

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: P196970

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196970
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
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-AFL-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6710 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

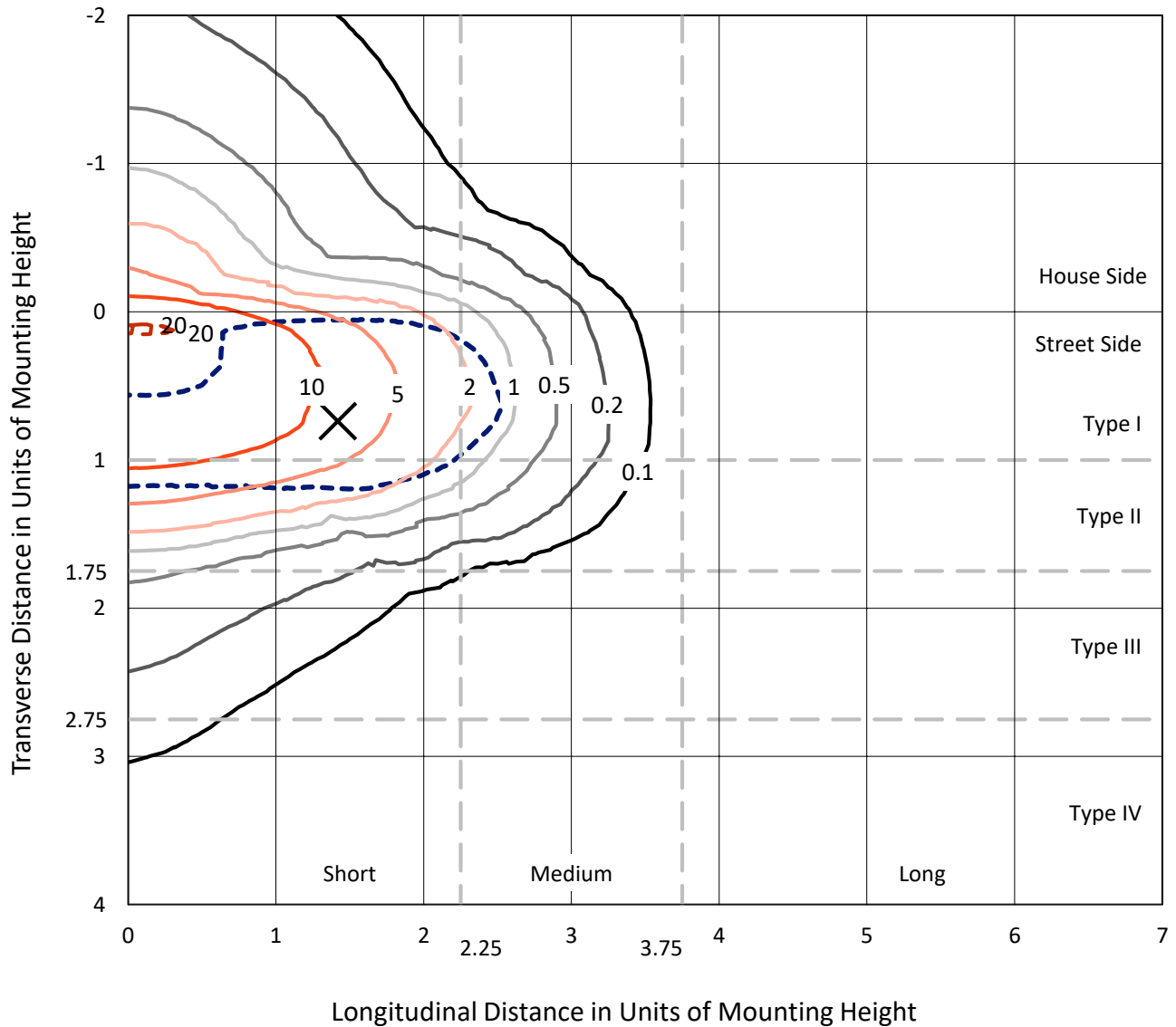
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196970
 CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-600

Iso-Footcandle Lines of Horizontal Illumination

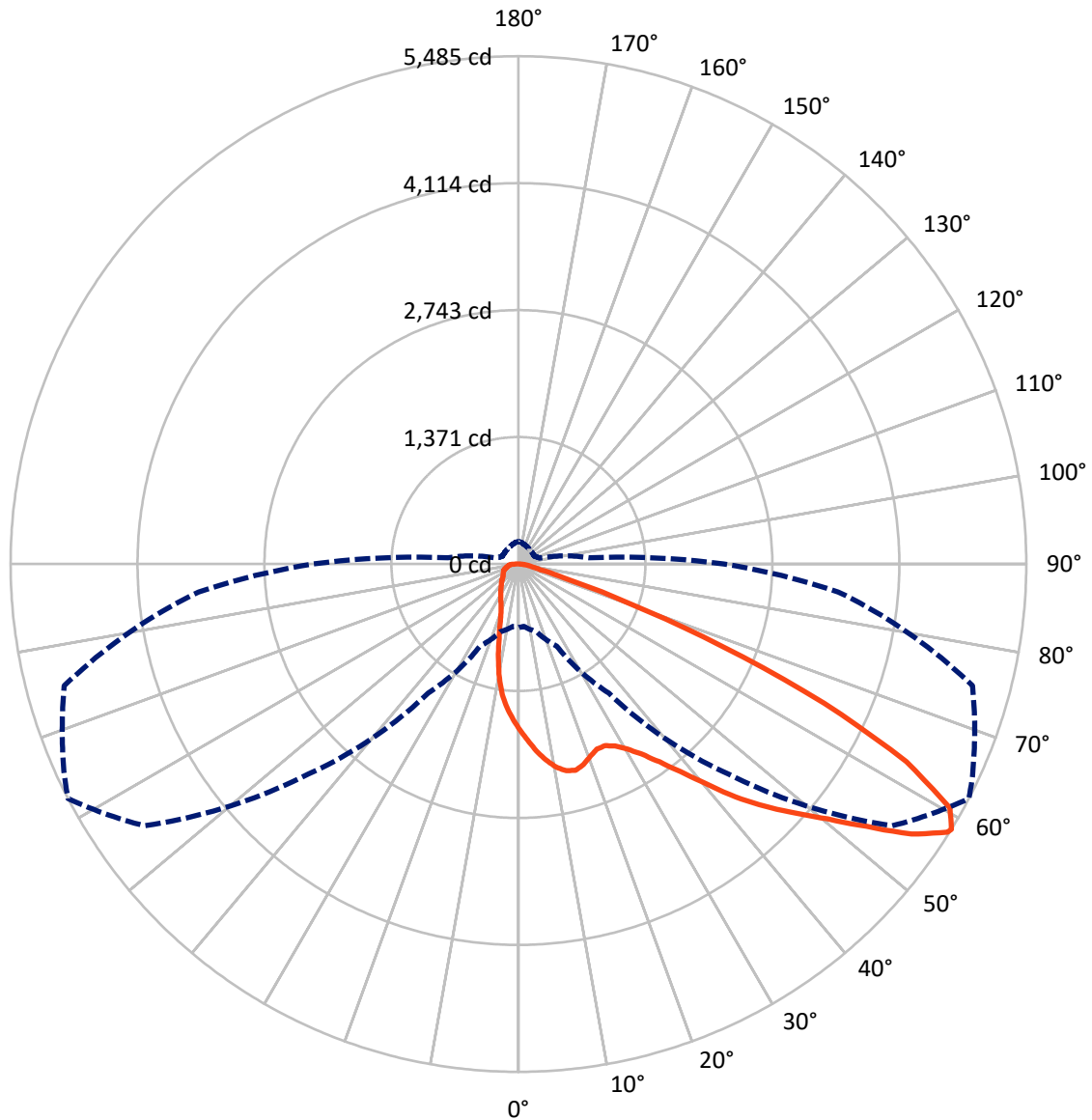
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 21 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P196970
CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-600

Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

REPORT NUMBER: P196970

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1030.2	0.0	1030.2
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	5679.8	0.0	5679.8
	% Fixture	84.6	0.0	84.6
Total	Lumens	6710.0	0.0	6710.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.1	2.4
10°-20°	404.1	6.0
20°-30°	654.9	9.8
30°-40°	1045.7	15.6
40°-50°	1521.0	22.7
50°-60°	1591.6	23.7
60°-70°	970.3	14.5
70°-80°	271.3	4.0
80°-90°	91.0	1.4
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°	6710.0	100.0
0°-180°	6710.0	100.0



REPORT NUMBER: P196970

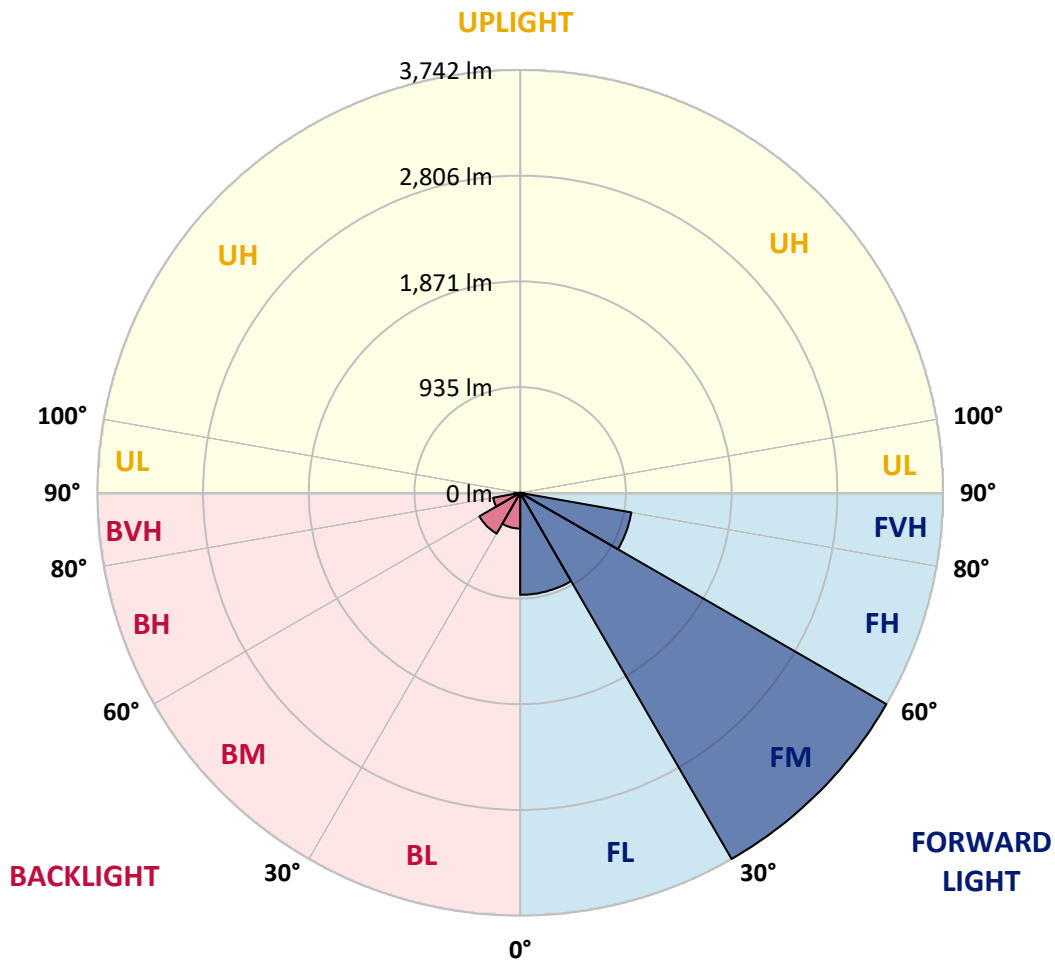
CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	902.5	13.5			
FM	(30°-60°)	3741.6	55.8			
FH	(60°-80°)	999.1	14.9			G1/1800
FVH	(80°-90°)	36.6	0.5			G1/100
BL	(0°-30°)	316.7	4.7	B1/500		
BM	(30°-60°)	416.6	6.2	B1/1000		
BH	(60°-80°)	242.5	3.6	B1/500		G1/500
BVH	(80°-90°)	54.4	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





REPORT NUMBER: P196970

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5
2.5°	2033.5	2032.2	2015.0	2003.7	1990.3	1959.3	1928.2	1905.2	1893.4	1848.6	1804.9
5°	2201.7	2196.6	2187.0	2174.8	2157.2	2118.2	2069.1	2026.8	2010.0	1930.3	1850.2
7.5°	2112.8	2120.7	2150.5	2184.1	2219.3	2221.8	2187.0	2136.7	2118.2	2011.7	1894.3
10°	1866.6	1863.2	1900.6	1966.0	2082.1	2197.1	2254.5	2229.8	2210.5	2088.9	1938.3
12.5°	1791.9	1791.1	1797.4	1814.2	1887.1	2044.8	2237.3	2291.0	2284.3	2170.6	1985.3
15°	1814.6	1815.4	1815.0	1817.1	1837.2	1912.3	2141.3	2311.5	2332.5	2251.6	2033.1
17.5°	1887.1	1884.2	1875.0	1864.9	1867.9	1894.7	2037.7	2276.3	2339.2	2323.7	2073.3
20°	1999.1	1999.1	1974.4	1946.3	1927.8	1933.7	1994.5	2215.9	2308.2	2384.9	2103.5
22.5°	2139.6	2141.7	2105.2	2054.0	2012.1	1996.2	2019.2	2171.1	2270.4	2441.5	2130.4
25°	2314.1	2313.6	2260.4	2187.0	2120.7	2082.6	2082.1	2173.1	2258.7	2507.8	2158.5
27.5°	2530.0	2510.3	2448.3	2343.8	2250.3	2192.0	2165.6	2226.0	2283.4	2589.2	2196.2
30°	2773.7	2753.5	2672.2	2538.0	2411.3	2326.2	2282.6	2317.4	2358.9	2692.7	2253.2
32.5°	3014.8	3019.4	2923.8	2772.4	2609.7	2489.8	2425.2	2446.6	2475.5	2819.4	2330.4
35°	3367.9	3367.5	3242.5	3053.4	2860.1	2694.0	2612.2	2623.5	2650.0	2998.0	2438.6
37.5°	3631.3	3627.1	3546.6	3379.2	3161.6	2962.4	2844.1	2845.8	2868.5	3222.4	2581.2
40°	3658.1	3657.3	3656.9	3633.0	3484.1	3296.2	3148.2	3117.6	3126.8	3460.6	2732.6
42.5°	3453.0	3483.7	3571.7	3706.8	3748.3	3649.7	3509.7	3441.3	3421.2	3734.0	2892.8
45°	3160.8	3176.3	3330.6	3634.2	3881.2	3981.9	3876.6	3732.3	3698.0	3999.9	3023.2
47.5°	3024.9	3018.2	3107.5	3438.4	3868.2	4246.1	4253.6	4017.1	3958.8	4229.3	3134.3
50°	2733.4	2724.6	2837.4	3150.3	3726.5	4377.3	4640.7	4327.4	4219.6	4447.4	3235.0
52.5°	2152.6	2144.2	2295.6	2698.6	3409.4	4328.3	4967.0	4708.2	4524.5	4657.5	3328.9
55°	1400.7	1401.5	1545.8	1961.4	2759.0	4042.3	5120.0	5148.1	4942.2	4867.6	3404.8
57.5°	771.2	764.1	866.8	1122.2	1898.0	3392.7	4992.5	5465.2	5357.8	5047.9	3459.8
58°	685.7	677.3	756.5	976.7	1701.8	3209.4	4928.4	5485.3	5411.1	5077.7	3467.7
60°	488.6	474.3	462.1	550.6	980.5	2314.1	4500.6	5354.9	5426.6	5137.2	3460.2
62.5°	411.8	395.5	351.8	348.5	461.7	1131.9	3559.1	4702.8	4903.6	5000.1	3338.6
65°	382.5	366.1	308.7	288.1	313.3	488.6	2200.8	3631.3	3899.7	4523.3	3032.4
67.5°	361.5	342.2	280.6	253.7	258.7	292.3	933.9	2374.9	2686.0	3527.3	2432.7
70°	342.6	321.2	258.3	227.3	223.1	222.3	364.8	1240.1	1539.9	2308.2	1629.7
72.5°	321.2	300.3	238.6	205.5	196.3	180.3	219.3	512.5	702.4	1131.4	746.9
75°	290.2	273.0	216.8	187.5	171.5	146.4	161.9	245.7	302.8	433.2	346.8
77.5°	255.4	241.6	194.6	172.4	151.0	119.5	123.7	166.5	187.0	244.1	200.9
80°	180.7	185.8	169.8	151.8	132.9	96.5	95.2	122.0	134.2	164.0	135.0
82.5°	124.6	128.3	138.4	119.9	107.4	75.1	70.0	84.7	91.0	99.0	65.4
85°	88.9	86.4	96.0	86.0	78.8	47.8	44.9	53.7	57.5	60.4	31.5
87.5°	54.1	53.7	55.4	44.5	41.1	24.3	22.2	25.6	27.3	26.4	15.1
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: P196970

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-8030-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5	1791.5
2.5°	1788.6	1768.0	1723.2	1687.1	1648.1	1618.3	1588.6	1571.8	1553.3	1542.8	1541.6
5°	1808.3	1766.4	1670.7	1581.8	1490.4	1408.2	1327.7	1268.2	1219.5	1191.8	1190.2
7.5°	1830.1	1764.3	1616.7	1462.7	1300.0	1138.2	995.2	894.1	829.1	798.9	796.8
10°	1846.9	1755.5	1550.8	1311.4	1053.4	839.6	709.6	650.0	630.3	625.3	624.4
12.5°	1867.0	1749.2	1467.8	1117.2	805.2	639.1	599.7	595.9	600.1	602.6	603.0
15°	1885.9	1737.0	1355.8	902.1	630.3	571.2	572.0	580.0	588.4	592.1	592.6
17.5°	1894.7	1707.2	1208.6	710.8	551.5	540.6	550.2	560.7	568.2	571.2	571.2
20°	1894.7	1659.4	1037.9	575.8	510.4	512.5	524.2	532.2	533.9	531.3	530.1
22.5°	1886.7	1600.3	871.9	502.4	476.8	484.8	494.0	488.6	468.8	453.8	450.8
25°	1879.6	1530.3	712.1	457.5	447.5	457.9	454.2	416.8	386.7	371.1	368.6
27.5°	1867.9	1445.6	578.7	420.6	418.9	427.3	390.0	353.9	338.8	330.5	328.8
30°	1864.9	1353.7	484.4	387.9	390.8	379.1	336.3	324.6	321.2	316.6	314.5
32.5°	1874.6	1261.9	425.2	361.1	364.0	325.4	309.1	310.7	310.3	304.5	302.4
35°	1901.0	1172.5	387.5	336.7	328.4	291.5	293.6	298.6	298.6	291.5	288.9
37.5°	1947.1	1089.5	363.6	316.2	287.3	273.8	279.3	286.0	286.0	281.0	278.9
40°	1996.2	1008.6	345.6	299.8	261.3	261.7	267.1	272.2	274.3	275.1	273.4
42.5°	2040.6	924.7	326.3	282.2	249.5	252.5	255.0	258.7	267.6	273.4	272.6
45°	2066.6	840.4	305.3	260.4	241.6	242.8	242.0	248.7	259.2	268.0	268.0
47.5°	2090.5	771.2	288.1	238.6	233.6	233.6	231.1	237.8	247.4	257.9	258.7
50°	2113.2	726.3	275.9	221.8	223.5	222.3	221.4	227.7	240.7	253.3	255.4
52.5°	2136.2	711.2	265.0	209.7	213.0	211.4	212.2	221.0	235.7	248.7	250.8
55°	2168.5	720.9	253.7	201.3	203.0	202.6	205.9	216.0	229.0	242.0	242.8
57.5°	2208.4	756.1	244.1	195.0	193.3	195.8	201.3	210.9	223.5	239.0	240.3
58°	2216.3	764.5	242.4	193.3	191.2	195.0	200.5	209.7	222.7	239.0	240.3
60°	2228.5	794.3	238.2	190.0	184.1	190.8	197.5	206.7	221.0	241.1	243.7
62.5°	2169.8	800.1	236.9	186.2	176.6	184.9	192.9	203.4	219.3	248.3	253.7
65°	1966.4	739.8	228.1	179.9	170.3	180.3	188.7	200.9	224.4	269.7	272.2
67.5°	1578.5	614.4	206.7	170.3	163.1	174.9	185.4	200.9	226.5	273.0	274.7
70°	1085.3	461.7	179.9	159.8	154.7	168.2	184.1	205.5	219.3	258.3	253.3
72.5°	567.0	321.2	157.7	147.6	144.7	162.3	196.3	200.9	210.9	241.1	236.1
75°	285.6	218.5	138.8	133.8	133.4	160.2	219.7	193.3	202.1	226.9	237.8
77.5°	168.6	171.1	123.7	120.8	122.9	156.4	220.2	185.8	192.1	208.8	220.6
80°	115.3	141.3	112.0	111.1	112.8	143.8	203.0	176.6	180.3	197.5	210.1
82.5°	65.0	78.0	98.1	103.6	102.7	117.8	175.3	160.6	165.2	233.6	247.0
85°	31.5	47.0	82.2	96.9	87.6	78.4	142.6	142.6	143.8	167.3	169.4
87.5°	11.7	21.0	55.4	76.7	61.2	47.0	96.9	101.1	112.4	115.7	118.3
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)