

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: P270440

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270440
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13359.9 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - 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

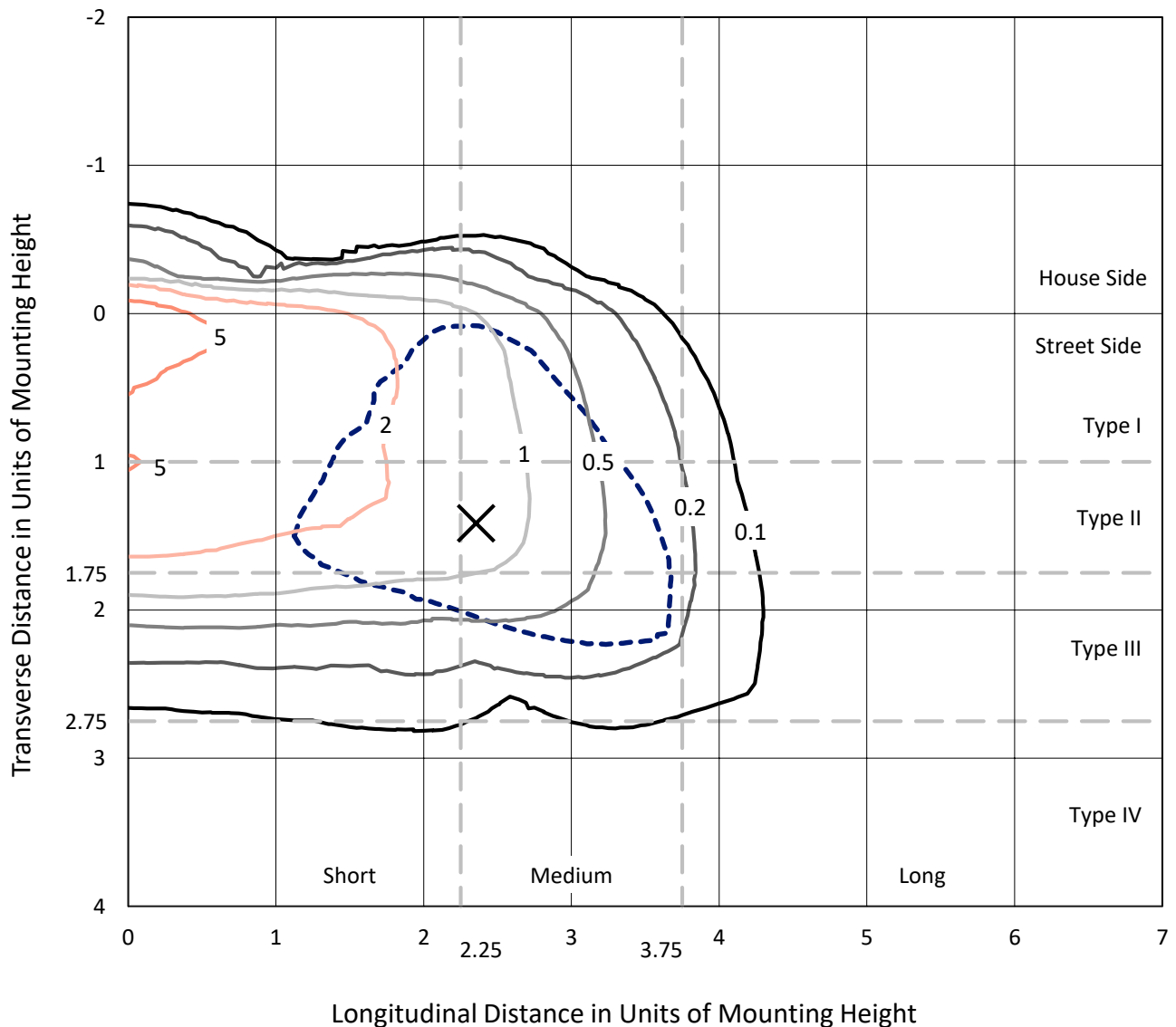


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

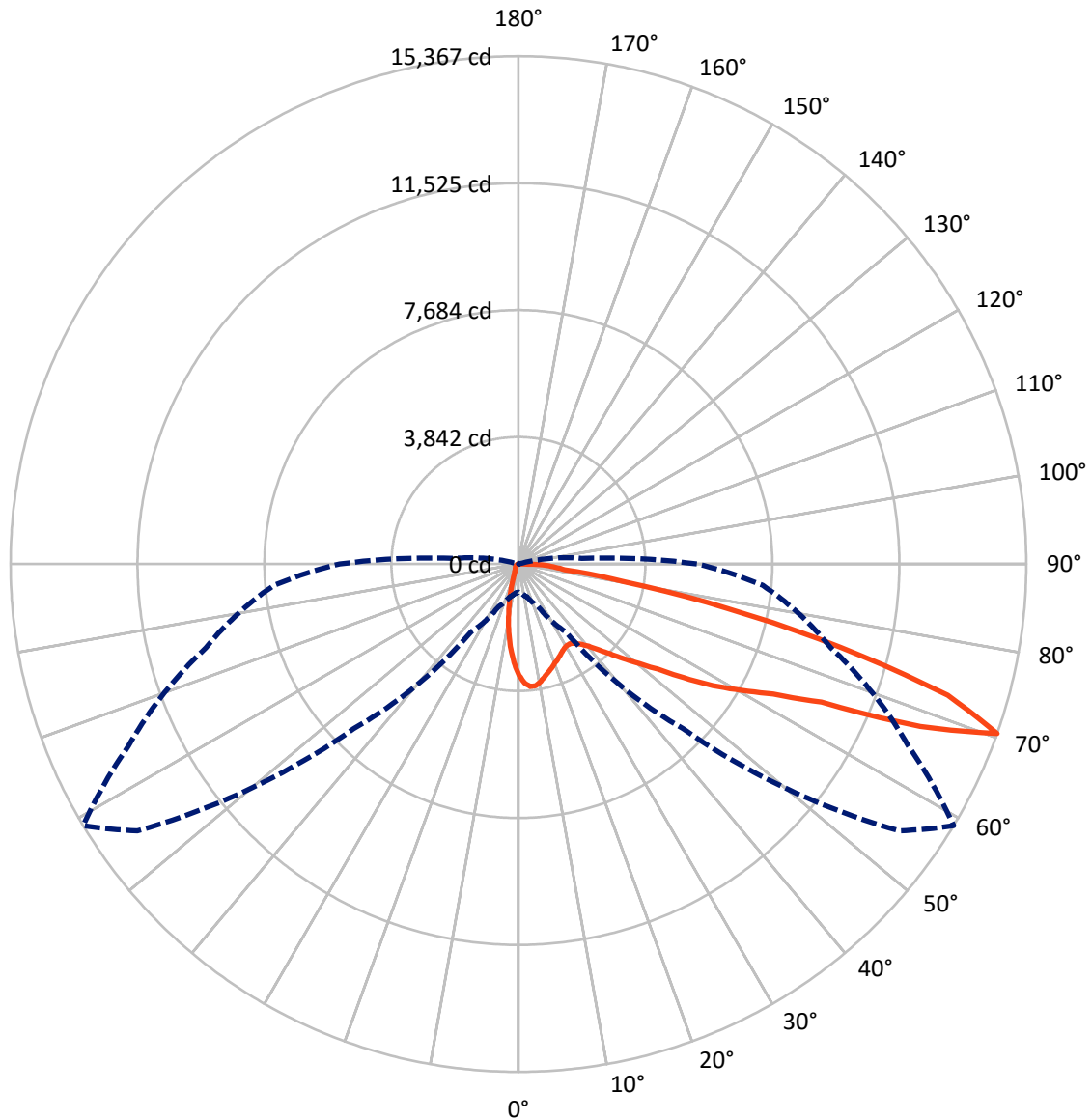


Based on 20 foot mounting height. Maximum calculated value = 9 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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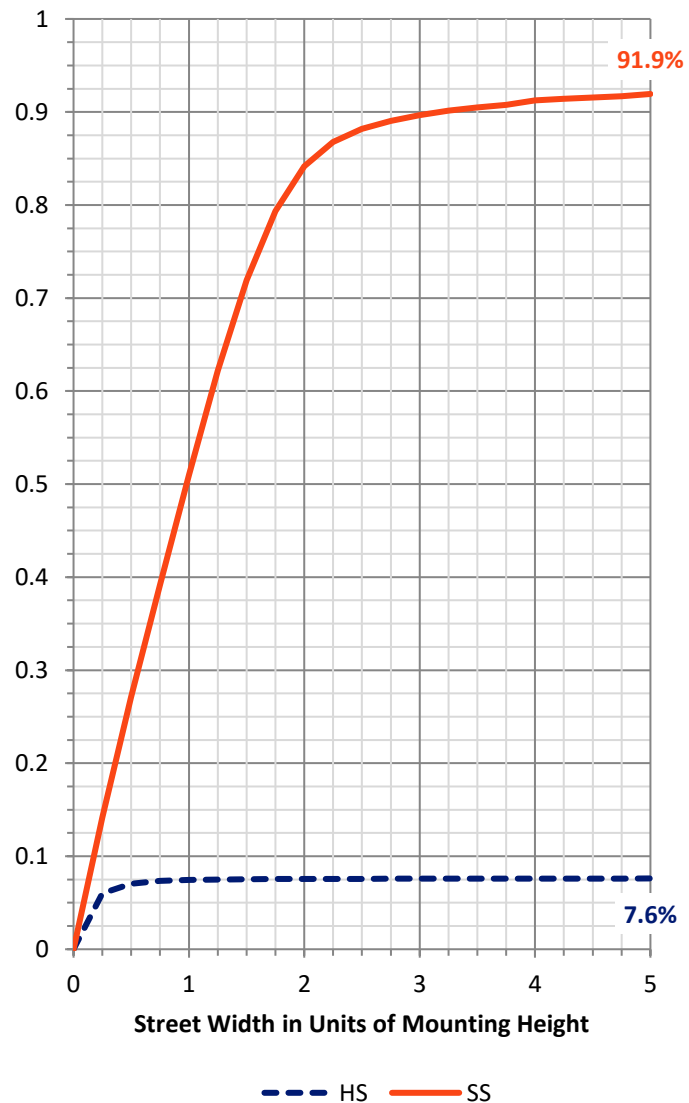
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1027.0	0.0	1027.0
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	12332.9	0.0	12332.9
	% Fixture	92.3	0.0	92.3
Total	Lumens	13359.9	0.0	13359.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	277.8	2.1
10°-20°	582.7	4.4
20°-30°	788.7	5.9
30°-40°	1138.3	8.5
40°-50°	1890.4	14.1
50°-60°	2891.5	21.6
60°-70°	3596.4	26.9
70°-80°	1988.1	14.9
80°-90°	206.2	1.5
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°	13359.9	100.0
0°-180°	13359.9	100.0

Coefficient of Utilization



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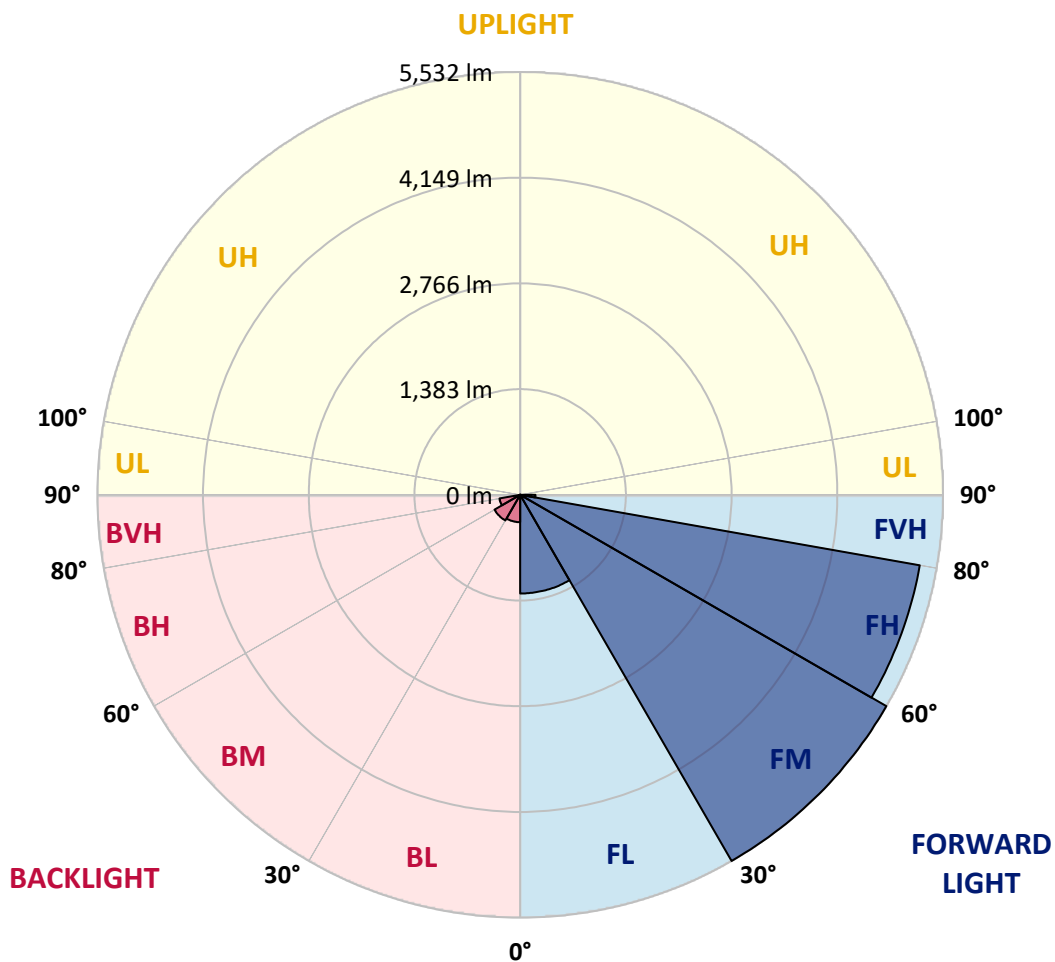
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1291.3	9.7			
FM	(30°-60°)	5532.5	41.4			
FH	(60°-80°)	5309.0	39.7			G3/7500
FVH	(80°-90°)	200.2	1.5			G2/225
BL	(0°-30°)	357.9	2.7	B1/500		
BM	(30°-60°)	387.7	2.9	B1/1000		
BH	(60°-80°)	275.5	2.1	B1/500		G1/500
BVH	(80°-90°)	6.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3
2.5°	3818.6	3812.6	3787.4	3782.4	3754.1	3697.8	3632.1	3606.1	3552.5	3467.9	3374.3
5°	3882.1	3885.2	3887.1	3876.0	3872.1	3825.7	3753.2	3721.9	3650.4	3511.2	3340.0
7.5°	3644.3	3652.4	3677.7	3688.7	3736.9	3755.2	3740.1	3719.9	3663.5	3499.2	3258.3
10°	3393.3	3408.4	3435.7	3453.9	3513.4	3561.7	3623.1	3628.2	3616.0	3458.8	3166.5
12.5°	3177.7	3191.8	3222.0	3258.3	3318.8	3381.3	3472.9	3505.2	3545.5	3432.7	3101.0
15°	2992.3	2996.2	3025.5	3070.9	3150.4	3236.1	3345.0	3392.4	3471.1	3422.6	3050.7
17.5°	2830.0	2831.0	2850.1	2891.5	2988.2	3101.0	3228.1	3290.5	3390.4	3408.4	3006.4
20°	2723.1	2722.1	2723.1	2745.3	2831.0	2965.0	3119.3	3184.8	3312.7	3391.3	2961.1
22.5°	2686.9	2681.8	2658.7	2650.5	2705.1	2823.0	3007.3	3093.0	3243.2	3386.3	2927.8
25°	2731.2	2728.2	2678.8	2632.5	2637.6	2711.1	2893.5	2998.4	3188.8	3404.4	2919.8
27.5°	2874.3	2868.3	2792.7	2702.0	2644.5	2657.6	2808.8	2918.7	3145.4	3448.9	2930.8
30°	3061.9	3062.9	2982.2	2872.3	2737.2	2662.7	2763.5	2867.3	3116.2	3515.2	2955.0
32.5°	3270.4	3269.4	3212.0	3085.0	2912.7	2755.5	2783.6	2871.3	3120.3	3613.1	3001.2
35°	3486.1	3475.1	3455.9	3344.0	3142.5	2917.7	2875.4	2939.9	3162.6	3742.1	3079.8
37.5°	3735.1	3731.0	3750.2	3632.1	3426.7	3156.6	3036.6	3079.8	3269.4	3932.5	3206.9
40°	4131.0	4108.8	4118.0	3957.8	3747.1	3478.0	3262.4	3273.5	3439.7	4184.6	3407.5
42.5°	4885.9	4796.3	4628.0	4327.7	4099.9	3834.8	3557.6	3538.6	3680.5	4489.9	3671.6
45°	5788.0	5685.2	5260.8	4735.8	4452.5	4217.7	3922.4	3871.1	3976.8	4853.7	4012.2
47.5°	6540.7	6430.0	5867.5	5162.1	4811.4	4612.8	4326.5	4266.1	4331.6	5275.9	4421.4
50°	6797.8	6736.3	6242.5	5516.9	5173.2	5056.3	4833.5	4732.8	4748.9	5731.5	4899.0
52.5°	6679.8	6658.7	6328.2	5759.8	5507.8	5546.0	5388.8	5283.0	5264.8	6229.3	5427.2
55°	6431.0	6420.8	6259.6	5894.8	5803.1	5994.6	6167.9	6076.1	5904.9	6758.5	5863.5
57.5°	6075.1	6113.4	6229.3	6154.7	6165.8	6468.2	6891.5	6938.9	6682.9	7179.8	6187.0
60°	5124.8	5227.5	5758.8	6434.0	6951.1	7256.4	7666.6	7755.2	7342.0	7468.0	6561.0
62.5°	3788.4	3935.6	4692.4	5933.0	7383.3	8755.1	8697.6	8658.3	7970.9	7854.1	7241.2
65°	2225.3	2397.7	3037.6	4636.1	6731.3	9718.6	10622.5	10078.4	8929.3	8656.2	8324.7
67.5°	1108.6	1109.6	1398.9	2447.1	4974.6	9046.3	13432.4	13117.9	10967.1	9838.4	8751.9
70°	852.6	875.8	1035.0	1422.0	2515.6	7045.8	14076.4	15367.3	13015.2	9786.0	7425.7
72.5°	722.5	737.8	921.1	1237.7	1880.6	3868.0	12185.7	13583.5	12419.4	8268.2	5473.6
75°	520.1	532.2	815.3	1122.7	1731.5	1918.9	8359.0	10074.2	9318.4	5816.2	3012.3
77.5°	128.9	128.0	284.3	911.2	1549.0	1598.4	4796.3	6460.3	5346.5	2381.4	774.0
80°	57.4	55.4	64.5	191.5	1441.2	1508.8	2109.4	3262.4	2050.9	386.0	236.9
82.5°	40.3	38.3	40.3	70.5	481.8	1399.9	1275.0	1414.0	750.9	132.1	100.8
85°	13.0	12.0	22.2	59.5	135.0	807.2	1243.7	1056.1	558.3	56.5	67.6
87.5°	2.1	2.1	8.1	32.2	39.3	269.1	729.7	731.7	250.9	33.2	30.3
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°	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3	3378.3
2.5°	3326.9	3267.3	3183.8	3100.1	3024.6	2946.9	2884.4	2855.3	2842.1	2823.9	2784.7
5°	3250.2	3142.5	2958.9	2778.5	2610.3	2449.0	2311.0	2232.4	2147.7	2143.6	2102.4
7.5°	3127.3	2974.1	2684.9	2404.8	2147.7	1901.8	1690.2	1553.1	1459.3	1400.8	1360.6
10°	2990.2	2793.6	2410.7	2016.7	1667.0	1338.5	1066.3	889.0	781.0	726.6	695.4
12.5°	2881.5	2634.5	2140.7	1644.7	1206.3	829.5	576.5	447.4	390.0	367.9	357.7
15°	2787.7	2488.3	1887.7	1312.2	805.2	476.7	333.6	291.3	282.2	282.2	281.2
17.5°	2692.8	2347.2	1641.7	985.7	507.0	312.4	263.1	256.9	258.1	261.0	261.0
20°	2603.2	2213.2	1404.9	702.5	332.6	250.0	238.9	236.9	239.8	243.9	242.9
22.5°	2530.6	2095.2	1183.2	482.7	255.9	226.7	219.7	216.8	218.6	221.7	220.8
25°	2479.2	1994.4	979.6	336.7	222.7	206.6	198.5	194.6	192.4	194.6	193.6
27.5°	2448.1	1909.8	788.2	253.0	199.6	186.5	176.3	168.3	163.2	163.2	161.2
30°	2427.8	1830.2	617.9	209.7	180.4	166.2	152.3	141.2	132.9	131.1	130.1
32.5°	2426.9	1761.7	461.5	185.4	162.2	146.2	128.9	115.0	105.8	103.8	102.8
35°	2452.1	1706.2	339.6	167.4	146.2	127.0	107.8	92.7	84.7	84.7	83.6
37.5°	2517.6	1674.0	256.9	153.3	132.9	110.9	90.6	76.5	69.6	71.5	71.5
40°	2639.5	1668.0	209.7	142.1	121.9	96.7	73.7	62.5	59.5	62.5	62.5
42.5°	2826.0	1700.2	186.5	134.0	111.8	82.6	61.4	53.4	52.5	55.4	55.4
45°	3068.8	1763.7	173.4	127.0	100.8	68.5	51.5	46.4	45.4	49.3	49.3
47.5°	3363.2	1849.4	161.2	118.9	89.7	56.5	43.4	39.3	39.3	43.4	44.3
50°	3711.8	1965.2	149.2	110.9	80.6	47.4	36.3	33.2	34.2	38.3	39.3
52.5°	4113.0	2107.3	138.1	103.8	70.5	38.3	30.3	28.2	29.3	33.2	34.2
55°	4458.6	2231.3	125.0	96.7	57.4	31.3	25.2	24.2	25.2	30.3	30.3
57.5°	4759.9	2350.2	112.8	85.7	45.4	25.2	20.1	20.1	22.2	27.2	28.2
60°	5160.0	2537.7	102.8	72.6	34.2	19.1	16.1	17.2	20.1	24.2	25.2
62.5°	5868.5	2856.3	89.7	60.5	25.2	15.1	13.0	14.2	18.1	23.1	24.2
65°	6755.4	3157.5	74.6	50.3	19.1	11.0	10.2	13.0	18.1	23.1	24.2
67.5°	6664.7	2746.4	58.5	40.3	14.2	9.1	8.1	12.0	17.2	23.1	24.2
70°	5405.0	1925.0	43.4	27.2	11.0	8.1	8.1	12.0	17.2	22.2	23.1
72.5°	3749.2	1071.3	33.2	18.1	10.2	8.1	7.0	11.0	16.1	22.2	23.1
75°	1783.9	328.6	26.2	13.0	9.1	7.0	6.1	11.0	16.1	22.2	23.1
77.5°	342.7	83.6	21.2	11.0	8.1	7.0	6.1	10.2	16.1	21.2	22.2
80°	115.9	37.3	17.2	10.2	8.1	7.0	6.1	10.2	15.1	20.1	21.2
82.5°	63.5	21.2	15.1	9.1	8.1	6.1	5.0	9.1	14.2	20.1	21.2
85°	49.3	15.1	12.0	9.1	8.1	6.1	5.0	9.1	14.2	19.1	20.1
87.5°	25.2	11.0	10.2	9.1	8.1	6.1	5.0	8.1	13.0	18.1	20.1
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)