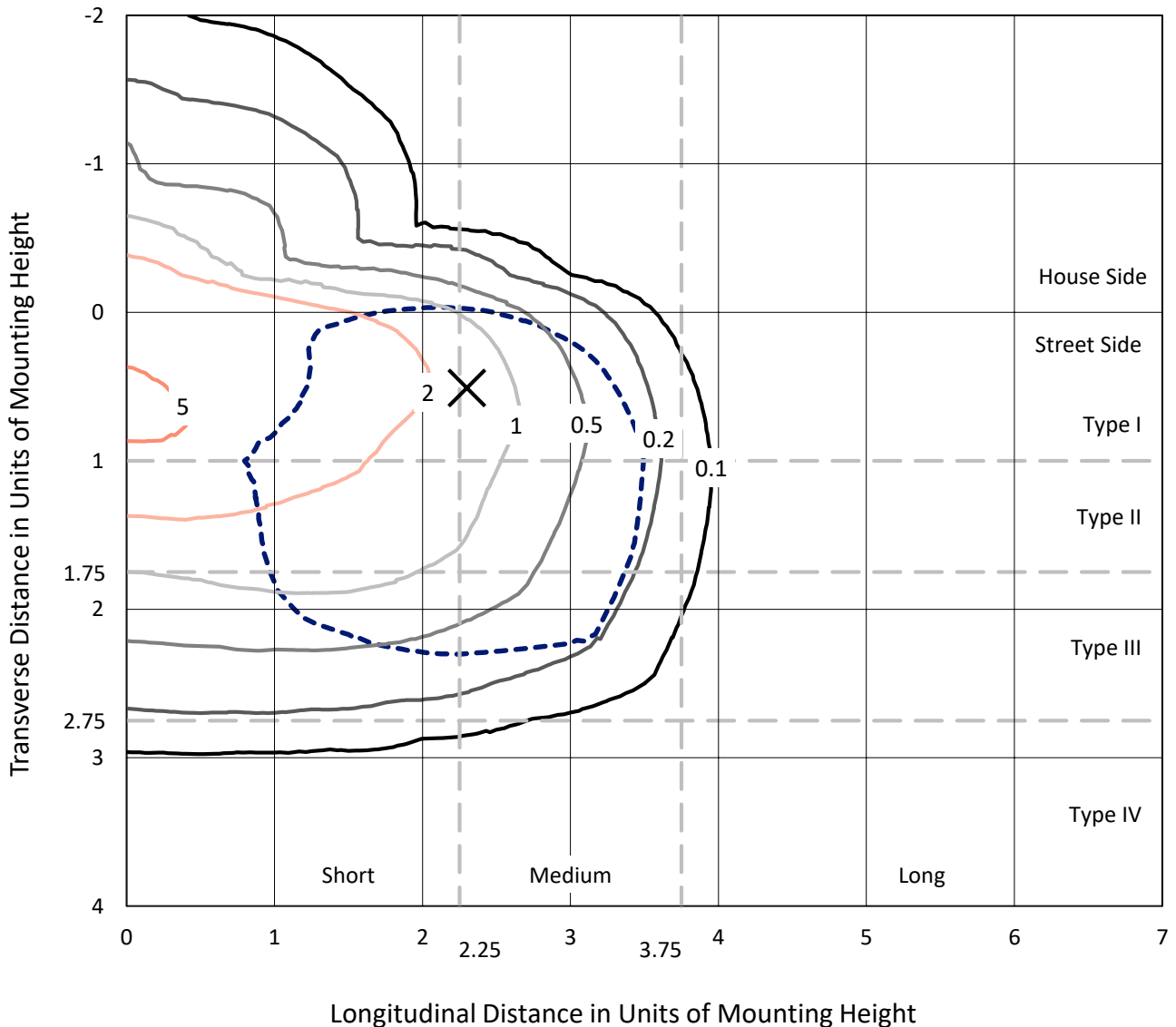


REPORT NUMBER: P196820

CATALOG NUMBER: NAV-AF-02-D-UNV-T3R-7030-1200

### Iso-Footcandle Lines of Horizontal Illumination

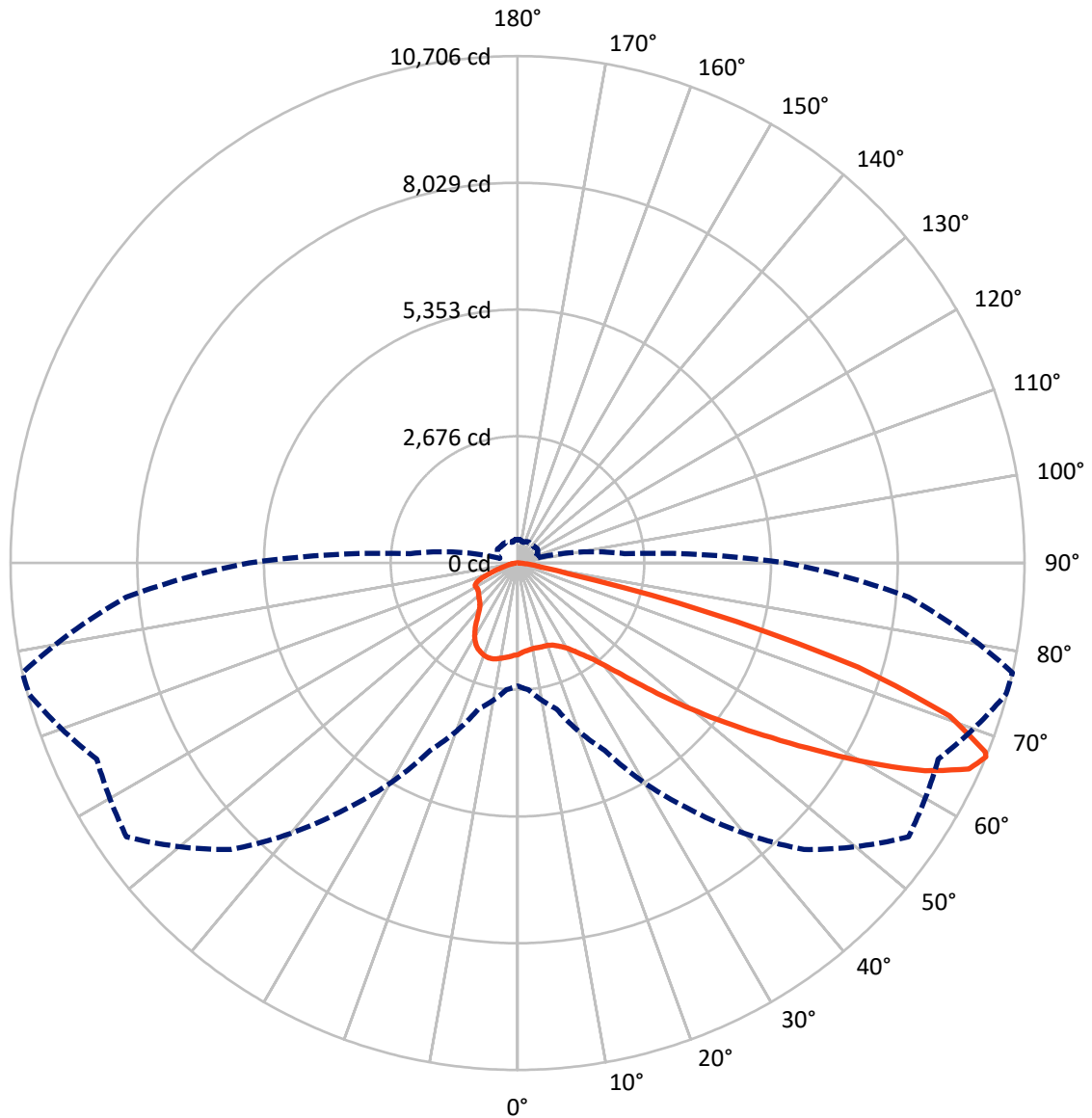
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.8 fc  
 Type III - Medium - Full Cutoff

REPORT NUMBER: P196820  
CATALOG NUMBER: NAV-AF-02-D-UNV-T3R-7030-1200

### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P196820

CATALOG NUMBER: NAV-AF-02-D-UNV-T3R-7030-1200

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2258.8	0.0	2258.8
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	10885.1	0.0	10885.1
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	13143.9	0.0	13143.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	172.3	1.3
10°-20°	477.1	3.6
20°-30°	810.7	6.2
30°-40°	1296.9	9.9
40°-50°	1996.6	15.2
50°-60°	2770.1	21.1
60°-70°	3695.1	28.1
70°-80°	1758.5	13.4
80°-90°	166.5	1.3
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°	13143.9	100.0
0°-180°	13143.9	100.0



REPORT NUMBER: P196820

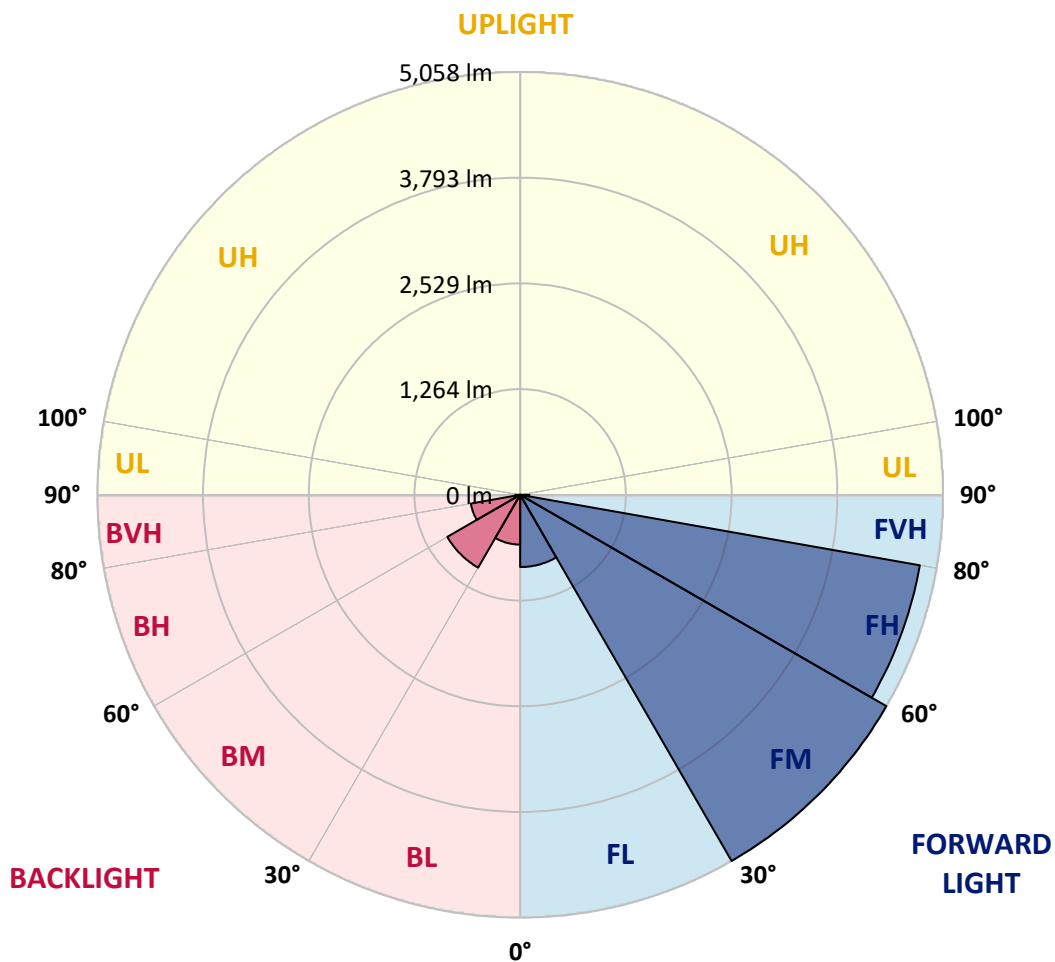
CATALOG NUMBER: NAV-AF-02-D-UNV-T3R-7030-1200

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	864.3	6.6			
FM	(30°-60°)	5057.9	38.5			
FH	(60°-80°)	4854.7	36.9			G2/5000
FVH	(80°-90°)	108.1	0.8			G2/225
BL	(0°-30°)	595.8	4.5	B2/1000		
BM	(30°-60°)	1005.7	7.7	B2/2500		
BH	(60°-80°)	598.9	4.6	B2/1000		G2/1000
BVH	(80°-90°)	58.4	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Medium





REPORT NUMBER: P196820

CATALOG NUMBER: NAV-AF-02-D-UNV-T3R-7030-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4
2.5°	1734.6	1742.6	1743.6	1767.0	1777.6	1804.4	1833.7	1859.7	1882.4	1890.5	1905.2
5°	1560.7	1560.7	1563.2	1578.6	1608.7	1651.7	1712.6	1779.3	1849.1	1866.1	1909.2
7.5°	1469.7	1471.4	1473.0	1488.4	1511.9	1550.2	1611.0	1702.0	1818.3	1846.7	1922.2
10°	1477.8	1475.4	1467.3	1464.1	1473.8	1498.2	1550.9	1644.4	1792.3	1836.1	1945.8
12.5°	1605.3	1600.5	1573.7	1534.8	1498.9	1490.1	1526.6	1615.2	1780.1	1836.1	1985.6
15°	1824.0	1827.2	1774.4	1693.2	1599.7	1536.3	1531.5	1604.6	1776.0	1841.0	2031.9
17.5°	2108.2	2109.9	2036.8	1919.0	1763.8	1633.0	1564.8	1604.6	1776.0	1845.8	2076.6
20°	2410.5	2399.2	2316.3	2168.5	1966.8	1767.0	1625.7	1614.3	1780.9	1853.1	2118.9
22.5°	2669.8	2659.2	2572.2	2417.1	2186.3	1925.4	1707.7	1646.9	1807.7	1883.3	2178.2
25°	2896.4	2902.9	2818.4	2643.7	2404.8	2104.3	1830.4	1721.6	1863.8	1937.7	2251.3
27.5°	3171.8	3159.6	3062.1	2895.6	2629.9	2289.5	1984.0	1815.8	1930.4	2003.5	2340.7
30°	3490.3	3484.6	3352.9	3181.5	2877.7	2496.7	2135.9	1917.4	2017.3	2093.6	2452.8
32.5°	3876.9	3876.2	3734.8	3524.3	3156.4	2730.6	2315.4	2056.3	2144.0	2221.2	2601.5
35°	4314.8	4314.1	4167.8	3889.9	3477.2	2989.8	2526.7	2225.3	2300.9	2382.1	2778.6
37.5°	4618.7	4613.9	4537.5	4267.7	3832.3	3291.2	2790.7	2452.8	2478.8	2569.8	2992.3
40°	4677.3	4706.5	4772.3	4613.0	4219.8	3626.0	3055.7	2697.3	2721.6	2838.7	3261.2
42.5°	4613.9	4652.0	4870.7	4915.3	4607.4	4031.3	3387.0	3036.1	3067.0	3212.4	3577.1
45°	4558.7	4591.9	4865.8	5082.6	4990.1	4473.3	3800.6	3449.7	3508.1	3688.5	3937.9
47.5°	4464.5	4495.3	4769.8	5112.7	5208.6	4899.0	4298.7	3946.9	4047.6	4266.1	4349.1
50°	4459.5	4473.3	4639.0	5011.9	5284.1	5222.4	4850.3	4528.6	4683.0	4934.8	4804.0
52.5°	4336.1	4432.7	4583.0	4851.1	5285.8	5410.8	5393.8	5166.4	5404.4	5683.0	5302.8
55°	3580.4	3691.8	4396.1	4772.3	5276.0	5572.6	5890.2	5844.8	6216.9	6510.1	5861.8
57.5°	3343.3	3390.4	3856.7	4795.8	5357.3	5839.9	6386.6	6573.5	7146.3	7466.3	6532.1
60°	3278.3	3327.8	3748.5	4807.3	5577.4	6326.5	7060.2	7396.6	8239.0	8578.6	7293.4
62.5°	3205.8	3270.1	3756.8	4817.8	5964.1	7046.3	7953.8	8289.4	9361.0	9664.1	8006.6
65°	2994.7	3080.0	3606.4	4751.1	6387.4	7949.8	9135.1	9220.5	10288.0	10480.5	8437.2
67°	2594.2	2687.6	3193.7	4366.1	6348.5	8558.3	10080.0	9803.0	10682.1	10705.7	8297.4
67.5°	2467.4	2564.1	3054.1	4206.1	6237.2	8637.9	10247.4	9883.4	10678.8	10652.8	8167.5
70°	1661.5	1770.3	2162.8	3088.1	5003.1	8039.2	10206.8	9635.6	9978.4	9680.3	7017.0
72.5°	824.6	827.8	1078.9	1691.6	3031.3	5765.9	8514.5	8243.1	8088.7	7525.7	5149.3
75°	397.2	404.6	509.3	747.5	1278.0	2976.8	5806.6	5562.1	4735.8	4100.4	2577.1
77.5°	303.0	310.4	395.6	486.6	532.9	970.9	2876.0	2324.4	1372.2	1096.0	726.3
80°	234.1	247.8	333.9	373.7	352.6	389.2	904.2	711.8	533.7	489.9	359.9
82.5°	182.8	190.8	283.5	283.5	243.7	260.8	420.8	411.2	331.5	299.0	193.4
85°	129.2	145.5	228.4	211.2	160.1	161.7	251.9	241.3	170.7	137.3	75.6
87.5°	57.7	74.0	162.5	138.1	85.3	65.8	103.1	88.6	67.4	52.0	35.0
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: P196820

CATALOG NUMBER: NAV-AF-02-D-UNV-T3R-7030-1200

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4	1934.4
2.5°	1921.5	1934.4	1954.7	1966.8	1983.2	1989.7	1996.1	2007.5	2016.5	2014.0	2010.1
5°	1939.4	1961.2	1986.5	1994.5	1994.5	1986.5	1981.5	1982.4	1979.9	1978.3	1973.4
7.5°	1965.3	1995.4	2013.2	2005.1	1979.9	1948.2	1918.1	1900.3	1883.3	1872.7	1876.0
10°	2001.8	2035.2	2035.9	2000.2	1940.1	1871.1	1811.7	1773.6	1737.0	1720.8	1725.6
12.5°	2054.7	2088.0	2059.5	1982.4	1876.7	1768.7	1659.8	1581.0	1510.3	1493.2	1488.4
15°	2111.6	2137.5	2074.2	1944.2	1785.8	1607.9	1425.1	1307.2	1228.4	1214.6	1209.7
17.5°	2161.1	2175.7	2066.8	1876.0	1641.9	1361.7	1148.8	1069.2	1052.9	1061.0	1061.0
20°	2205.0	2200.2	2035.2	1770.3	1415.2	1088.7	965.2	964.3	986.3	1006.6	1008.3
22.5°	2260.2	2222.0	1984.8	1613.5	1144.7	908.3	887.1	908.3	932.6	955.5	957.8
25°	2326.0	2246.4	1917.4	1390.1	920.5	824.6	833.5	851.4	866.9	884.8	885.5
27.5°	2391.8	2265.1	1822.3	1127.7	798.6	771.1	780.7	788.1	792.1	803.5	803.5
30°	2468.1	2279.7	1685.0	903.5	742.5	723.9	718.2	715.0	718.2	733.6	734.4
32.5°	2564.1	2305.7	1497.3	775.0	716.6	690.6	661.3	645.0	656.4	684.1	689.0
35°	2672.9	2336.6	1272.4	723.9	707.7	674.3	620.7	595.6	599.7	624.8	628.8
37.5°	2809.5	2376.4	1050.5	711.8	716.6	672.7	602.0	566.3	548.4	549.2	548.4
40°	2984.1	2416.3	875.0	715.0	736.1	676.8	593.1	537.0	499.7	501.3	504.6
42.5°	3166.9	2442.2	763.7	724.7	759.7	682.5	589.9	508.6	476.1	503.6	529.0
45°	3380.6	2435.0	706.1	733.6	777.5	684.9	577.7	505.4	478.5	561.4	608.6
47.5°	3626.0	2403.2	673.5	737.7	782.4	684.1	568.7	515.9	498.9	642.7	696.3
50°	3892.5	2353.7	647.5	731.2	780.0	680.8	578.4	529.0	507.0	660.5	702.0
52.5°	4184.1	2308.2	620.7	716.6	767.8	671.1	590.6	523.3	484.2	608.6	640.3
55°	4529.4	2297.6	590.6	691.4	747.5	660.5	584.1	505.4	459.0	539.4	559.0
57.5°	4924.2	2363.4	551.6	660.5	719.8	639.3	568.7	495.6	450.1	490.7	501.3
60°	5425.5	2508.8	510.2	628.0	685.7	607.7	554.9	498.0	452.6	483.4	485.8
62.5°	5817.1	2639.6	472.9	588.3	640.3	569.6	540.3	500.5	459.9	493.2	489.1
65°	5959.3	2575.5	426.5	529.0	576.1	527.2	520.0	502.0	459.9	498.9	489.9
67°	5667.6	2269.2	382.6	469.6	515.0	489.9	500.5	495.6	451.7	498.0	482.6
67.5°	5528.7	2161.1	371.3	459.9	498.9	478.5	495.6	492.3	449.3	496.4	478.5
70°	4559.5	1550.2	313.6	385.9	417.6	421.6	465.6	471.2	429.8	466.3	433.9
72.5°	3244.1	970.1	270.5	299.0	337.2	360.8	424.9	442.8	403.8	405.5	378.6
75°	1605.3	520.7	241.3	230.7	262.4	300.6	370.5	403.8	365.6	337.9	329.1
77.5°	541.9	294.9	203.9	186.1	203.9	241.3	307.1	352.6	322.6	285.9	280.2
80°	280.2	214.4	159.2	149.4	160.8	186.9	240.5	293.3	275.5	277.1	228.4
82.5°	174.7	130.8	114.5	113.7	121.9	143.0	177.1	238.0	236.4	202.3	147.1
85°	81.3	75.6	73.1	75.6	78.0	81.3	115.4	169.8	179.5	108.8	96.7
87.5°	34.1	33.4	29.3	31.6	35.0	34.1	46.3	72.3	100.7	68.3	62.6
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)