

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: P270506

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270506  
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-04-D-UNV-SL2-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 615mA 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: 13691.7 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

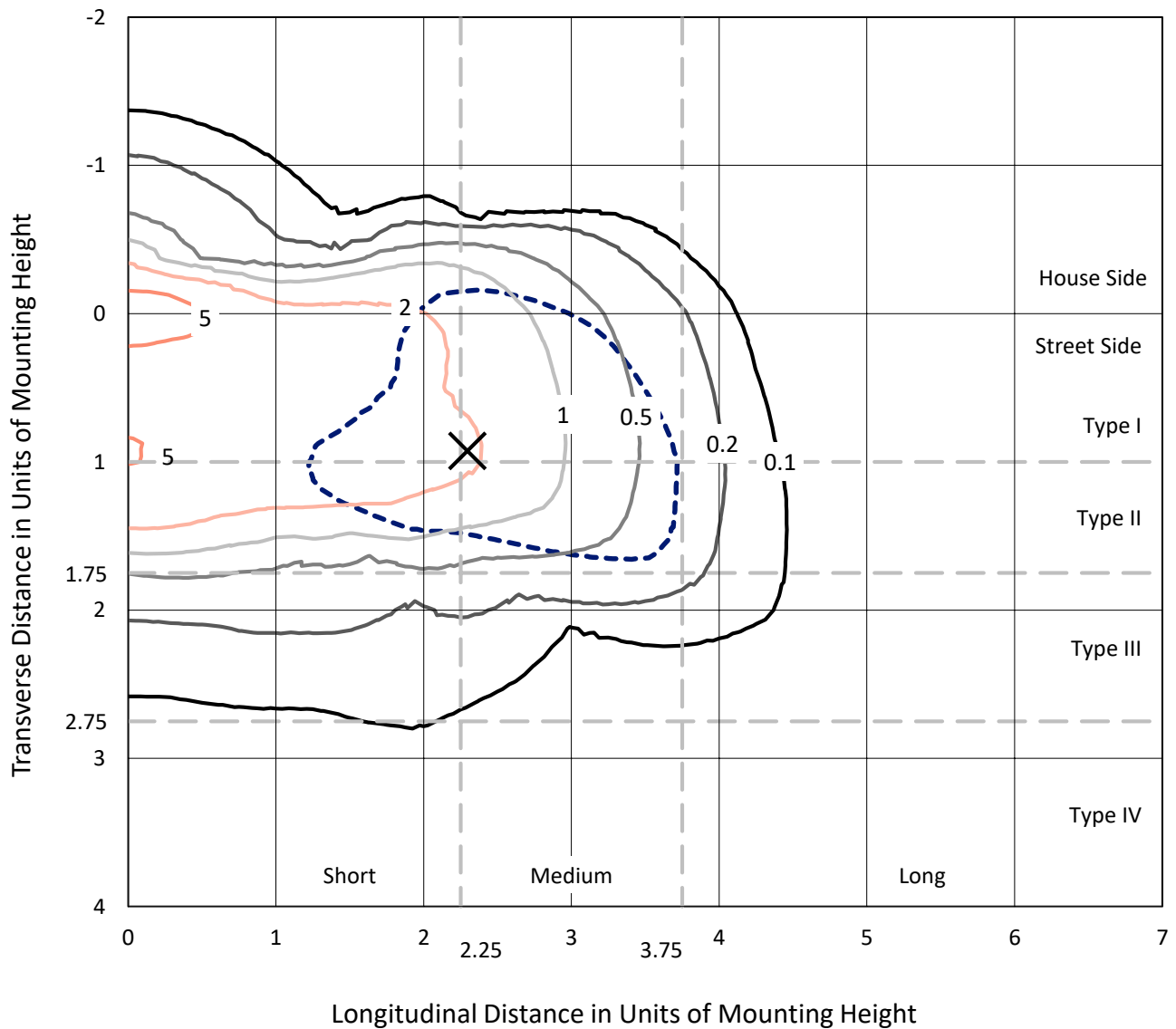
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

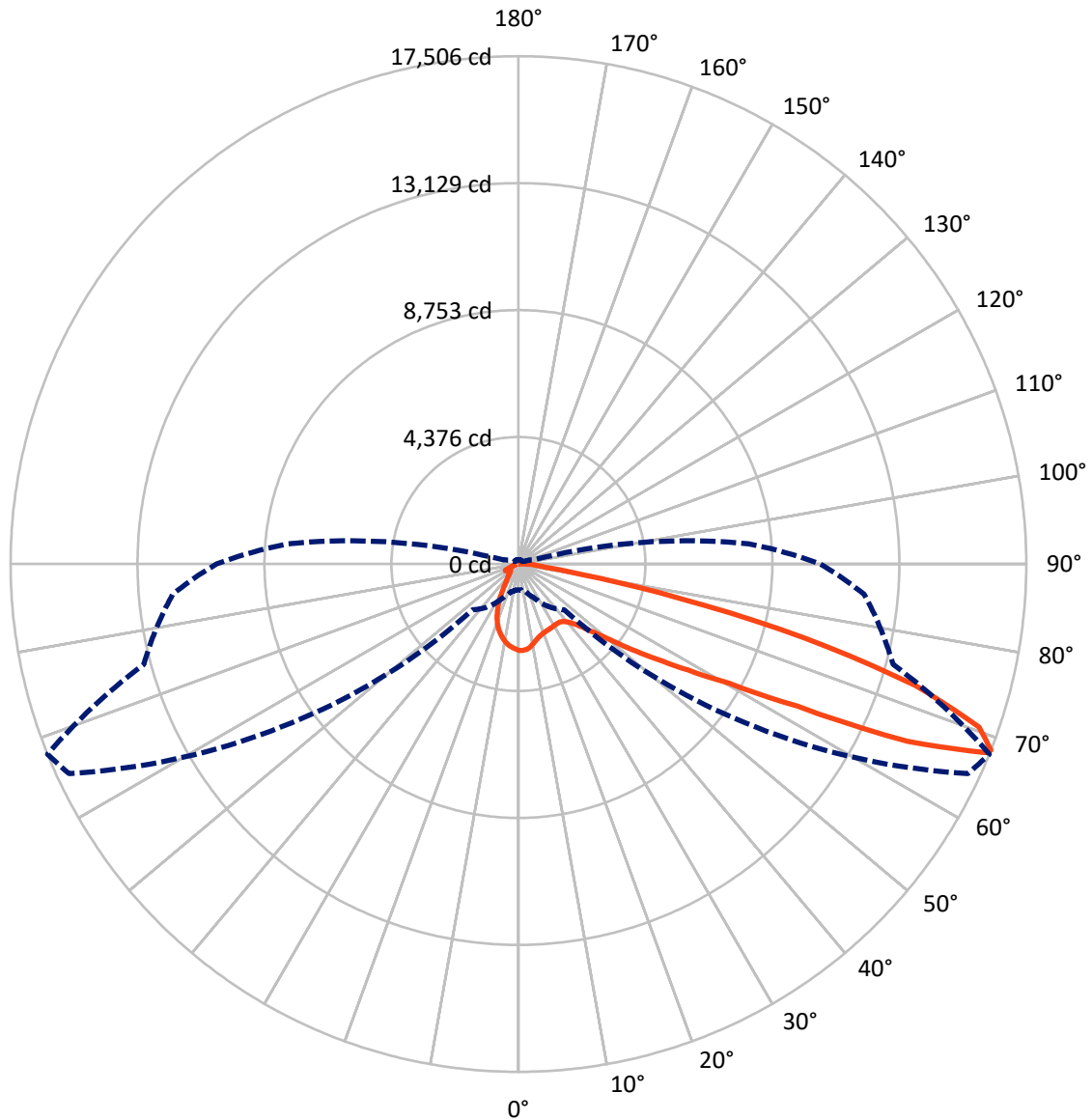
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.4 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2240.0	0.0	2240.0
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	11451.7	0.0	11451.7
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	13691.7	0.0	13691.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	255.3	1.9
10°-20°	592.1	4.3
20°-30°	800.7	5.8
30°-40°	1129.0	8.2
40°-50°	1856.5	13.6
50°-60°	2877.7	21.0
60°-70°	3731.2	27.3
70°-80°	2141.1	15.6
80°-90°	308.1	2.3
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°	13691.7	100.0
0°-180°	13691.7	100.0



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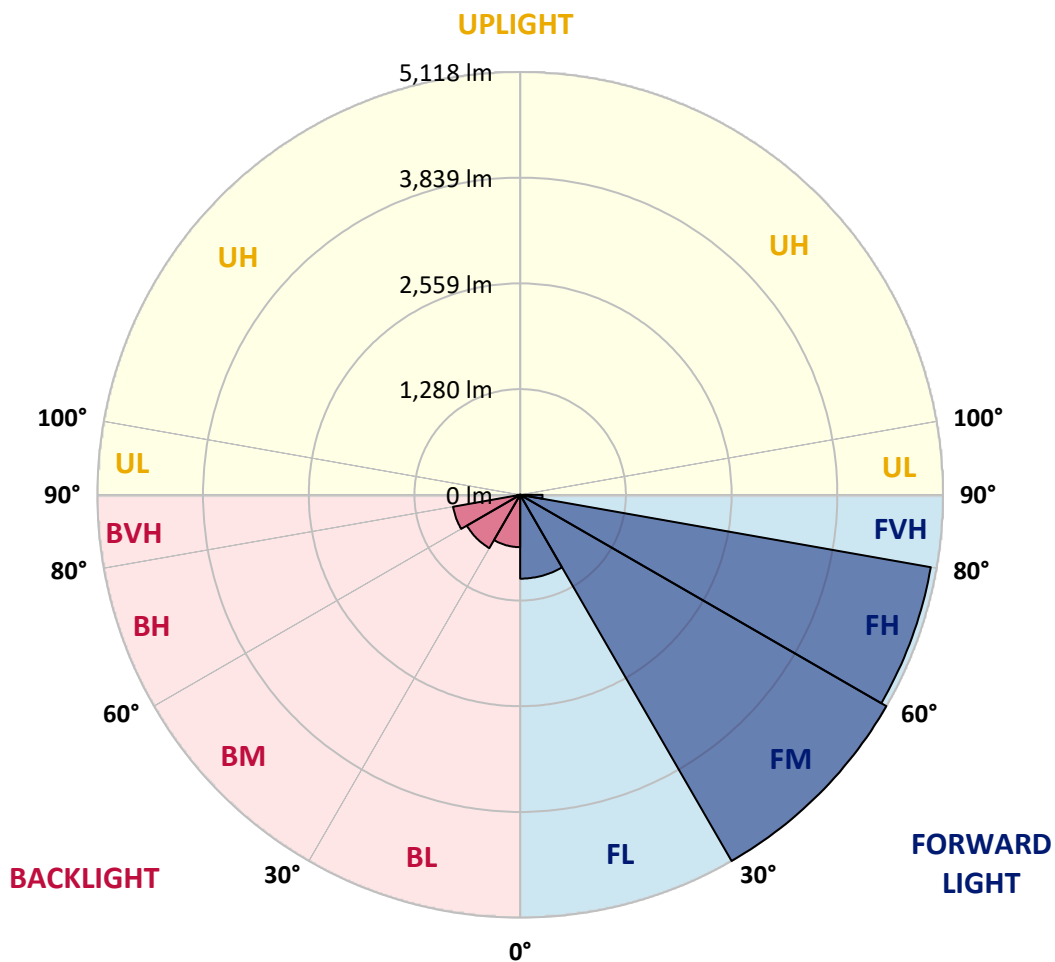
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1014.8	7.4			
FM	(30°-60°)	5118.2	37.4			
FH	(60°-80°)	5047.4	36.9			G3/7500
FVH	(80°-90°)	271.3	2.0			G3/500
BL	(0°-30°)	633.3	4.6	B2/1000		
BM	(30°-60°)	745.0	5.4	B1/1000		
BH	(60°-80°)	825.0	6.0	B2/1000		G2/1000
BVH	(80°-90°)	36.7	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1
2.5°	2899.5	2922.8	2922.8	2939.9	2955.1	2967.6	2978.3	2978.3	2978.3	2971.1	2964.9
5°	2594.7	2625.8	2630.3	2673.3	2729.7	2798.5	2875.5	2943.3	2956.9	2981.8	2991.7
7.5°	2382.7	2392.5	2409.4	2439.0	2496.2	2581.2	2701.9	2853.9	2890.7	2969.3	3010.5
10°	2232.4	2240.5	2254.7	2284.2	2336.1	2413.0	2532.1	2729.7	2790.4	2930.0	3011.4
12.5°	2122.3	2128.7	2142.1	2168.9	2221.7	2290.5	2412.2	2617.8	2692.9	2890.7	3024.0
15°	2036.5	2047.2	2057.9	2083.9	2137.5	2203.7	2327.1	2536.5	2617.8	2859.3	3047.2
17.5°	2002.5	2007.9	2009.7	2023.2	2071.4	2138.4	2261.9	2479.2	2563.4	2834.3	3065.0
20°	2024.1	2024.9	2007.1	1998.0	2025.8	2087.5	2207.3	2436.4	2522.1	2812.0	3072.3
22.5°	2117.9	2117.9	2071.4	2032.1	2013.2	2051.6	2170.7	2406.7	2499.9	2794.9	3072.3
25°	2296.7	2288.7	2216.3	2138.4	2055.3	2039.2	2147.4	2388.1	2482.7	2786.1	3060.5
27.5°	2532.1	2524.9	2432.7	2317.4	2167.2	2066.0	2139.4	2372.9	2465.8	2772.6	3035.6
30°	2818.3	2812.0	2707.3	2556.1	2334.3	2151.0	2158.2	2362.1	2452.5	2750.3	2993.5
32.5°	3103.6	3100.0	3016.8	2862.0	2565.1	2295.0	2207.3	2360.2	2445.2	2723.4	2942.5
35°	3390.7	3390.7	3339.5	3209.0	2875.5	2511.4	2310.3	2393.4	2458.7	2709.1	2898.7
37.5°	3814.6	3797.6	3702.8	3567.7	3266.2	2792.2	2476.5	2463.2	2510.6	2733.3	2884.4
40°	4471.0	4421.8	4184.8	3957.7	3692.9	3151.9	2719.8	2598.2	2626.9	2815.5	2918.4
42.5°	5157.9	5080.1	4766.1	4403.0	4133.8	3595.5	3039.1	2817.4	2816.4	2974.6	3026.6
45°	5747.3	5707.0	5367.3	4906.6	4637.4	4094.5	3442.5	3142.9	3110.7	3221.5	3234.9
47.5°	6089.8	6063.0	5858.1	5439.6	5234.9	4683.9	3954.1	3594.5	3533.8	3599.9	3579.2
50°	5995.1	6021.0	5962.0	5748.2	5877.0	5512.1	4606.1	4213.4	4098.1	4164.3	4114.1
52.5°	5496.0	5565.7	5618.4	5659.6	6246.4	6620.1	5425.4	4986.2	4890.6	4878.9	4830.5
55°	4597.2	4708.0	4874.4	5176.8	6147.1	7510.1	6856.4	5920.8	5781.3	5707.9	5726.8
57.5°	3128.5	3296.7	3655.4	4230.4	5631.0	7889.4	8972.5	7128.2	6892.1	6631.0	6691.7
60°	1723.5	1864.0	2290.5	2870.1	4453.1	7833.0	10847.9	9090.5	8347.3	7654.9	7780.2
62.5°	1115.2	1145.7	1463.2	1960.6	2733.3	6915.3	11889.8	12370.2	10795.2	9005.5	9181.8
65°	896.1	917.6	1073.3	1581.2	1904.1	4448.6	11936.4	15772.4	14734.0	10840.7	10846.1
67.5°	875.6	885.4	975.7	1329.9	1786.1	2422.0	10317.7	17114.0	17354.5	13007.0	11959.7
68°	888.2	899.7	991.0	1288.8	1785.2	2232.4	9535.9	17093.4	17505.7	13369.2	11959.7
70°	783.5	797.8	1010.7	1333.5	1709.1	1919.4	6529.9	16185.7	16849.2	14201.8	11347.8
72.5°	409.6	397.9	499.9	1052.6	1923.8	1999.8	3449.6	13522.1	14296.6	13152.8	9804.2
75°	319.3	290.7	279.9	415.8	1692.1	2074.0	2003.4	9611.1	10195.9	9481.3	6553.1
77.5°	300.6	265.5	245.1	246.0	745.1	2158.2	1620.6	5656.1	5656.1	4522.8	2091.1
80°	241.5	209.2	195.9	223.6	359.5	1989.0	1691.2	2577.5	2198.4	1169.0	576.0
82.5°	159.2	142.2	143.1	181.5	272.7	1328.1	1958.8	1272.7	956.1	517.9	339.0
85°	101.1	86.7	96.6	127.0	203.9	592.2	1939.0	884.6	633.2	290.7	169.1
87.5°	50.9	39.3	48.2	66.1	124.3	169.9	1596.5	789.7	469.5	120.7	92.2
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°	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1	2979.1
2.5°	2964.9	2945.3	2935.3	2919.2	2899.5	2879.8	2866.5	2860.3	2856.7	2858.4	2857.6
5°	2986.3	2960.5	2918.4	2858.4	2796.8	2731.4	2681.4	2643.0	2618.7	2611.6	2609.8
7.5°	3002.4	2964.9	2886.2	2777.1	2671.5	2557.0	2459.6	2381.8	2328.9	2304.8	2304.0
10°	2999.8	2951.4	2827.1	2666.2	2511.4	2343.3	2190.3	2059.8	1965.0	1919.4	1917.5
12.5°	3002.4	2936.3	2754.7	2536.5	2314.7	2074.0	1846.8	1643.9	1502.5	1435.5	1432.7
15°	3013.2	2920.2	2680.5	2391.6	2084.7	1745.0	1420.3	1165.5	1036.6	992.7	992.7
17.5°	3012.2	2893.4	2594.7	2223.5	1812.1	1356.8	969.5	812.1	799.6	839.8	846.1
20°	2994.4	2850.4	2483.8	2024.1	1491.8	939.1	657.4	635.0	735.3	846.1	858.6
22.5°	2966.7	2794.9	2355.7	1792.4	1118.8	611.7	507.2	541.0	677.1	814.9	834.4
25°	2928.2	2727.9	2209.1	1523.2	744.2	440.0	423.0	465.1	560.8	652.9	667.3
27.5°	2871.8	2643.0	2049.0	1231.5	474.9	362.2	368.5	397.9	439.1	478.4	486.5
30°	2801.3	2543.6	1874.7	908.6	360.4	323.7	334.4	352.3	370.3	395.3	400.6
32.5°	2729.7	2442.5	1693.0	624.3	314.9	303.2	314.0	323.7	339.0	356.0	359.5
35°	2665.2	2348.7	1506.2	435.6	295.2	289.8	295.2	301.4	316.7	333.6	335.3
37.5°	2618.7	2271.8	1311.2	344.3	283.5	278.1	280.8	283.5	301.4	326.4	329.0
40°	2612.5	2220.8	1113.4	309.5	274.6	267.4	265.5	267.4	290.7	319.3	322.0
42.5°	2673.3	2223.5	920.4	295.2	267.4	259.4	252.2	255.7	276.4	298.7	300.6
45°	2817.4	2286.0	753.0	288.9	261.1	254.8	244.2	246.0	255.7	267.4	269.2
47.5°	3071.3	2422.9	625.2	285.3	255.7	250.4	237.1	231.7	232.5	238.8	238.8
50°	3477.3	2651.8	547.3	281.7	251.3	241.5	226.3	215.6	212.9	216.4	217.3
52.5°	4082.8	3044.4	509.8	274.6	243.4	229.8	212.9	202.1	197.6	201.2	201.2
55°	4901.2	3671.5	491.9	264.7	233.4	215.6	200.3	191.3	187.8	190.5	190.5
57.5°	5834.0	4486.2	522.4	251.3	221.0	200.3	189.6	183.3	180.6	183.3	184.2
60°	6942.2	5552.3	731.6	234.3	207.5	186.9	180.6	177.1	175.3	178.0	178.0
62.5°	8415.2	6970.8	1132.4	221.0	193.1	174.5	172.7	170.9	169.1	171.8	171.8
65°	10005.4	8261.4	1165.5	212.9	180.6	163.8	164.6	164.6	162.8	165.5	165.5
67.5°	10511.6	8149.7	651.1	203.0	165.5	152.9	156.6	156.6	155.6	158.3	157.5
68°	10404.3	7972.5	567.0	200.3	162.8	150.2	153.8	154.7	153.8	156.6	155.6
70°	9604.8	6999.5	372.9	185.1	151.2	141.4	146.7	147.6	146.7	150.2	149.4
72.5°	7928.7	5250.1	275.5	161.9	136.8	129.6	135.0	136.0	136.8	140.4	139.5
75°	5035.4	2899.5	217.3	137.7	122.4	116.3	121.6	124.3	126.1	131.5	128.7
77.5°	1379.2	880.1	176.2	117.1	105.6	102.9	106.4	110.0	111.7	118.0	113.5
80°	483.0	389.1	146.7	99.3	87.7	86.7	90.3	94.0	95.7	101.1	95.7
82.5°	293.3	254.0	117.1	77.9	68.9	68.0	72.5	76.0	77.9	77.9	74.2
85°	152.9	134.1	85.9	54.5	47.4	44.7	52.8	57.2	58.1	57.2	54.5
87.5°	85.9	76.0	45.6	26.0	21.5	22.4	27.7	34.0	36.7	35.8	34.0
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)