

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: P196588

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196588  
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-04-D-UNV-SL3-7030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 615mA 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: 13197.4 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - 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

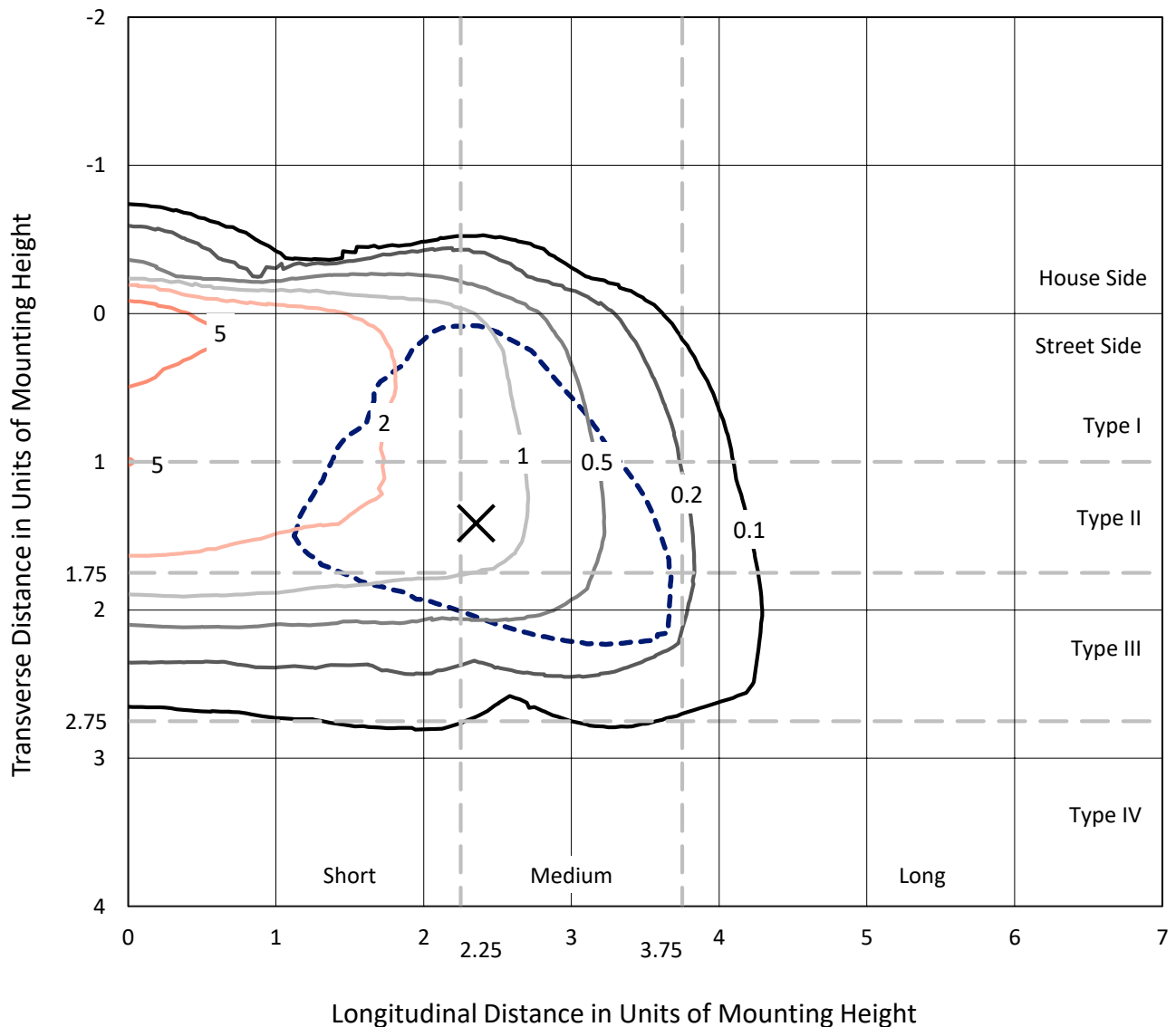


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

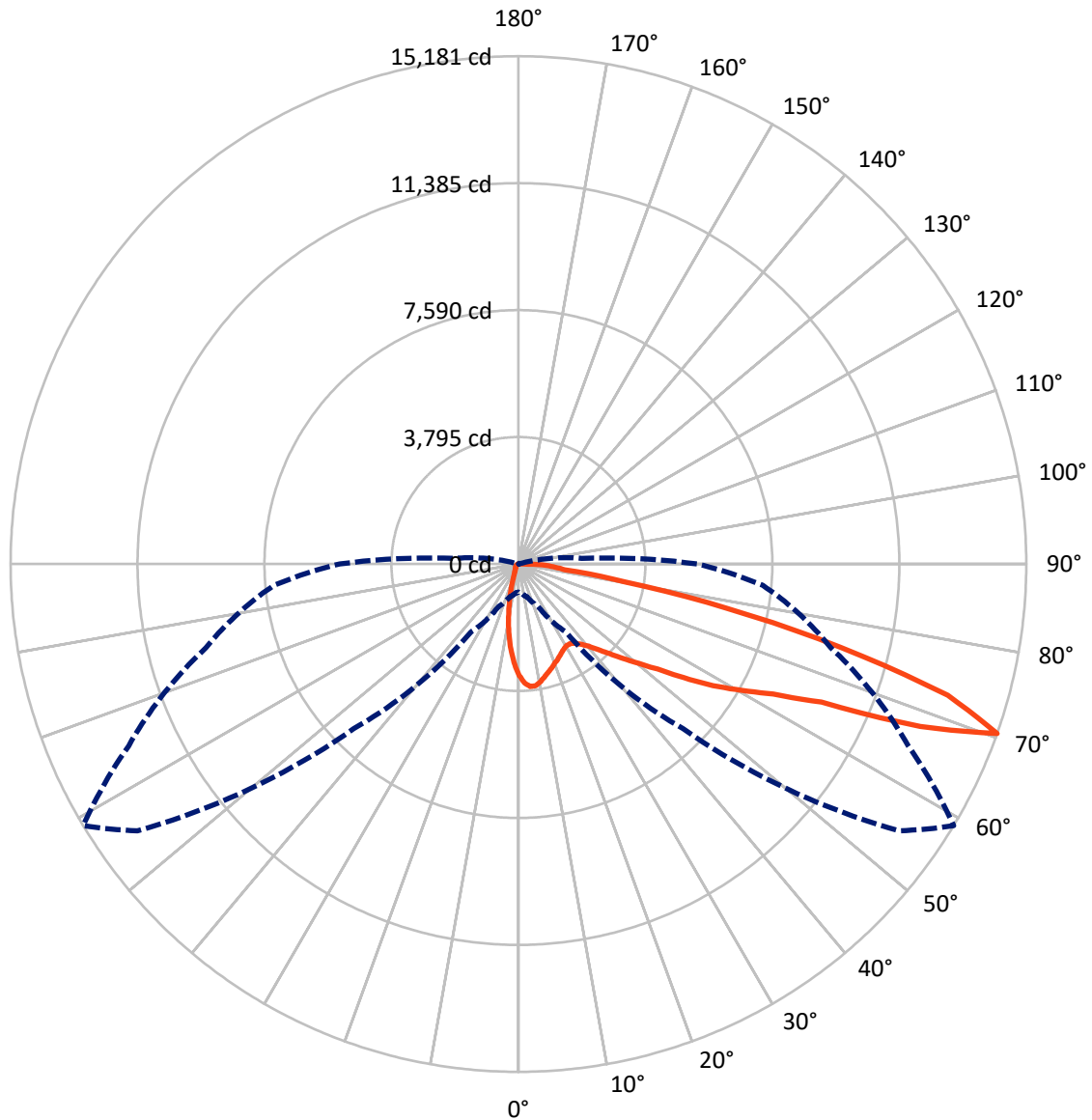


Based on 20 foot mounting height. Maximum calculated value = 8.9 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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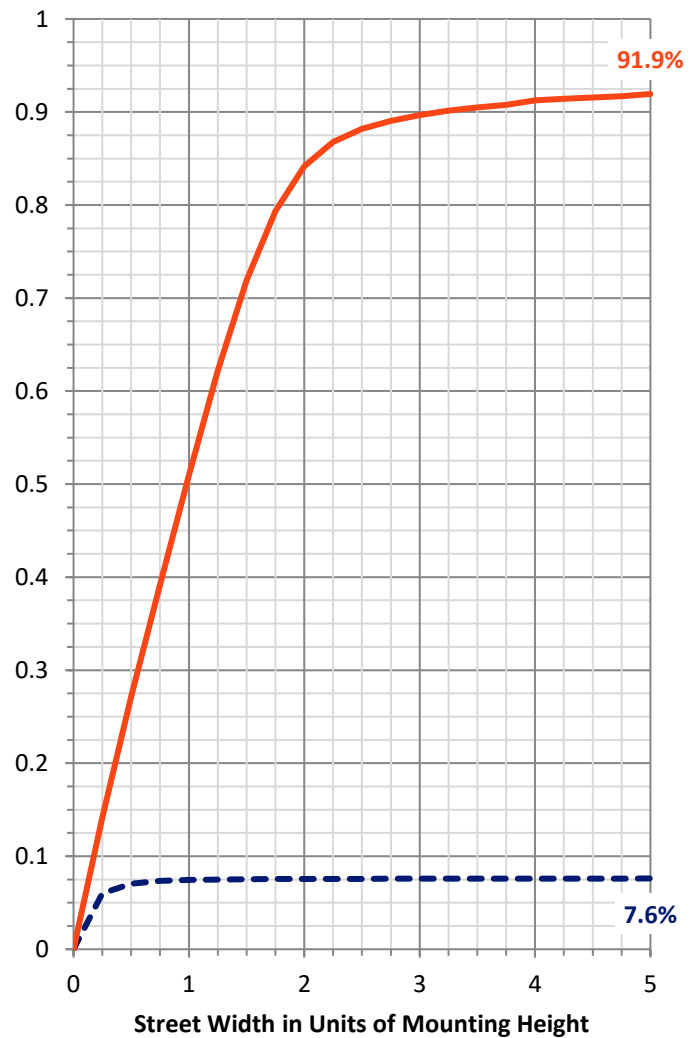
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1014.5	0.0	1014.5
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	12182.9	0.0	12182.9
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	13197.4	0.0	13197.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.4	2.1
10°-20°	575.6	4.4
20°-30°	779.1	5.9
30°-40°	1124.4	8.5
40°-50°	1867.4	14.1
50°-60°	2856.4	21.6
60°-70°	3552.6	26.9
70°-80°	1963.9	14.9
80°-90°	203.6	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°	13197.4	100.0
0°-180°	13197.4	100.0



--- HS    — SS

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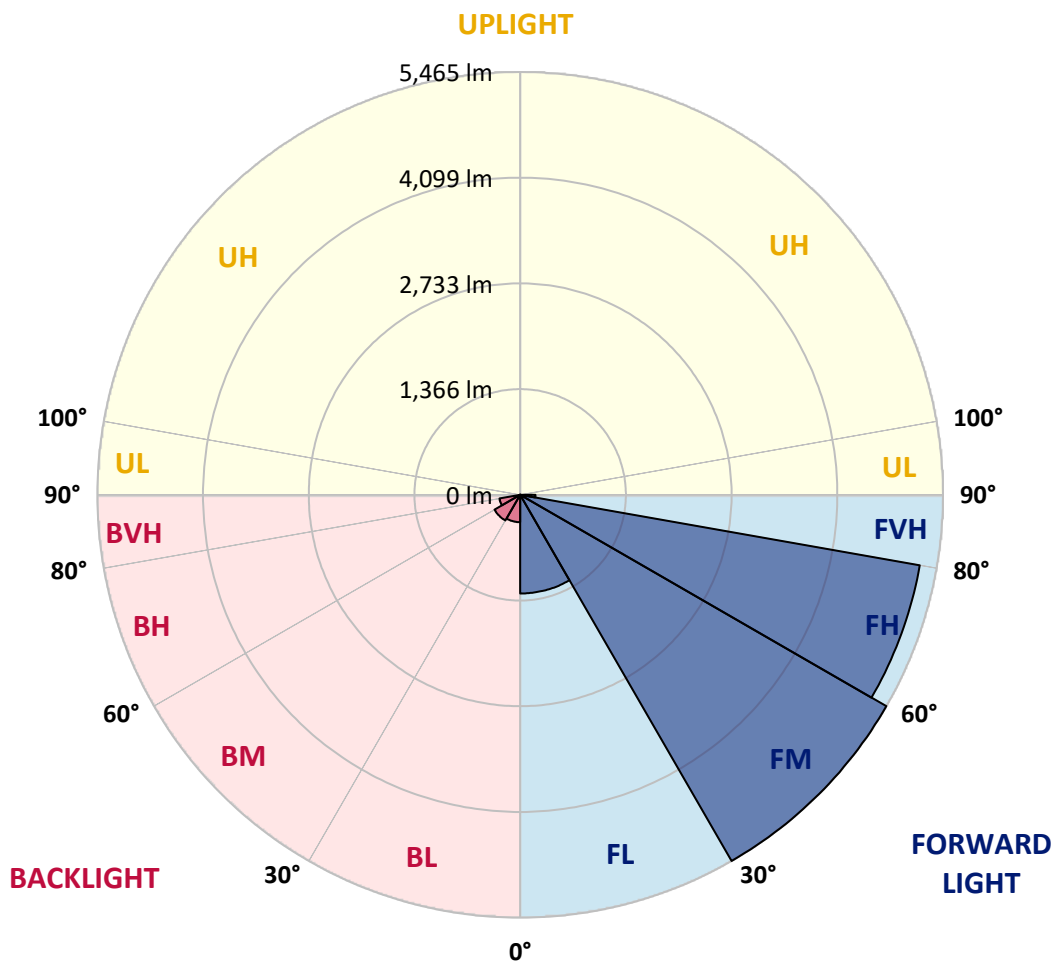
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1275.6	9.7			
FM	(30°-60°)	5465.2	41.4			
FH	(60°-80°)	5244.4	39.7			G3/7500
FVH	(80°-90°)	197.7	1.5			G2/225
BL	(0°-30°)	353.5	2.7	B1/500		
BM	(30°-60°)	382.9	2.9	B1/1000		
BH	(60°-80°)	272.2	2.1	B1/500		G1/500
BVH	(80°-90°)	5.9	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°	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1
2.5°	3772.1	3766.2	3741.4	3736.3	3708.5	3652.7	3588.1	3562.2	3509.4	3425.8	3333.2
5°	3834.9	3838.0	3839.9	3829.0	3824.9	3779.2	3707.5	3676.7	3606.0	3468.6	3299.3
7.5°	3600.0	3608.0	3632.9	3643.8	3691.6	3709.5	3694.6	3674.6	3618.8	3456.6	3218.7
10°	3352.1	3367.1	3393.9	3411.8	3470.5	3518.3	3579.2	3584.0	3572.1	3416.7	3128.1
12.5°	3139.0	3153.0	3182.8	3218.7	3278.5	3340.2	3430.7	3462.7	3502.5	3390.9	3063.4
15°	2955.9	2959.9	2988.7	3033.5	3112.1	3196.8	3304.3	3351.1	3428.8	3380.9	3013.6
17.5°	2795.6	2796.6	2815.5	2856.2	2951.8	3063.4	3188.8	3250.6	3349.2	3367.1	2969.7
20°	2690.1	2689.1	2690.1	2712.0	2796.6	2929.0	3081.3	3146.0	3272.5	3350.1	2925.0
22.5°	2654.2	2649.2	2626.3	2618.4	2672.2	2788.7	2970.8	3055.4	3203.7	3345.1	2892.1
25°	2698.0	2695.0	2646.3	2600.5	2605.4	2678.1	2858.3	2961.8	3150.0	3363.0	2884.1
27.5°	2839.3	2833.4	2758.7	2669.1	2612.4	2625.3	2774.6	2883.2	3107.3	3406.8	2895.2
30°	3024.6	3025.5	2945.8	2837.4	2703.9	2630.3	2729.9	2832.4	3078.3	3472.6	2919.0
32.5°	3230.6	3229.6	3172.9	3047.5	2877.3	2721.8	2749.7	2836.4	3082.3	3569.2	2964.9
35°	3443.7	3432.7	3413.8	3303.4	3104.2	2882.2	2840.4	2904.1	3124.0	3696.6	3042.5
37.5°	3689.5	3685.7	3704.6	3588.1	3385.0	3118.2	2999.6	3042.5	3229.6	3884.7	3167.9
40°	4080.9	4059.0	4067.9	3909.7	3701.4	3435.7	3222.7	3233.6	3397.9	4133.6	3366.1
42.5°	4826.5	4737.9	4571.6	4275.0	4050.0	3788.1	3514.4	3495.4	3635.8	4435.3	3626.9
45°	5717.5	5616.0	5196.9	4678.2	4398.4	4166.5	3874.8	3824.0	3928.5	4794.7	3963.4
47.5°	6461.3	6351.8	5796.2	5099.3	4752.9	4556.7	4274.0	4214.2	4278.9	5211.7	4367.5
50°	6715.1	6654.4	6166.6	5449.8	5110.3	4994.8	4774.7	4675.2	4691.1	5661.9	4839.4
52.5°	6598.6	6577.7	6251.2	5689.6	5440.8	5478.6	5323.3	5218.8	5200.8	6153.6	5361.2
55°	6352.8	6342.8	6183.5	5823.1	5732.5	5921.7	6092.9	6002.2	5833.1	6676.3	5792.3
57.5°	6001.3	6039.1	6153.6	6079.9	6090.8	6389.6	6807.7	6854.5	6601.7	7092.4	6111.9
60°	5062.5	5164.0	5688.7	6355.7	6866.5	7168.1	7573.3	7660.9	7252.7	7377.1	6481.2
62.5°	3742.3	3887.7	4635.5	5860.8	7293.6	8648.5	8591.8	8553.0	7874.0	7758.5	7153.2
65°	2198.2	2368.4	3000.7	4579.6	6649.4	9600.3	10493.4	9955.7	8820.7	8550.9	8223.4
67.5°	1095.1	1096.1	1381.8	2417.3	4914.2	8936.2	13269.0	12958.3	10833.8	9718.7	8645.5
70°	842.3	865.2	1022.4	1404.7	2485.0	6960.1	13905.1	15180.5	12856.7	9667.0	7335.3
72.5°	713.8	728.8	909.9	1222.6	1857.7	3821.1	12037.4	13418.3	12268.4	8167.6	5406.9
75°	513.7	525.6	805.5	1109.1	1710.4	1895.5	8257.3	9951.8	9205.1	5745.4	2975.7
77.5°	127.4	126.4	280.8	900.0	1530.1	1579.1	4737.9	6381.7	5281.5	2352.6	764.6
80°	56.7	54.7	63.7	189.1	1423.6	1490.4	2083.7	3222.7	2026.0	381.4	234.0
82.5°	39.8	37.8	39.8	69.7	476.0	1382.9	1259.4	1396.8	741.7	130.4	99.5
85°	12.9	11.9	21.9	58.8	133.4	797.5	1228.5	1043.3	551.5	55.7	66.7
87.5°	1.9	1.9	7.9	31.9	38.8	265.8	720.8	722.8	247.9	32.9	29.8
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°	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1	3337.1
2.5°	3286.4	3227.6	3145.0	3062.4	2987.7	2911.1	2849.4	2820.4	2807.5	2789.6	2750.7
5°	3210.7	3104.2	2923.0	2744.8	2578.5	2419.2	2282.9	2205.2	2121.6	2117.6	2076.8
7.5°	3089.3	2938.0	2652.2	2375.4	2121.6	1878.6	1669.6	1534.2	1441.5	1383.9	1344.0
10°	2953.9	2759.7	2381.5	1992.2	1646.6	1322.1	1053.4	878.1	771.6	717.9	686.9
12.5°	2846.3	2602.4	2114.6	1624.8	1191.7	819.3	569.5	442.1	385.2	363.4	353.5
15°	2753.8	2458.2	1864.7	1296.3	795.4	470.9	329.5	287.7	278.7	278.7	277.7
17.5°	2660.1	2318.7	1621.7	973.7	500.7	308.6	259.8	253.9	254.9	257.9	257.9
20°	2571.5	2186.3	1387.8	693.9	328.6	246.9	236.0	234.0	237.0	240.9	240.0
22.5°	2499.9	2069.8	1168.7	476.9	252.8	224.0	217.0	214.0	216.0	219.1	218.1
25°	2449.1	1970.3	967.7	332.4	220.0	204.1	196.1	192.2	190.1	192.2	191.2
27.5°	2418.2	1886.6	778.6	249.8	197.1	184.2	174.3	166.3	161.2	161.2	159.3
30°	2398.3	1807.9	610.3	207.0	178.2	164.2	150.3	139.5	131.4	129.5	128.4
32.5°	2397.3	1740.3	455.9	183.2	160.3	144.3	127.4	113.5	104.6	102.6	101.5
35°	2422.3	1685.6	335.5	165.3	144.3	125.4	106.5	91.6	83.6	83.6	82.6
37.5°	2487.0	1653.6	253.9	151.4	131.4	109.5	89.6	75.7	68.8	70.7	70.7
40°	2607.4	1647.6	207.0	140.4	120.5	95.6	72.6	61.7	58.8	61.7	61.7
42.5°	2791.6	1679.6	184.2	132.4	110.5	81.6	60.7	52.8	51.8	54.7	54.7
45°	3031.5	1742.2	171.2	125.4	99.5	67.7	50.8	45.8	44.8	48.7	48.7
47.5°	3322.2	1827.0	159.3	117.5	88.6	55.7	42.8	38.8	38.8	42.8	43.8
50°	3666.7	1941.3	147.4	109.5	79.6	46.8	35.8	32.9	33.9	37.8	38.8
52.5°	4063.0	2081.7	136.3	102.6	69.7	37.8	29.8	27.9	28.9	32.9	33.9
55°	4404.5	2204.2	123.5	95.6	56.7	30.8	24.9	23.9	24.9	29.8	29.8
57.5°	4702.1	2321.6	111.6	84.6	44.8	24.9	19.8	19.8	21.9	26.9	27.9
60°	5097.3	2506.9	101.5	71.7	33.9	18.9	16.0	16.9	19.8	23.9	24.9
62.5°	5797.2	2821.4	88.6	59.8	24.9	15.0	12.9	13.9	17.9	23.0	23.9
65°	6673.3	3119.2	73.6	49.8	18.9	10.9	10.0	12.9	17.9	23.0	23.9
67.5°	6583.8	2712.9	57.7	39.8	13.9	9.0	7.9	11.9	16.9	23.0	23.9
70°	5339.3	1901.5	42.8	26.9	10.9	7.9	7.9	11.9	16.9	21.9	23.0
72.5°	3703.6	1058.2	32.9	17.9	10.0	7.9	7.0	10.9	16.0	21.9	23.0
75°	1762.2	324.6	25.9	12.9	9.0	7.0	6.0	10.9	16.0	21.9	23.0
77.5°	338.4	82.6	20.9	10.9	7.9	7.0	6.0	10.0	16.0	20.9	21.9
80°	114.5	36.8	16.9	10.0	7.9	7.0	6.0	10.0	15.0	19.8	20.9
82.5°	62.8	20.9	15.0	9.0	7.9	6.0	5.0	9.0	13.9	19.8	20.9
85°	48.7	15.0	11.9	9.0	7.9	6.0	5.0	9.0	13.9	18.9	19.8
87.5°	24.9	10.9	10.0	9.0	7.9	6.0	5.0	7.9	12.9	17.9	19.8
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)