

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: P195153

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7060-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195153  
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-SL3-7060-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 800mA 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: 12424 lumens  
Efficiency: N/A  
Efficacy: 100.2 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 - G2

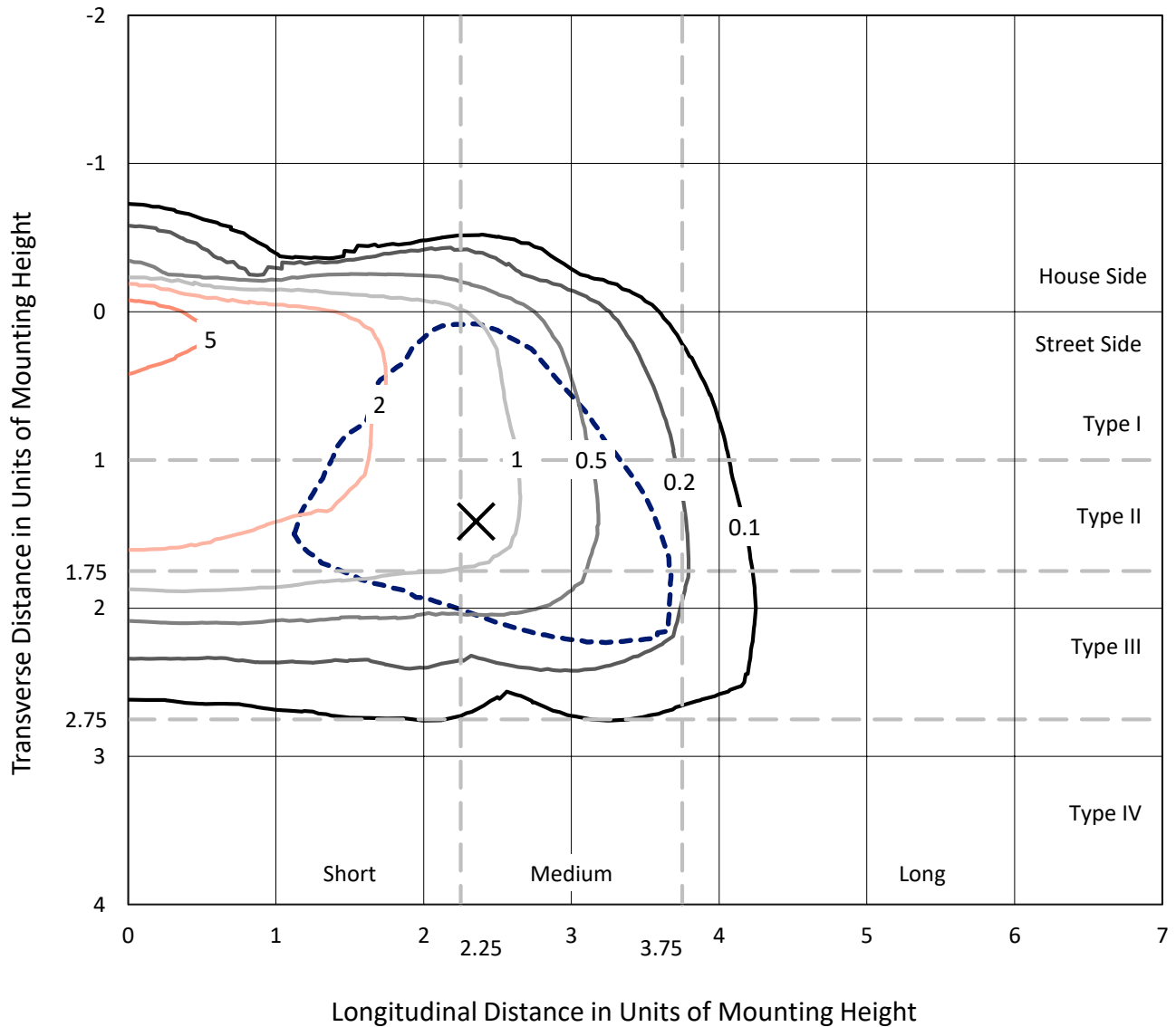
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

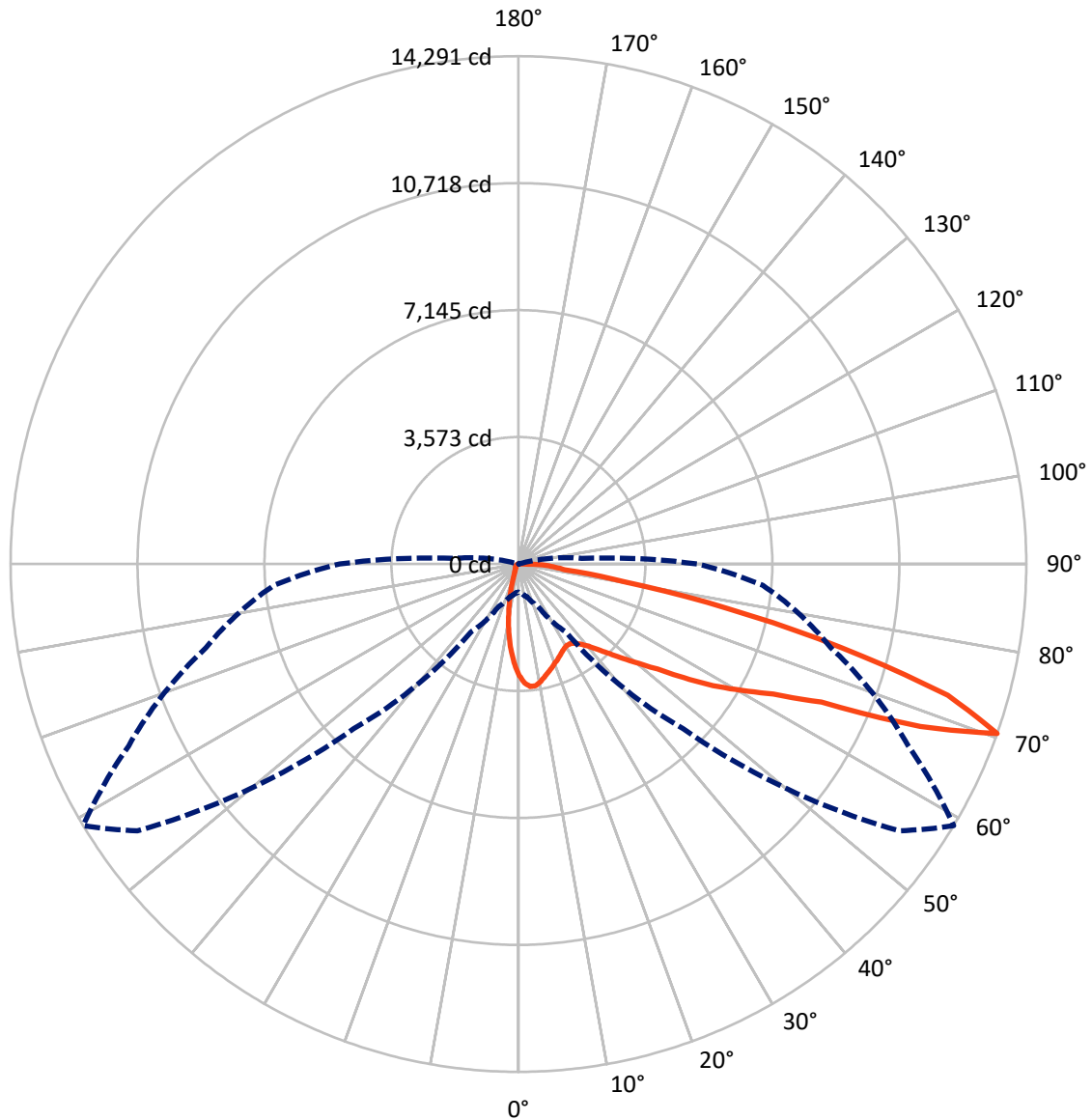
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.4 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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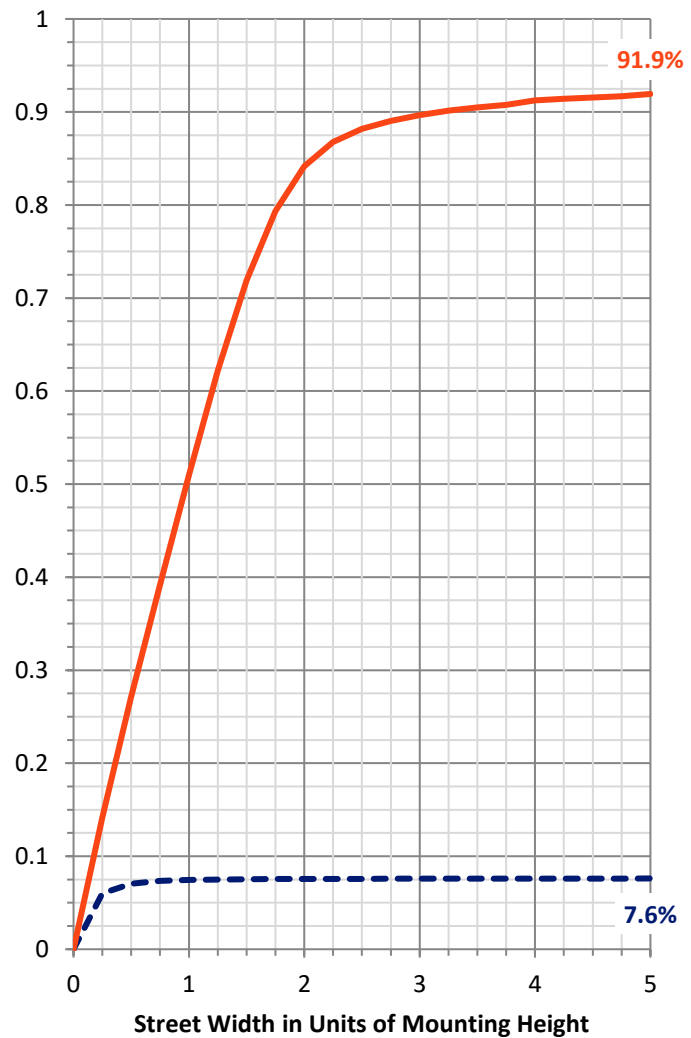
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	955.1	0.0	955.1
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	11468.9	0.0	11468.9
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	12424.0	0.0	12424.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	258.3	2.1
10°-20°	541.8	4.4
20°-30°	733.5	5.9
30°-40°	1058.5	8.5
40°-50°	1757.9	14.1
50°-60°	2689.0	21.6
60°-70°	3344.4	26.9
70°-80°	1848.8	14.9
80°-90°	191.7	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°	12424.0	100.0
0°-180°	12424.0	100.0



--- HS    — SS

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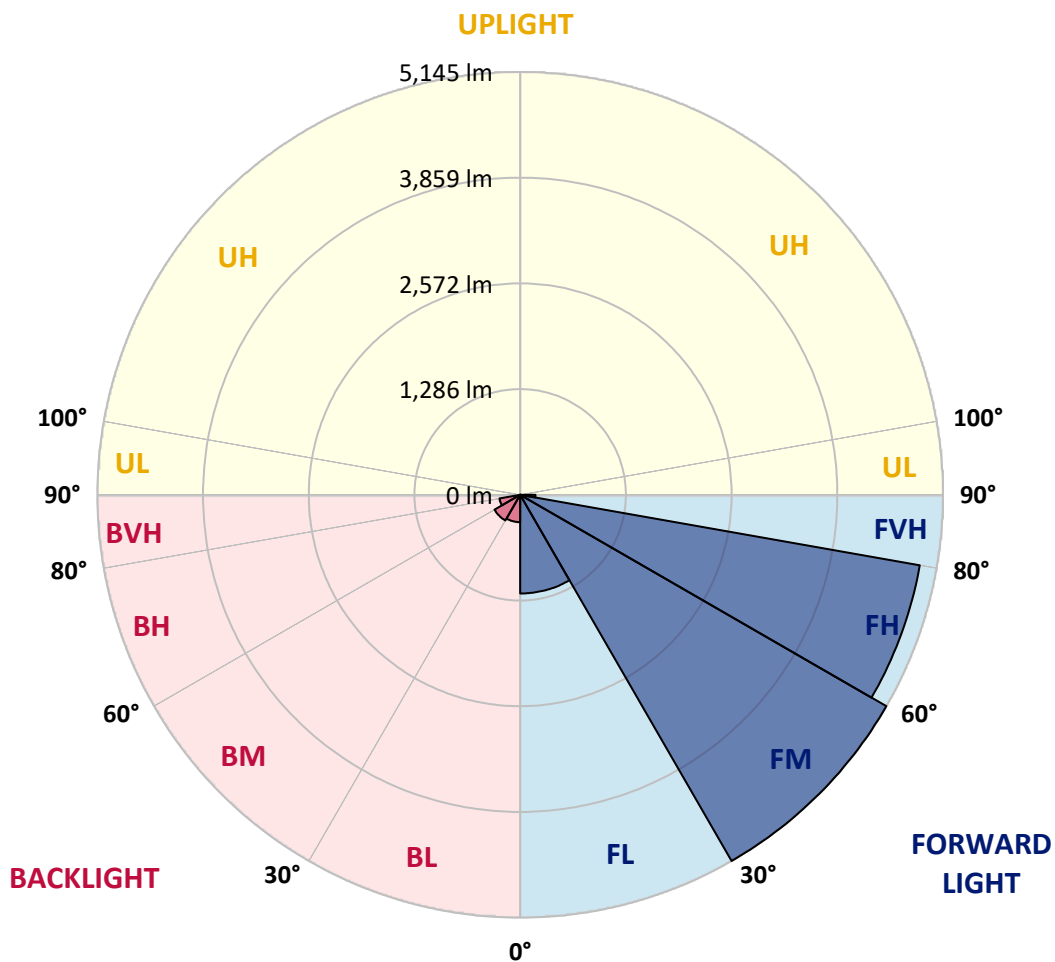
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1200.8	9.7			
FM	(30°-60°)	5144.9	41.4			
FH	(60°-80°)	4937.0	39.7			G2/5000
FVH	(80°-90°)	186.2	1.5			G2/225
BL	(0°-30°)	332.8	2.7	B1/500		
BM	(30°-60°)	360.5	2.9	B1/1000		
BH	(60°-80°)	256.2	2.1	B1/500		G1/500
BVH	(80°-90°)	5.5	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-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6
2.5°	3551.2	3545.5	3522.1	3517.4	3491.2	3438.7	3377.8	3353.4	3303.7	3225.0	3137.8
5°	3610.2	3613.0	3614.9	3604.6	3600.8	3557.7	3490.2	3461.2	3394.6	3265.3	3106.0
7.5°	3389.0	3396.5	3419.9	3430.2	3475.2	3492.1	3478.0	3459.3	3406.8	3254.0	3030.1
10°	3155.6	3169.7	3195.0	3211.9	3267.2	3312.2	3369.3	3374.0	3362.8	3216.6	2944.8
12.5°	2955.1	2968.2	2996.3	3030.1	3086.3	3144.4	3229.7	3259.7	3297.2	3192.2	2883.8
15°	2782.6	2786.4	2813.6	2855.7	2929.8	3009.4	3110.7	3154.7	3227.8	3182.8	2837.0
17.5°	2631.7	2632.7	2650.5	2688.9	2778.9	2883.8	3001.9	3060.0	3152.8	3169.7	2795.7
20°	2532.4	2531.4	2532.4	2553.0	2632.7	2757.3	2900.7	2961.6	3080.7	3153.8	2753.6
22.5°	2498.6	2494.0	2472.4	2464.9	2515.5	2625.2	2796.7	2876.3	3016.0	3149.1	2722.6
25°	2539.9	2537.1	2491.1	2448.0	2452.7	2521.1	2690.8	2788.2	2965.4	3166.0	2715.1
27.5°	2673.0	2667.3	2597.1	2512.7	2459.3	2471.5	2612.0	2714.2	2925.1	3207.2	2725.5
30°	2847.3	2848.2	2773.3	2671.1	2545.5	2476.2	2569.9	2666.4	2897.9	3269.0	2747.9
32.5°	3041.3	3040.4	2986.9	2868.8	2708.6	2562.4	2588.6	2670.2	2901.7	3360.0	2791.1
35°	3241.9	3231.6	3213.7	3109.7	2922.3	2713.3	2673.9	2733.9	2941.0	3479.9	2864.2
37.5°	3473.4	3469.6	3487.4	3377.8	3186.6	2935.4	2823.9	2864.2	3040.4	3657.1	2982.3
40°	3841.7	3821.1	3829.5	3680.5	3484.6	3234.4	3033.8	3044.1	3198.8	3891.4	3168.8
42.5°	4543.7	4460.3	4303.7	4024.4	3812.6	3566.1	3308.4	3290.6	3422.8	4175.3	3414.3
45°	5382.5	5286.9	4892.3	4404.0	4140.7	3922.3	3647.7	3599.9	3698.3	4513.7	3731.1
47.5°	6082.6	5979.5	5456.5	4800.5	4474.3	4289.7	4023.5	3967.3	4028.2	4906.4	4111.6
50°	6321.6	6264.4	5805.2	5130.4	4810.8	4702.1	4494.9	4401.2	4416.2	5330.0	4555.9
52.5°	6211.9	6192.3	5884.8	5356.2	5121.9	5157.6	5011.3	4912.9	4896.1	5793.0	5047.0
55°	5980.4	5971.1	5821.1	5481.8	5396.5	5574.6	5735.8	5650.5	5491.2	6285.0	5452.8
57.5°	5649.6	5685.2	5793.0	5723.6	5734.0	6015.1	6408.8	6452.8	6214.7	6676.8	5753.6
60°	4765.8	4861.4	5355.3	5983.3	6464.0	6748.0	7129.5	7212.0	6827.7	6944.8	6101.3
62.5°	3523.0	3659.9	4363.7	5517.5	6866.1	8141.7	8088.3	8051.7	7412.5	7303.8	6734.0
65°	2069.4	2229.7	2824.8	4311.2	6259.7	9037.7	9878.4	9372.3	8303.8	8049.8	7741.5
67.5°	1030.9	1031.9	1300.9	2275.6	4626.1	8412.5	12491.4	12198.9	10198.9	9149.2	8138.9
70°	792.9	814.4	962.5	1322.4	2339.3	6552.1	13090.2	14290.8	12103.3	9100.5	6905.5
72.5°	672.0	686.0	856.6	1150.9	1748.9	3597.1	11332.0	12631.9	11549.4	7689.0	5090.1
75°	483.6	494.9	758.2	1044.1	1610.2	1784.5	7773.4	9368.5	8665.6	5408.7	2801.4
77.5°	120.0	119.0	264.3	847.3	1440.5	1486.4	4460.3	6007.6	4972.0	2214.7	719.8
80°	53.4	51.5	60.0	178.1	1340.2	1403.0	1961.6	3033.8	1907.3	359.0	220.2
82.5°	37.5	35.6	37.5	65.6	448.0	1301.8	1185.6	1314.9	698.2	122.8	93.7
85°	12.2	11.2	20.6	55.3	125.6	750.7	1156.5	982.2	519.2	52.5	62.8
87.5°	1.9	1.9	7.5	30.0	36.6	250.2	678.6	680.4	233.4	30.9	28.1
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°	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6	3141.6
2.5°	3093.8	3038.5	2960.7	2882.9	2812.6	2740.4	2682.3	2655.2	2643.0	2626.1	2589.6
5°	3022.6	2922.3	2751.7	2583.9	2427.4	2277.5	2149.1	2076.0	1997.2	1993.5	1955.1
7.5°	2908.2	2765.8	2496.8	2236.2	1997.2	1768.5	1571.7	1444.3	1357.1	1302.7	1265.3
10°	2780.8	2598.0	2241.8	1875.4	1550.2	1244.6	991.6	826.6	726.4	675.7	646.7
12.5°	2679.5	2449.9	1990.7	1529.6	1121.9	771.3	536.1	416.1	362.7	342.1	332.7
15°	2592.4	2314.0	1755.4	1220.3	748.8	443.3	310.2	270.9	262.4	262.4	261.5
17.5°	2504.3	2182.8	1526.7	916.6	471.4	290.5	244.6	239.0	239.9	242.7	242.7
20°	2420.9	2058.1	1306.5	653.2	309.3	232.4	222.1	220.2	223.1	226.8	225.9
22.5°	2353.4	1948.5	1100.3	448.9	238.1	210.9	204.3	201.5	203.4	206.2	205.3
25°	2305.6	1854.8	911.0	313.0	207.1	192.1	184.6	180.9	179.0	180.9	179.9
27.5°	2276.5	1776.0	732.9	235.2	185.6	173.4	164.0	156.5	151.8	151.8	150.0
30°	2257.8	1702.0	574.5	194.9	167.8	154.6	141.5	131.2	123.7	121.8	120.9
32.5°	2256.8	1638.3	429.2	172.4	150.9	135.9	120.0	106.8	98.4	96.5	95.6
35°	2280.3	1586.7	315.8	155.6	135.9	118.1	100.3	86.2	78.7	78.7	77.8
37.5°	2341.2	1556.7	239.0	142.5	123.7	103.1	84.4	71.2	64.7	66.5	66.5
40°	2454.6	1551.1	194.9	132.1	113.4	90.0	68.4	58.1	55.3	58.1	58.1
42.5°	2628.0	1581.1	173.4	124.7	104.0	76.9	57.2	49.7	48.7	51.5	51.5
45°	2853.9	1640.1	161.2	118.1	93.7	63.7	47.8	43.1	42.2	45.9	45.9
47.5°	3127.5	1719.8	150.0	110.6	83.4	52.5	40.3	36.6	36.6	40.3	41.2
50°	3451.8	1827.6	138.7	103.1	75.0	44.0	33.7	30.9	31.9	35.6	36.6
52.5°	3824.8	1959.7	128.4	96.5	65.6	35.6	28.1	26.2	27.2	30.9	31.9
55°	4146.3	2075.0	116.2	90.0	53.4	29.1	23.4	22.5	23.4	28.1	28.1
57.5°	4426.5	2185.6	105.0	79.7	42.2	23.4	18.7	18.7	20.6	25.3	26.2
60°	4798.6	2359.9	95.6	67.5	31.9	17.8	15.0	15.9	18.7	22.5	23.4
62.5°	5457.5	2656.1	83.4	56.2	23.4	14.1	12.2	13.1	16.9	21.6	22.5
65°	6282.2	2936.3	69.4	46.9	17.8	10.3	9.4	12.2	16.9	21.6	22.5
67.5°	6197.9	2553.9	54.4	37.5	13.1	8.4	7.5	11.2	15.9	21.6	22.5
70°	5026.3	1790.1	40.3	25.3	10.3	7.5	7.5	11.2	15.9	20.6	21.6
72.5°	3486.5	996.3	30.9	16.9	9.4	7.5	6.6	10.3	15.0	20.6	21.6
75°	1658.9	305.5	24.4	12.2	8.4	6.6	5.6	10.3	15.0	20.6	21.6
77.5°	318.7	77.8	19.7	10.3	7.5	6.6	5.6	9.4	15.0	19.7	20.6
80°	107.8	34.7	15.9	9.4	7.5	6.6	5.6	9.4	14.1	18.7	19.7
82.5°	59.0	19.7	14.1	8.4	7.5	5.6	4.7	8.4	13.1	18.7	19.7
85°	45.9	14.1	11.2	8.4	7.5	5.6	4.7	8.4	13.1	17.8	18.7
87.5°	23.4	10.3	9.4	8.4	7.5	5.6	4.7	7.5	12.2	16.9	18.7
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)