

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: P196575

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196575  
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-SL2-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 1050mA 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: 17174.4 lumens  
Efficiency: N/A  
Efficacy: 103.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

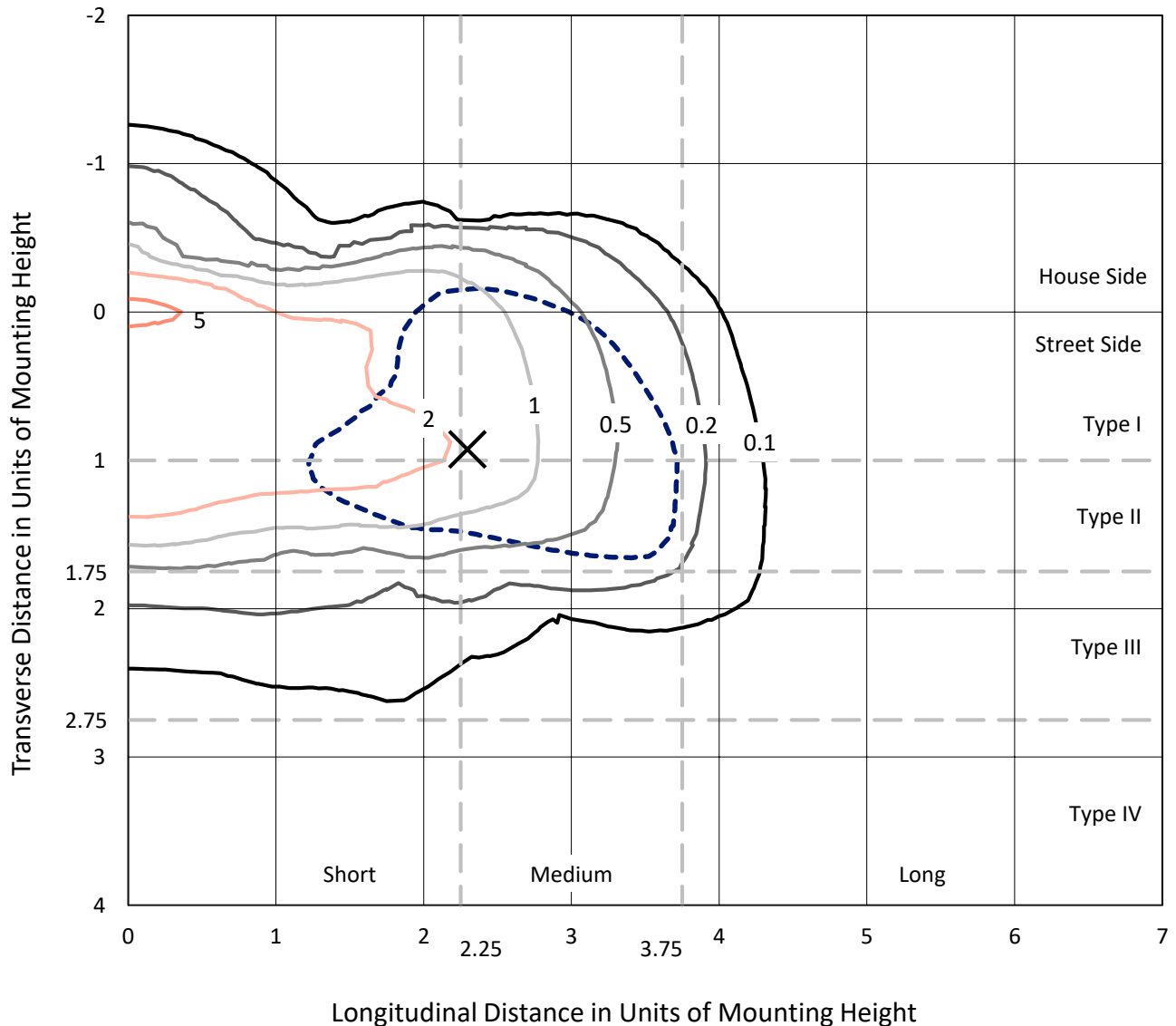
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

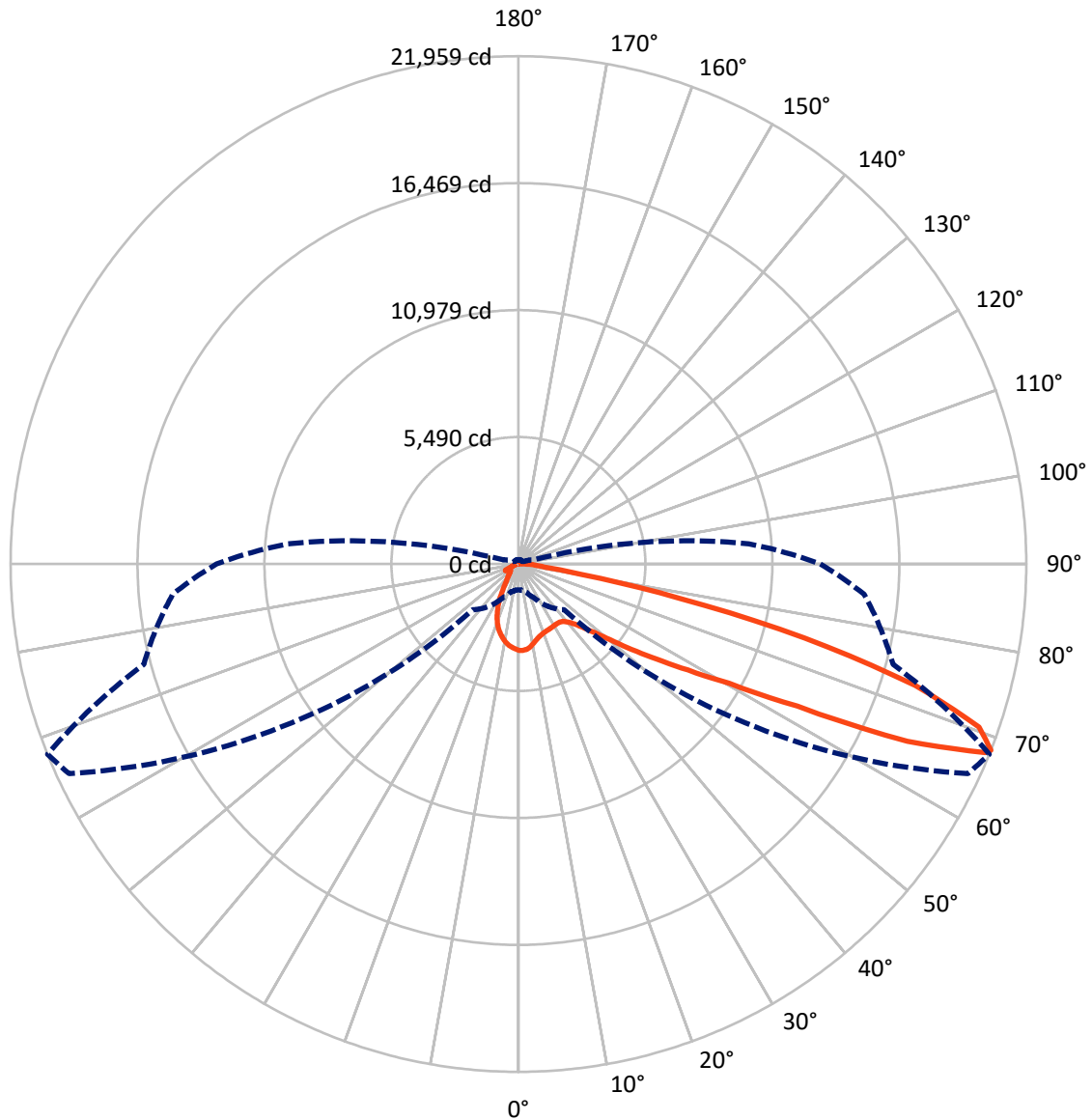
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6 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	2809.8	0.0	2809.8
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	14364.7	0.0	14364.7
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	17174.4	0.0	17174.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	320.2	1.9
10°-20°	742.7	4.3
20°-30°	1004.4	5.8
30°-40°	1416.2	8.2
40°-50°	2328.7	13.6
50°-60°	3609.7	21.0
60°-70°	4680.3	27.3
70°-80°	2685.8	15.6
80°-90°	386.4	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°	17174.4	100.0
0°-180°	17174.4	100.0



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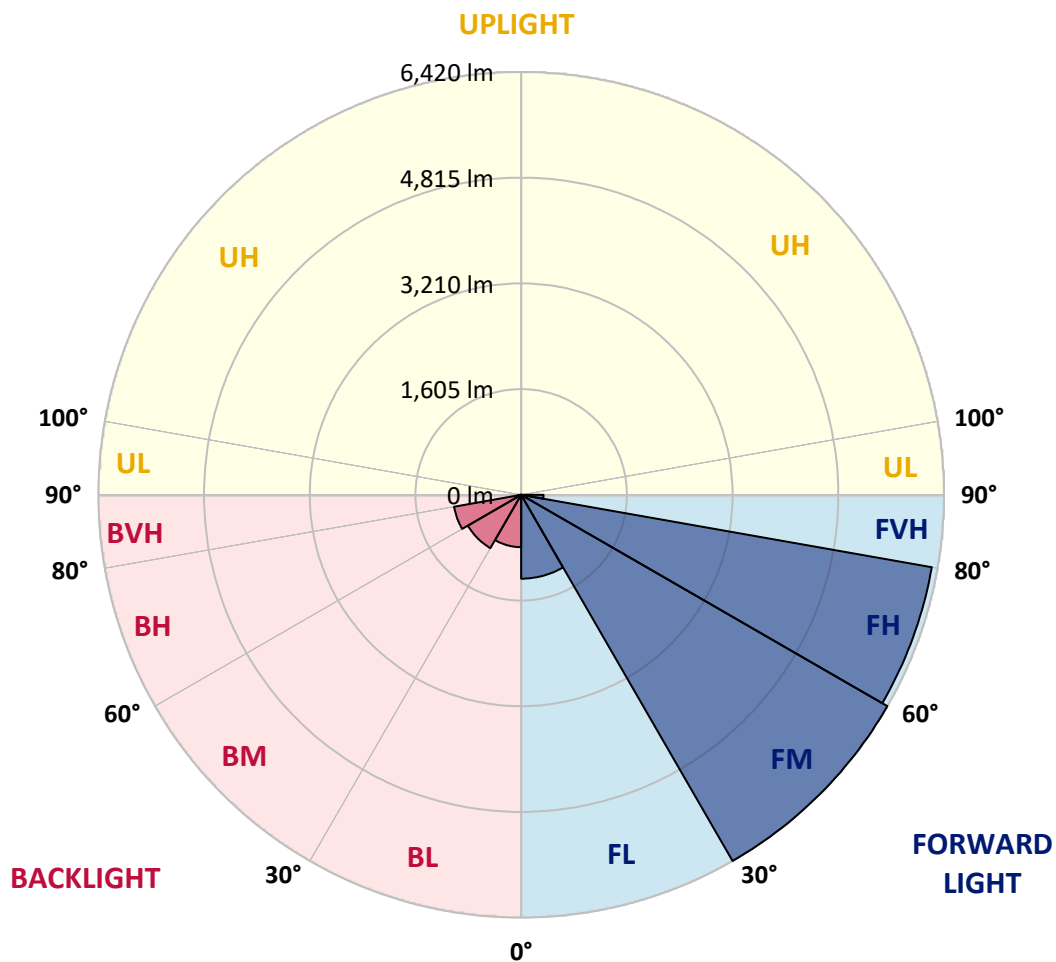
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1272.9	7.4			
FM	(30°-60°)	6420.1	37.4			
FH	(60°-80°)	6331.3	36.9			G3/7500
FVH	(80°-90°)	340.4	2.0			G3/500
BL	(0°-30°)	794.4	4.6	B2/1000		
BM	(30°-60°)	934.6	5.4	B1/1000		
BH	(60°-80°)	1034.8	6.0	B3/2500		G3/2500
BVH	(80°-90°)	46.1	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0
2.5°	3637.1	3666.3	3666.3	3687.6	3706.7	3722.5	3735.9	3735.9	3735.9	3727.0	3719.0
5°	3254.7	3293.8	3299.5	3353.2	3423.9	3510.4	3606.8	3692.1	3709.0	3740.4	3752.7
7.5°	2988.7	3001.1	3022.3	3059.4	3131.2	3237.8	3389.2	3580.0	3626.0	3724.6	3776.3
10°	2800.2	2810.3	2828.2	2865.4	2930.4	3026.8	3176.0	3423.9	3500.3	3675.3	3777.4
12.5°	2662.2	2670.1	2686.9	2720.5	2786.7	2873.2	3025.7	3283.8	3378.0	3626.0	3793.2
15°	2554.6	2568.0	2581.5	2614.0	2681.3	2764.4	2919.2	3181.6	3283.8	3586.7	3822.3
17.5°	2511.9	2518.7	2520.8	2537.8	2598.3	2682.5	2837.3	3109.8	3215.3	3555.3	3844.8
20°	2538.8	2540.0	2517.6	2506.3	2541.1	2618.5	2768.8	3056.0	3163.7	3527.2	3853.7
22.5°	2656.6	2656.6	2598.3	2548.9	2525.4	2573.6	2722.8	3019.1	3135.6	3505.9	3853.7
25°	2881.0	2870.9	2780.0	2682.5	2578.1	2557.9	2693.7	2995.5	3114.3	3494.6	3839.2
27.5°	3176.0	3167.1	3051.5	2906.9	2718.4	2591.5	2683.5	2976.3	3093.0	3477.8	3807.6
30°	3535.1	3527.2	3396.0	3206.3	2928.1	2698.1	2707.1	2962.9	3076.2	3449.9	3754.9
32.5°	3892.9	3888.4	3784.0	3590.0	3217.5	2878.8	2768.8	2960.7	3067.2	3416.1	3691.0
35°	4253.0	4253.0	4189.1	4025.3	3606.8	3150.3	2897.9	3002.2	3084.1	3398.2	3636.0
37.5°	4784.9	4763.4	4644.6	4475.3	4097.1	3502.6	3106.5	3089.7	3149.2	3428.4	3618.1
40°	5608.3	5546.6	5249.4	4964.3	4632.3	3953.5	3411.6	3259.1	3294.9	3531.7	3660.7
42.5°	6469.9	6372.3	5978.5	5523.0	5185.3	4510.0	3812.2	3534.0	3532.8	3731.4	3796.4
45°	7209.3	7158.7	6732.4	6154.7	5817.0	5136.1	4318.2	3942.3	3901.9	4041.1	4057.9
47.5°	7639.0	7605.3	7348.3	6823.4	6566.4	5875.3	4959.9	4508.9	4432.5	4515.5	4489.8
50°	7520.0	7552.5	7478.5	7210.3	7371.9	6914.2	5777.7	5285.2	5140.5	5223.4	5160.7
52.5°	6894.0	6981.5	7047.7	7099.3	7835.3	8304.2	6805.3	6254.5	6134.5	6119.9	6059.3
55°	5766.4	5905.6	6114.2	6493.5	7710.8	9420.5	8600.4	7426.9	7251.9	7159.9	7183.5
57.5°	3924.4	4135.3	4585.2	5306.5	7063.4	9896.1	11254.8	8941.4	8645.2	8317.7	8394.0
60°	2161.9	2338.0	2873.2	3600.1	5585.9	9825.4	13607.3	11402.9	10470.6	9602.2	9759.2
62.5°	1398.9	1437.1	1835.4	2459.2	3428.4	8674.4	14914.4	15516.9	13541.1	11296.4	11517.3
65°	1124.2	1151.0	1346.3	1983.5	2388.5	5580.3	14972.7	19784.4	18482.0	13598.4	13605.2
67.5°	1098.3	1110.6	1224.0	1668.3	2240.4	3038.1	12942.1	21467.4	21769.2	16315.5	15001.9
68°	1114.0	1128.6	1243.1	1616.6	2239.3	2800.2	11961.6	21441.6	21958.7	16769.9	15001.9
70°	982.8	1000.7	1267.7	1672.8	2143.8	2407.5	8190.9	20302.8	21135.2	17814.5	14234.6
72.5°	513.8	499.2	627.1	1320.5	2413.2	2508.6	4327.1	16961.9	17933.4	16498.4	12298.1
75°	400.6	364.6	351.2	521.7	2122.6	2601.7	2513.1	12055.7	12789.6	11893.1	8220.1
77.5°	377.0	333.2	307.3	308.5	934.5	2707.1	2032.9	7094.9	7094.9	5673.4	2623.0
80°	302.8	262.6	245.8	280.5	451.0	2495.1	2121.5	3233.3	2757.6	1466.3	722.5
82.5°	199.7	178.4	179.5	227.7	342.2	1665.9	2456.9	1596.5	1199.3	649.5	425.2
85°	126.7	108.8	121.2	159.3	255.7	742.8	2432.2	1109.5	794.4	364.6	212.1
87.5°	63.9	49.3	60.5	83.0	155.9	213.2	2002.6	990.7	589.0	151.5	115.6
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°	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0	3737.0
2.5°	3719.0	3694.4	3682.0	3661.9	3637.1	3612.4	3595.6	3587.7	3583.2	3585.6	3584.5
5°	3746.0	3713.5	3660.7	3585.6	3508.1	3426.3	3363.4	3315.2	3284.9	3275.9	3273.6
7.5°	3766.1	3719.0	3620.3	3483.5	3351.1	3207.6	3085.2	2987.5	2921.4	2891.1	2890.0
10°	3762.8	3702.2	3546.3	3344.3	3150.3	2939.4	2747.6	2583.8	2464.8	2407.5	2405.4
12.5°	3766.1	3683.1	3455.5	3181.6	2903.4	2601.7	2316.8	2062.0	1884.7	1800.6	1797.4
15°	3779.6	3662.9	3362.4	2999.9	2615.1	2188.8	1781.6	1461.8	1300.3	1245.3	1245.3
17.5°	3778.5	3629.3	3254.7	2789.1	2272.9	1701.9	1216.2	1018.7	1003.0	1053.5	1061.4
20°	3756.2	3575.5	3115.5	2538.8	1871.3	1178.1	824.6	796.5	922.1	1061.4	1077.0
22.5°	3721.3	3505.9	2955.0	2248.2	1403.4	767.3	636.1	678.7	849.3	1022.0	1046.7
25°	3673.1	3421.8	2771.1	1910.6	933.4	552.0	530.7	583.3	703.4	819.0	836.9
27.5°	3602.4	3315.2	2570.3	1544.8	595.7	454.4	462.1	499.2	550.8	600.2	610.3
30°	3513.8	3190.7	2351.5	1139.8	452.2	406.1	419.5	442.1	464.5	495.9	502.6
32.5°	3423.9	3063.8	2123.8	783.1	394.9	380.3	393.8	406.1	425.2	446.6	451.0
35°	3343.3	2946.0	1889.3	546.4	370.2	363.5	370.2	378.0	397.1	418.5	420.7
37.5°	3284.9	2849.6	1644.7	431.9	355.6	348.9	352.3	355.6	378.0	409.5	412.9
40°	3277.0	2785.7	1396.8	388.2	344.3	335.4	333.2	335.4	364.6	400.6	403.9
42.5°	3353.2	2789.1	1154.5	370.2	335.4	325.4	316.5	320.9	346.7	374.8	377.0
45°	3534.0	2867.5	944.6	362.4	327.6	319.7	306.3	308.5	320.9	335.4	337.7
47.5°	3852.6	3039.1	784.2	358.0	320.9	314.1	297.3	290.5	291.7	299.6	299.6
50°	4361.8	3326.4	686.5	353.4	315.2	302.8	283.8	270.4	267.0	271.5	272.6
52.5°	5121.4	3818.9	639.5	344.3	305.2	288.3	267.0	253.6	247.9	252.4	252.4
55°	6147.9	4605.4	617.0	332.0	292.9	270.4	251.3	240.1	235.6	239.0	239.0
57.5°	7318.0	5627.4	655.2	315.2	277.1	251.3	237.8	230.0	226.6	230.0	231.1
60°	8708.1	6964.7	917.7	293.9	260.2	234.5	226.6	222.2	219.9	223.2	223.2
62.5°	10555.9	8744.0	1420.3	277.1	242.3	218.7	216.6	214.2	212.1	215.3	215.3
65°	12550.6	10362.9	1461.8	267.0	226.6	205.3	206.4	206.4	204.2	207.6	207.6
67.5°	13185.5	10222.7	816.7	254.7	207.6	191.9	196.3	196.3	195.2	198.6	197.4
68°	13050.9	10000.5	711.3	251.3	204.2	188.5	193.0	194.1	193.0	196.3	195.2
70°	12047.9	8779.8	467.8	232.2	189.6	177.2	184.0	185.0	184.0	188.5	187.4
72.5°	9945.6	6585.5	345.6	203.1	171.6	162.7	169.4	170.6	171.6	176.1	175.1
75°	6316.3	3637.1	272.6	172.7	153.7	145.9	152.5	155.9	158.2	164.9	161.6
77.5°	1729.9	1103.9	221.0	147.0	132.4	129.0	133.6	138.0	140.3	148.0	142.5
80°	605.9	488.1	184.0	124.5	110.0	108.8	113.3	117.8	120.0	126.7	120.0
82.5°	367.9	318.6	147.0	97.6	86.5	85.2	90.9	95.4	97.6	97.6	93.1
85°	191.9	168.3	107.7	68.4	59.4	56.0	66.2	71.8	72.8	71.8	68.4
87.5°	107.7	95.4	57.3	32.6	26.9	28.1	34.8	42.6	46.0	44.9	42.6
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)