

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: P196580

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196580
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12668.6 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G3

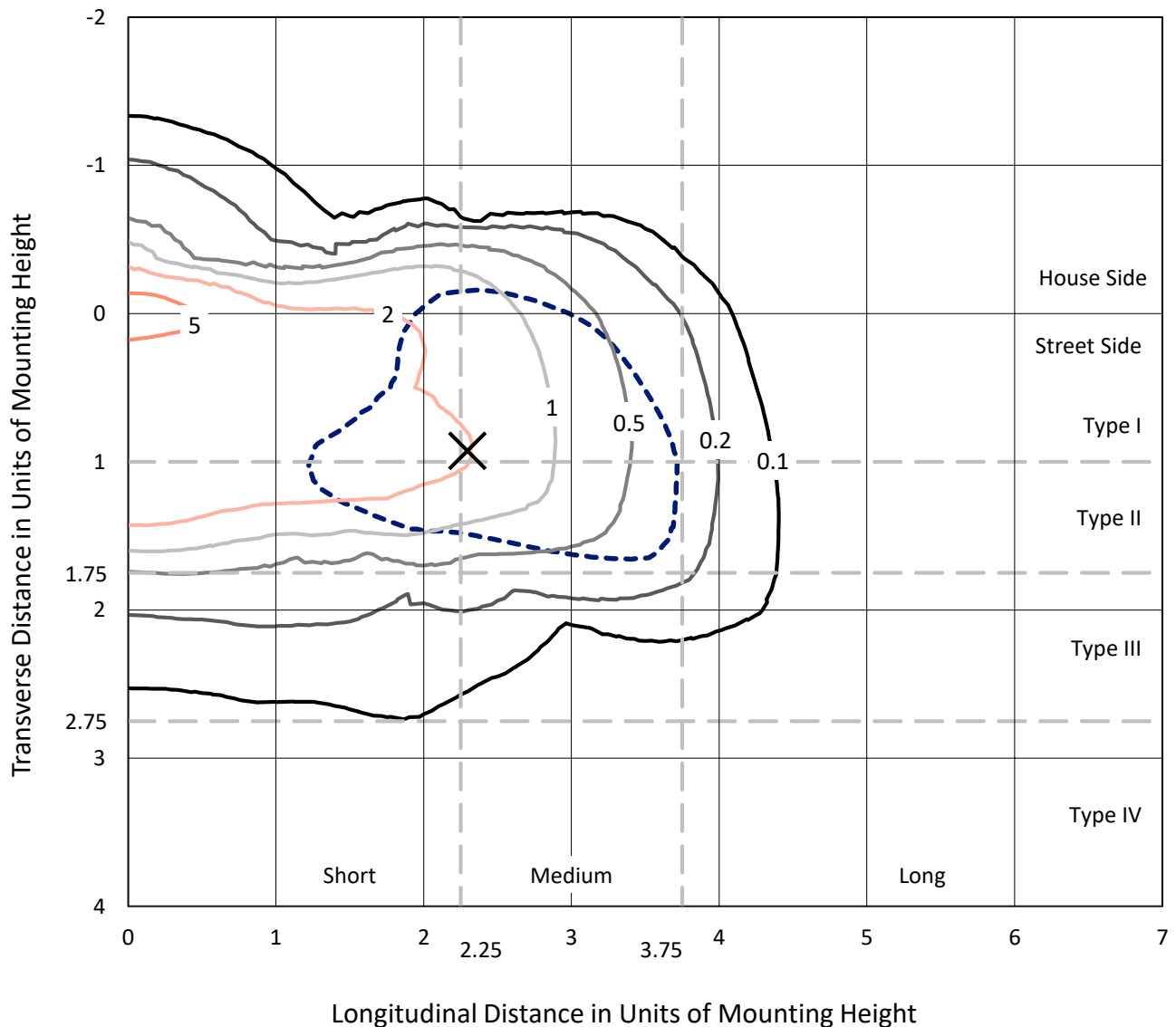
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196580
 CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200

Iso-Footcandle Lines of Horizontal Illumination

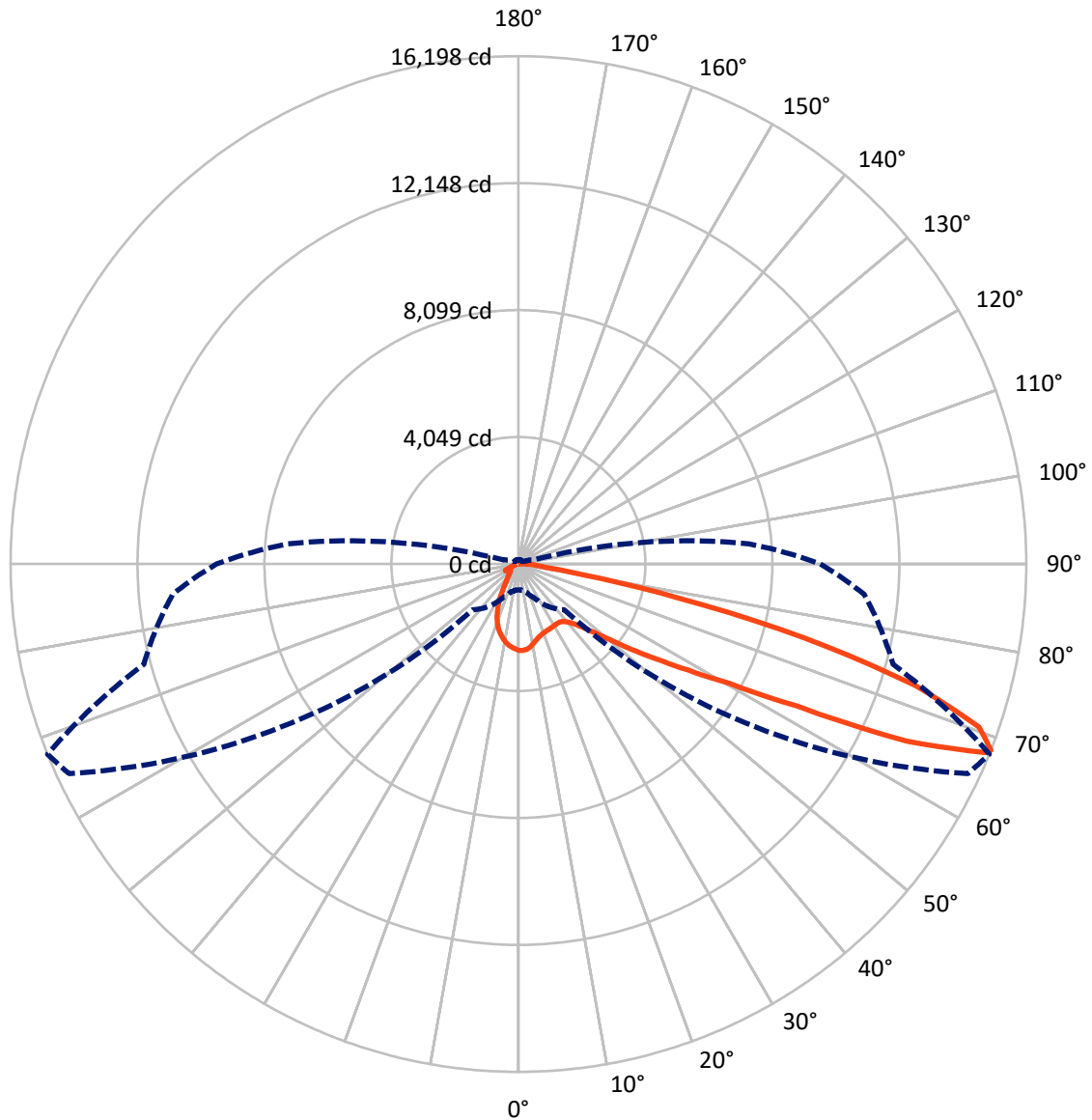
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.9 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P196580
CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P196580

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2072.6	0.0	2072.6
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	10596.0	0.0	10596.0
	% Fixture	83.6	0.0	83.6
Total	Lumens	12668.6	0.0	12668.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.2	1.9
10°-20°	547.8	4.3
20°-30°	740.9	5.8
30°-40°	1044.6	8.2
40°-50°	1717.8	13.6
50°-60°	2662.7	21.0
60°-70°	3452.4	27.3
70°-80°	1981.2	15.6
80°-90°	285.0	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°	12668.6	100.0
0°-180°	12668.6	100.0



REPORT NUMBER: P196580

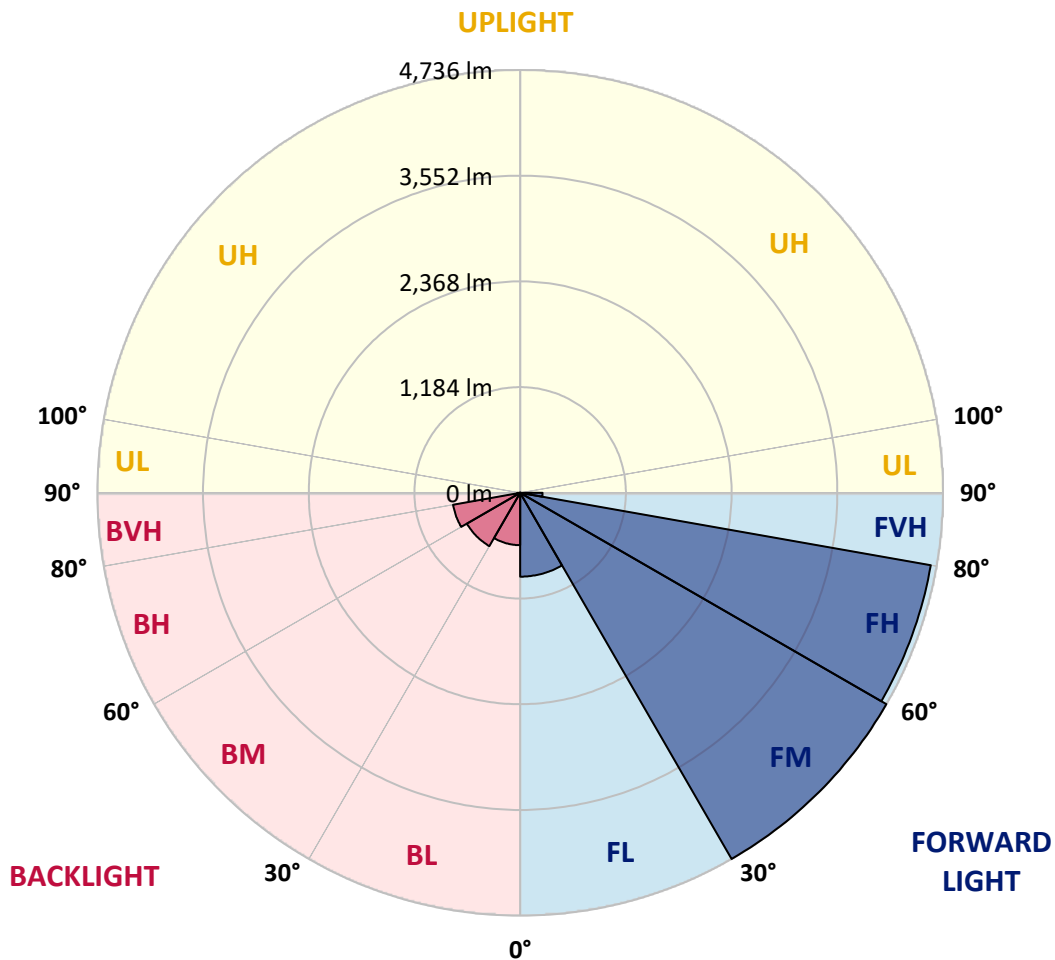
CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	938.9	7.4			
FM (30°-60°)	4735.7	37.4			
FH (60°-80°)	4670.2	36.9			G2/5000
FVH (80°-90°)	251.1	2.0			G3/500
BL (0°-30°)	585.9	4.6	B2/1000		
BM (30°-60°)	689.4	5.4	B1/1000		
BH (60°-80°)	763.3	6.0	B2/1000		G2/1000
BVH (80°-90°)	34.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type II Medium





REPORT NUMBER: P196580

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6
2.5°	2683.0	2704.5	2704.5	2720.1	2734.2	2745.8	2755.7	2755.7	2755.7	2749.2	2743.3
5°	2400.8	2429.7	2433.9	2473.5	2525.6	2589.5	2660.6	2723.5	2735.9	2759.1	2768.2
7.5°	2204.7	2213.7	2229.4	2256.8	2309.7	2388.3	2500.1	2640.7	2674.6	2747.5	2785.6
10°	2065.5	2072.9	2086.3	2113.6	2161.5	2232.7	2342.8	2525.6	2582.1	2711.0	2786.3
12.5°	1963.8	1969.6	1982.0	2006.8	2055.6	2119.4	2231.9	2422.3	2491.7	2674.6	2797.9
15°	1884.2	1894.2	1904.2	1928.2	1977.8	2039.1	2153.3	2346.9	2422.3	2645.7	2819.4
17.5°	1852.9	1857.9	1859.5	1871.9	1916.6	1978.6	2092.9	2294.0	2371.8	2622.5	2836.1
20°	1872.7	1873.6	1857.1	1848.7	1874.5	1931.4	2042.4	2254.2	2333.7	2601.8	2842.6
22.5°	1959.7	1959.7	1916.6	1880.3	1862.9	1898.4	2008.5	2226.9	2313.0	2586.0	2842.6
25°	2125.2	2117.7	2050.7	1978.6	1901.7	1886.8	1987.0	2209.5	2297.2	2577.9	2831.9
27.5°	2342.8	2336.2	2251.0	2144.2	2005.1	1911.6	1979.6	2195.4	2281.6	2565.4	2808.7
30°	2607.6	2601.8	2505.0	2365.1	2159.9	1990.2	1996.9	2185.5	2269.1	2544.7	2769.8
32.5°	2871.7	2868.3	2791.3	2648.1	2373.4	2123.5	2042.4	2183.9	2262.5	2519.8	2722.6
35°	3137.3	3137.3	3090.1	2969.2	2660.6	2323.7	2137.5	2214.5	2274.9	2506.6	2682.1
37.5°	3529.5	3513.8	3426.1	3301.2	3022.2	2583.7	2291.5	2279.0	2323.0	2529.1	2668.8
40°	4136.9	4091.4	3872.1	3662.0	3417.0	2916.3	2516.6	2404.0	2430.5	2605.2	2700.4
42.5°	4772.5	4700.5	4410.0	4074.1	3824.9	3326.7	2812.0	2606.8	2606.0	2752.5	2800.5
45°	5317.8	5280.6	4966.2	4539.9	4290.8	3788.6	3185.2	2908.1	2878.2	2980.8	2993.2
47.5°	5634.8	5610.0	5420.5	5033.1	4843.7	4333.9	3658.6	3326.0	3269.7	3330.9	3311.8
50°	5547.1	5571.1	5516.5	5318.6	5437.9	5100.2	4261.8	3898.6	3791.9	3853.1	3806.7
52.5°	5085.4	5149.8	5198.7	5236.8	5779.6	6125.5	5019.9	4613.6	4525.1	4514.3	4469.6
55°	4253.6	4356.2	4510.1	4789.9	5687.8	6949.0	6344.0	5478.4	5349.4	5281.5	5298.8
57.5°	2894.9	3050.4	3382.2	3914.3	5210.2	7299.8	8301.9	6595.6	6377.1	6135.5	6191.7
60°	1594.6	1724.6	2119.4	2655.6	4120.3	7247.7	10037.4	8411.3	7723.5	7083.1	7198.9
62.5°	1032.0	1060.2	1353.8	1814.0	2529.1	6398.7	11001.6	11445.9	9988.6	8332.6	8495.7
65°	829.2	849.1	993.0	1463.1	1761.8	4116.3	11044.5	14593.9	13633.1	10030.8	10035.7
67.5°	810.1	819.2	902.8	1230.6	1652.6	2241.0	9546.6	15835.2	16057.9	12035.1	11066.0
68°	821.7	832.5	916.9	1192.4	1651.8	2065.5	8823.3	15816.2	16197.6	12370.3	11066.0
70°	724.9	738.1	935.1	1233.9	1581.4	1775.9	6041.9	14976.1	15590.2	13140.7	10500.1
72.5°	379.0	368.3	462.6	974.0	1780.1	1850.5	3191.9	12511.8	13228.4	12170.0	9071.6
75°	295.4	269.0	259.1	384.8	1565.6	1919.1	1853.7	8892.8	9434.1	8772.9	6063.5
77.5°	278.1	245.9	226.7	227.6	689.3	1996.9	1499.5	5233.4	5233.4	4184.9	1934.8
80°	223.4	193.6	181.3	206.9	332.7	1840.5	1564.9	2385.0	2034.1	1081.5	532.9
82.5°	147.3	131.5	132.4	168.0	252.4	1228.9	1812.4	1177.6	884.7	479.1	313.7
85°	93.5	80.3	89.4	117.6	188.7	547.8	1794.1	818.5	585.9	269.0	156.5
87.5°	47.2	36.4	44.7	61.1	115.0	157.3	1477.1	730.7	434.5	111.8	85.2
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: P196580

CATALOG NUMBER: NAV-AF-02-D-UNV-SL2-7030-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6	2756.6
2.5°	2743.3	2725.2	2716.0	2701.1	2683.0	2664.8	2652.3	2646.5	2643.2	2644.8	2644.1
5°	2763.1	2739.2	2700.4	2644.8	2587.8	2527.3	2481.0	2445.4	2423.1	2416.5	2414.8
7.5°	2778.1	2743.3	2670.6	2569.6	2471.9	2366.0	2275.8	2203.8	2154.9	2132.6	2131.7
10°	2775.6	2730.9	2615.8	2467.0	2323.7	2168.1	2026.6	1905.8	1818.2	1775.9	1774.3
12.5°	2778.1	2716.8	2548.9	2346.9	2141.7	1919.1	1709.0	1521.0	1390.4	1328.3	1325.8
15°	2788.1	2702.0	2480.1	2212.8	1929.0	1614.6	1314.2	1078.3	959.2	918.6	918.6
17.5°	2787.2	2677.2	2400.8	2057.3	1676.6	1255.4	897.0	751.3	739.8	777.1	782.9
20°	2770.6	2637.4	2298.2	1872.7	1380.4	868.9	608.2	587.6	680.2	782.9	794.5
22.5°	2745.0	2586.0	2179.7	1658.4	1035.2	566.1	469.3	500.6	626.5	753.9	772.1
25°	2709.4	2524.0	2044.0	1409.3	688.6	407.2	391.4	430.4	518.9	604.1	617.4
27.5°	2657.3	2445.4	1895.9	1139.6	439.4	335.2	341.0	368.3	406.3	442.7	450.1
30°	2591.8	2353.6	1734.6	840.7	333.5	299.6	309.5	326.0	342.6	365.8	370.7
32.5°	2525.6	2260.0	1566.6	577.7	291.2	280.6	290.5	299.6	313.7	329.4	332.7
35°	2466.1	2173.1	1393.6	403.0	273.0	268.1	273.0	278.9	293.0	308.6	310.3
37.5°	2423.1	2101.9	1213.3	318.6	262.3	257.5	259.8	262.3	278.9	302.1	304.5
40°	2417.3	2054.8	1030.4	286.4	254.0	247.5	245.9	247.5	269.0	295.4	297.9
42.5°	2473.5	2057.3	851.5	273.0	247.5	240.1	233.4	236.6	255.6	276.4	278.1
45°	2606.8	2115.3	696.7	267.2	241.7	235.9	225.9	227.6	236.6	247.5	249.1
47.5°	2841.9	2241.9	578.4	264.0	236.6	231.7	219.3	214.3	215.1	220.9	220.9
50°	3217.5	2453.8	506.4	260.7	232.5	223.4	209.3	199.4	197.0	200.3	201.1
52.5°	3777.7	2817.0	471.7	254.0	225.1	212.7	197.0	187.1	182.9	186.2	186.2
55°	4535.1	3397.1	455.2	245.0	216.0	199.4	185.4	177.1	173.8	176.2	176.2
57.5°	5398.2	4151.0	483.3	232.5	204.5	185.4	175.5	169.7	167.1	169.7	170.5
60°	6423.5	5137.5	677.0	216.8	192.0	172.9	167.1	163.9	162.2	164.7	164.7
62.5°	7786.5	6449.9	1047.7	204.5	178.7	161.3	159.7	158.1	156.5	158.9	158.9
65°	9257.9	7644.1	1078.3	197.0	167.1	151.5	152.3	152.3	150.7	153.1	153.1
67.5°	9726.3	7540.6	602.4	187.8	153.1	141.5	144.8	144.8	144.0	146.5	145.7
68°	9627.0	7376.7	524.7	185.4	150.7	139.0	142.4	143.1	142.4	144.8	144.0
70°	8887.0	6476.5	345.0	171.3	139.9	130.8	135.7	136.6	135.7	139.0	138.2
72.5°	7336.2	4857.7	254.9	149.8	126.6	119.9	125.0	125.7	126.6	129.9	129.2
75°	4659.2	2683.0	201.1	127.4	113.4	107.6	112.5	115.0	116.7	121.6	119.2
77.5°	1276.0	814.3	163.1	108.3	97.7	95.2	98.5	101.8	103.5	109.3	105.1
80°	446.9	360.0	135.7	91.9	81.1	80.3	83.6	86.9	88.5	93.5	88.5
82.5°	271.4	235.0	108.3	72.0	63.7	63.0	67.0	70.4	72.0	72.0	68.8
85°	141.5	124.1	79.4	50.5	43.8	41.4	48.8	53.0	53.7	53.0	50.5
87.5°	79.4	70.4	42.2	24.0	19.8	20.6	25.6	31.4	34.0	33.1	31.4
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)