

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: P197061

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197061  
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-03-D-UNV-SL2-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 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: 15896 lumens  
Efficiency: N/A  
Efficacy: 83.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 191  
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

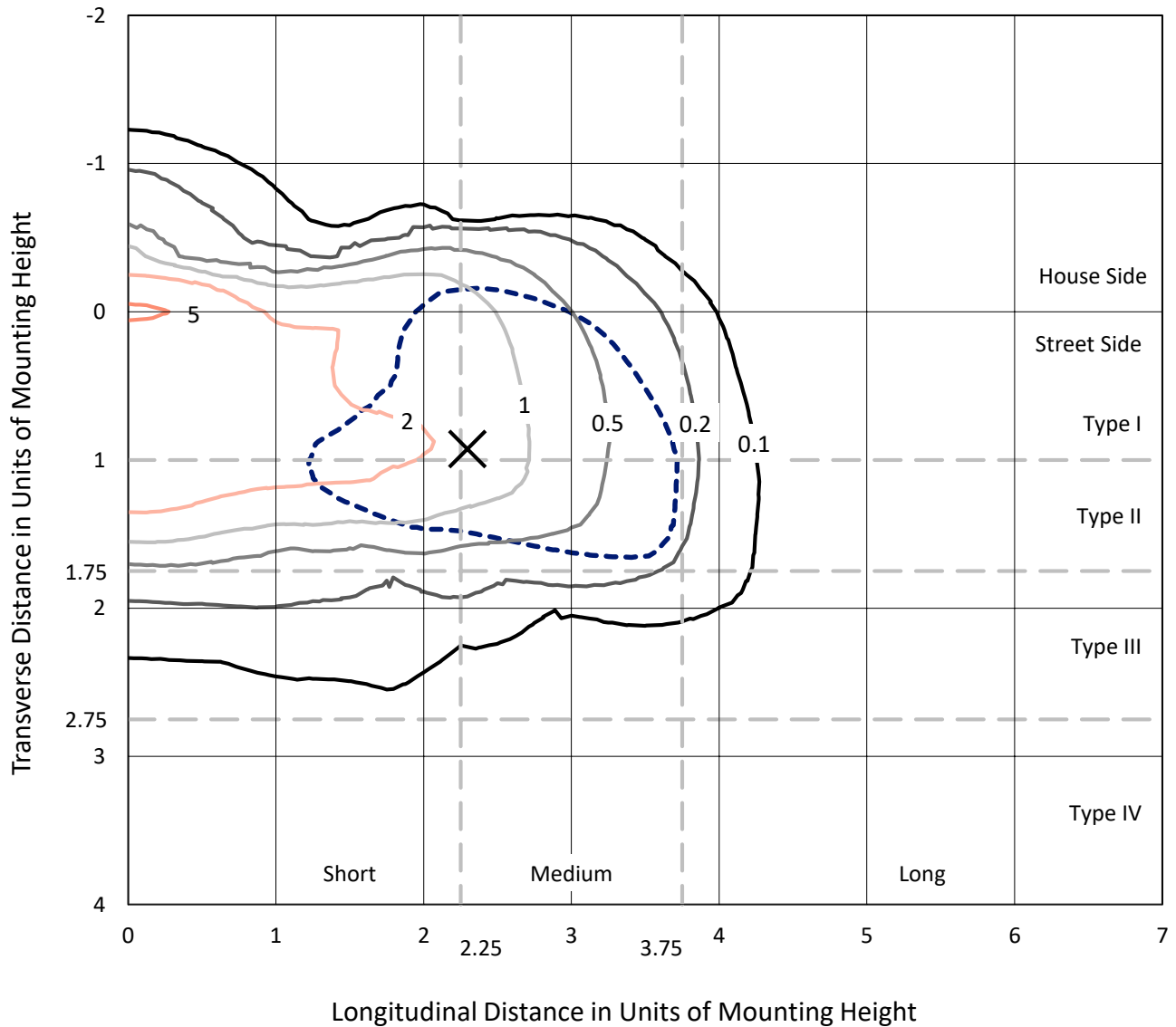


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### Iso-Footcandle Lines of Horizontal Illumination

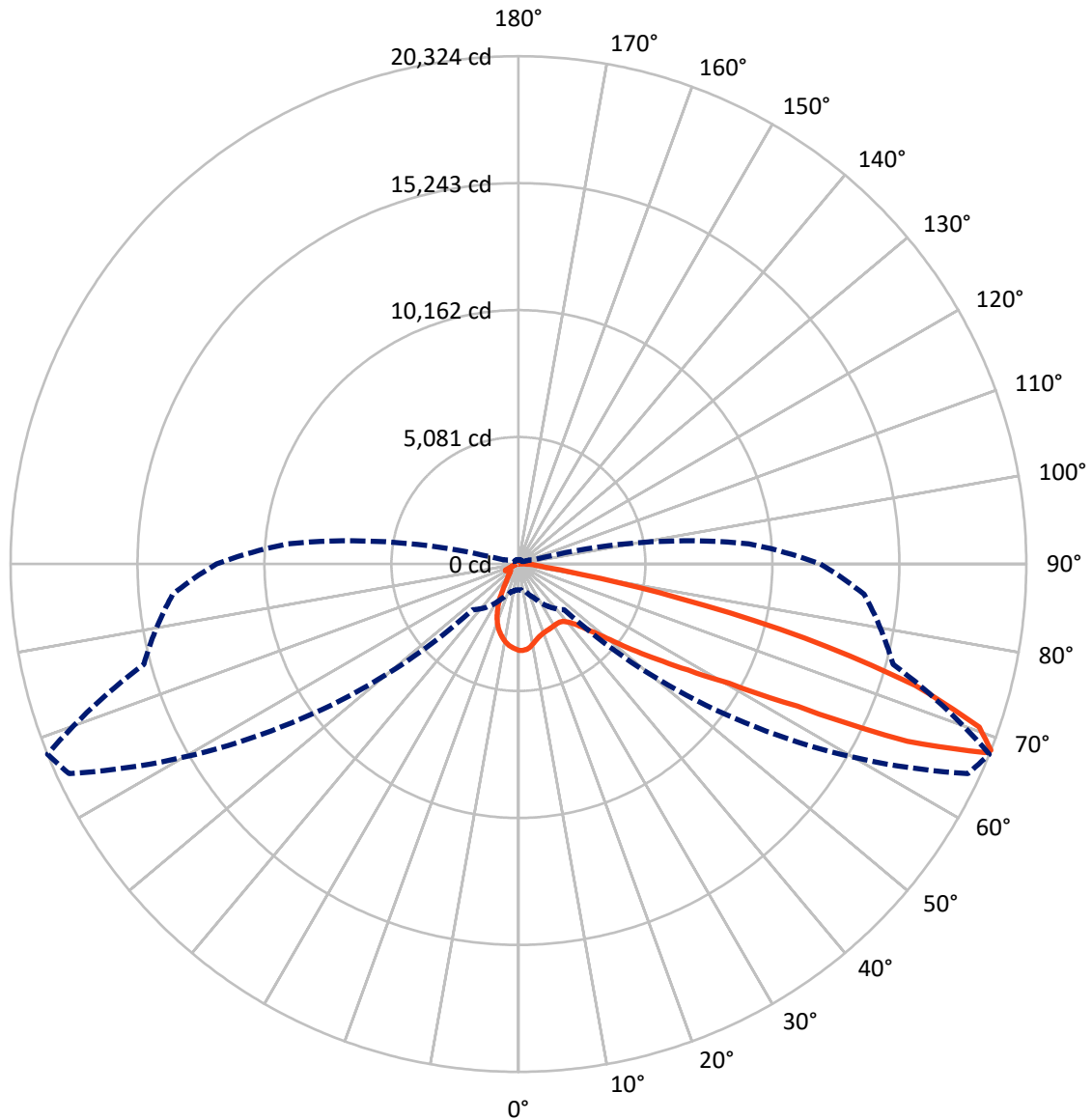
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 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	2600.6	0.0	2600.6
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	13295.4	0.0	13295.4
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	15896.0	0.0	15896.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	296.4	1.9
10°-20°	687.4	4.3
20°-30°	929.6	5.8
30°-40°	1310.8	8.2
40°-50°	2155.4	13.6
50°-60°	3341.0	21.0
60°-70°	4331.9	27.3
70°-80°	2485.9	15.6
80°-90°	357.7	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°	15896.0	100.0
0°-180°	15896.0	100.0



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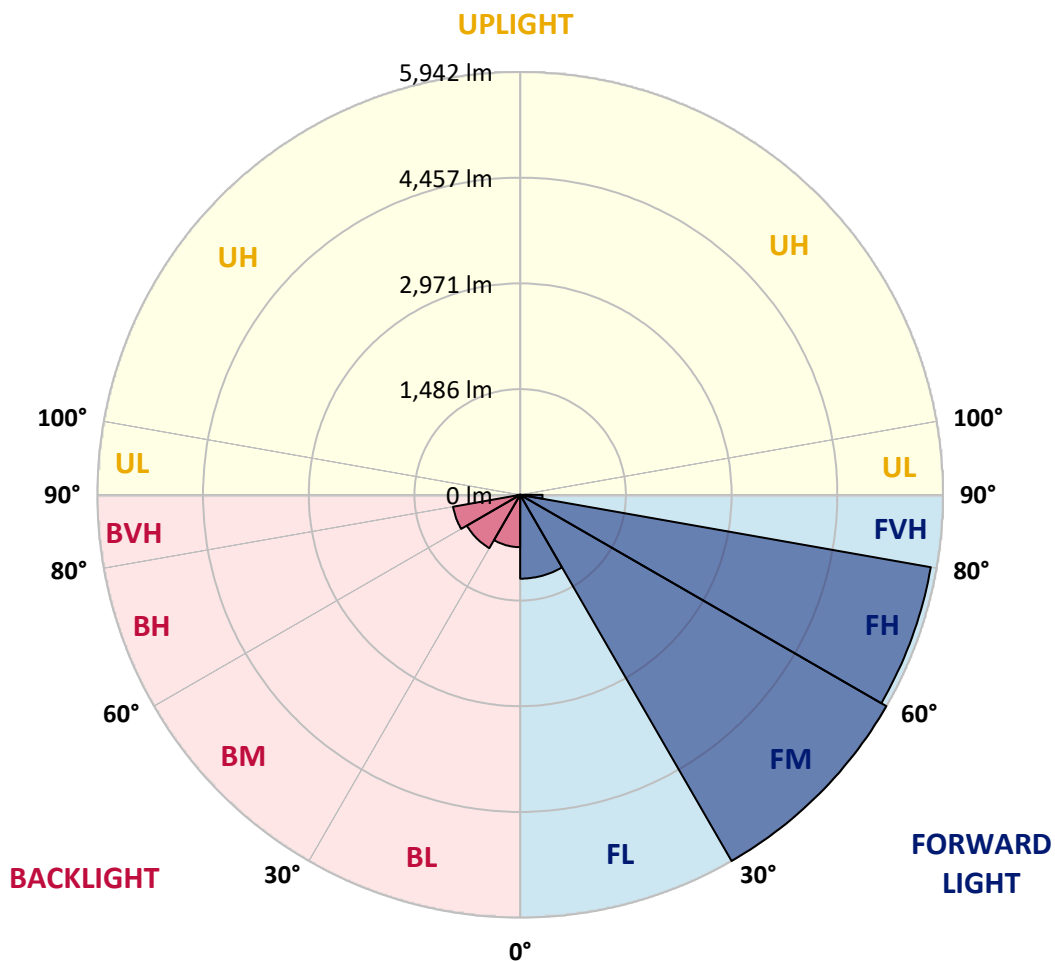
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1178.2	7.4			
FM (30°-60°)	5942.2	37.4			
FH (60°-80°)	5860.0	36.9			G3/7500
FVH (80°-90°)	315.0	2.0			G3/500
BL (0°-30°)	735.2	4.6	B2/1000		
BM (30°-60°)	865.0	5.4	B1/1000		
BH (60°-80°)	957.8	6.0	B2/1000		G2/1000
BVH (80°-90°)	42.6	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°	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8
2.5°	3366.4	3393.4	3393.4	3413.1	3430.8	3445.3	3457.8	3457.8	3457.8	3449.5	3442.2
5°	3012.3	3048.7	3053.9	3103.7	3169.1	3249.1	3338.4	3417.3	3432.9	3461.9	3473.4
7.5°	2766.2	2777.7	2797.4	2831.6	2898.1	2996.8	3136.9	3313.5	3356.0	3447.4	3495.2
10°	2591.8	2601.1	2617.7	2652.0	2712.2	2801.5	2939.6	3169.1	3239.7	3401.7	3496.2
12.5°	2464.1	2471.3	2486.9	2518.1	2579.3	2659.3	2800.5	3039.3	3126.5	3356.0	3510.7
15°	2364.4	2376.8	2389.3	2419.4	2481.7	2558.6	2701.9	2944.8	3039.3	3319.7	3537.7
17.5°	2324.9	2331.2	2333.2	2348.8	2404.9	2482.8	2626.1	2878.4	2976.0	3290.6	3558.5
20°	2349.8	2350.9	2330.1	2319.7	2351.9	2423.6	2562.7	2828.5	2928.2	3264.7	3566.8
22.5°	2458.9	2458.9	2404.9	2359.2	2337.4	2382.0	2520.1	2794.3	2902.3	3244.9	3566.8
25°	2666.5	2657.2	2573.1	2482.8	2386.2	2367.5	2493.1	2772.5	2882.5	3234.5	3553.3
27.5°	2939.6	2931.3	2824.4	2690.4	2516.0	2398.6	2483.8	2754.8	2862.8	3219.0	3524.2
30°	3271.9	3264.7	3143.2	2967.7	2710.2	2497.3	2505.6	2742.3	2847.2	3193.0	3475.4
32.5°	3603.2	3599.0	3502.4	3322.8	2978.1	2664.5	2562.7	2740.3	2838.9	3161.9	3416.3
35°	3936.5	3936.5	3877.3	3725.7	3338.4	2915.8	2682.1	2778.7	2854.5	3145.2	3365.4
37.5°	4428.7	4408.9	4298.9	4142.1	3792.1	3241.8	2875.3	2859.7	2914.7	3173.3	3348.8
40°	5190.8	5133.7	4858.6	4594.8	4287.5	3659.2	3157.7	3016.5	3049.7	3268.8	3388.2
42.5°	5988.3	5898.0	5533.5	5111.9	4799.4	4174.3	3528.4	3270.9	3269.8	3453.6	3513.9
45°	6672.6	6625.9	6231.3	5696.5	5384.0	4753.7	3996.7	3648.9	3611.5	3740.2	3755.8
47.5°	7070.3	7039.1	6801.4	6315.4	6077.6	5438.0	4590.7	4173.2	4102.6	4179.5	4155.6
50°	6960.2	6990.3	6921.8	6673.6	6823.2	6399.5	5347.6	4891.8	4757.8	4834.7	4776.5
52.5°	6380.8	6461.8	6523.1	6570.8	7252.0	7686.1	6298.8	5788.9	5677.8	5664.3	5608.3
55°	5337.2	5466.0	5659.1	6010.1	7136.8	8719.2	7960.2	6874.0	6712.1	6626.9	6648.7
57.5°	3632.2	3827.5	4243.8	4911.5	6537.6	9159.5	10417.0	8275.9	8001.7	7698.5	7769.1
60°	2000.9	2164.0	2659.3	3332.1	5170.1	9094.1	12594.5	10554.0	9691.2	8887.5	9032.8
62.5°	1294.9	1330.2	1698.8	2276.1	3173.3	8028.7	13804.2	14361.8	12533.2	10455.4	10660.0
65°	1040.5	1065.4	1246.1	1835.8	2210.7	5164.9	13858.2	18311.7	17106.2	12586.1	12592.4
67.5°	1016.6	1028.0	1132.9	1544.1	2073.6	2811.9	11978.7	19869.3	20148.6	15101.1	13885.2
68°	1031.1	1044.6	1150.5	1496.3	2072.6	2591.8	11071.2	19845.4	20324.1	15521.6	13885.2
70°	909.6	926.2	1173.4	1548.2	1984.3	2228.4	7581.2	18791.5	19562.0	16488.4	13174.9
72.5°	475.6	462.1	580.5	1222.2	2233.5	2321.8	4005.0	15699.2	16598.4	15270.3	11382.7
75°	370.7	337.5	325.0	482.8	1964.6	2408.0	2326.0	11158.4	11837.5	11007.8	7608.2
77.5°	348.9	308.4	284.5	285.6	865.0	2505.6	1881.5	6566.7	6566.7	5251.1	2427.7
80°	280.4	243.0	227.4	259.6	417.4	2309.3	1963.6	2992.6	2552.3	1357.2	668.7
82.5°	184.8	165.1	166.1	210.8	316.7	1542.0	2274.0	1477.6	1110.0	601.2	393.5
85°	117.3	100.7	112.1	147.4	236.7	687.4	2251.2	1027.0	735.2	337.5	196.3
87.5°	59.2	45.7	56.1	76.8	144.3	197.3	1853.5	916.9	545.1	140.2	107.0
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°	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8	3458.8
2.5°	3442.2	3419.4	3407.9	3389.3	3366.4	3343.6	3328.0	3320.7	3316.6	3318.6	3317.6
5°	3467.1	3437.0	3388.2	3318.6	3247.0	3171.2	3113.0	3068.4	3040.4	3032.1	3030.0
7.5°	3485.8	3442.2	3350.8	3224.2	3101.6	2968.7	2855.5	2765.2	2703.9	2675.9	2674.9
10°	3482.7	3426.6	3282.3	3095.4	2915.8	2720.5	2543.0	2391.4	2281.3	2228.4	2226.3
12.5°	3485.8	3409.0	3198.2	2944.8	2687.3	2408.0	2144.2	1908.5	1744.5	1666.6	1663.5
15°	3498.3	3390.3	3112.0	2776.6	2420.5	2025.9	1648.9	1353.0	1203.5	1152.6	1152.6
17.5°	3497.2	3359.1	3012.3	2581.4	2103.7	1575.2	1125.6	942.8	928.3	975.0	982.3
20°	3476.5	3309.3	2883.6	2349.8	1732.0	1090.3	763.2	737.2	853.5	982.3	996.8
22.5°	3444.3	3244.9	2735.1	2080.9	1299.0	710.2	588.8	628.2	786.1	946.0	968.8
25°	3399.6	3167.0	2564.8	1768.4	863.9	510.9	491.2	540.0	651.1	758.0	774.6
27.5°	3334.2	3068.4	2378.9	1429.8	551.4	420.5	427.8	462.1	509.8	555.5	564.9
30°	3252.2	2953.1	2176.4	1055.0	418.5	375.9	388.4	409.1	429.9	459.0	465.2
32.5°	3169.1	2835.8	1965.6	724.8	365.5	352.0	364.5	375.9	393.5	413.3	417.4
35°	3094.4	2726.8	1748.6	505.7	342.7	336.4	342.7	349.9	367.6	387.3	389.4
37.5°	3040.4	2637.5	1522.3	399.8	329.2	322.9	326.0	329.2	349.9	379.0	382.1
40°	3033.1	2578.3	1292.8	359.3	318.8	310.5	308.4	310.5	337.5	370.7	373.8
42.5°	3103.7	2581.4	1068.5	342.7	310.5	301.1	292.8	297.0	320.9	346.8	348.9
45°	3270.9	2654.1	874.3	335.4	303.2	295.9	283.5	285.6	297.0	310.5	312.6
47.5°	3565.8	2813.0	725.8	331.2	297.0	290.7	275.2	268.9	270.0	277.2	277.2
50°	4037.2	3078.8	635.5	327.1	291.8	280.4	262.7	250.2	247.1	251.3	252.3
52.5°	4740.2	3534.6	591.9	318.8	282.4	266.9	247.1	234.7	229.5	233.6	233.6
55°	5690.3	4262.5	571.1	307.4	271.0	250.2	232.6	222.2	218.1	221.2	221.2
57.5°	6773.3	5208.5	606.4	291.8	256.5	232.6	220.1	212.9	209.8	212.9	213.9
60°	8059.9	6446.2	849.4	272.1	240.9	217.0	209.8	205.6	203.5	206.6	206.6
62.5°	9770.1	8093.1	1314.6	256.5	224.3	202.5	200.4	198.3	196.3	199.4	199.4
65°	11616.3	9591.5	1353.0	247.1	209.8	190.0	191.1	191.1	189.0	192.1	192.1
67.5°	12204.0	9461.7	755.9	235.7	192.1	177.6	181.7	181.7	180.7	183.8	182.8
68°	12079.4	9256.1	658.3	232.6	189.0	174.4	178.6	179.6	178.6	181.7	180.7
70°	11151.1	8126.3	433.0	214.9	175.5	164.1	170.3	171.3	170.3	174.4	173.4
72.5°	9205.2	6095.3	319.8	187.9	158.9	150.6	156.8	157.8	158.9	163.0	162.0
75°	5846.1	3366.4	252.3	159.9	142.3	135.0	141.2	144.3	146.4	152.6	149.5
77.5°	1601.2	1021.8	204.6	136.0	122.5	119.4	123.6	127.7	129.8	137.1	131.9
80°	560.7	451.7	170.3	115.3	101.8	100.7	104.9	109.0	111.1	117.3	111.1
82.5°	340.6	294.9	136.0	90.3	80.0	78.9	84.1	88.3	90.3	90.3	86.2
85°	177.6	155.8	99.7	63.3	55.0	51.9	61.3	66.5	67.5	66.5	63.3
87.5°	99.7	88.3	53.0	30.1	24.9	26.0	32.2	39.5	42.6	41.5	39.5
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)