

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: P195518

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195518  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-AFL-7050-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10224 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 113  
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

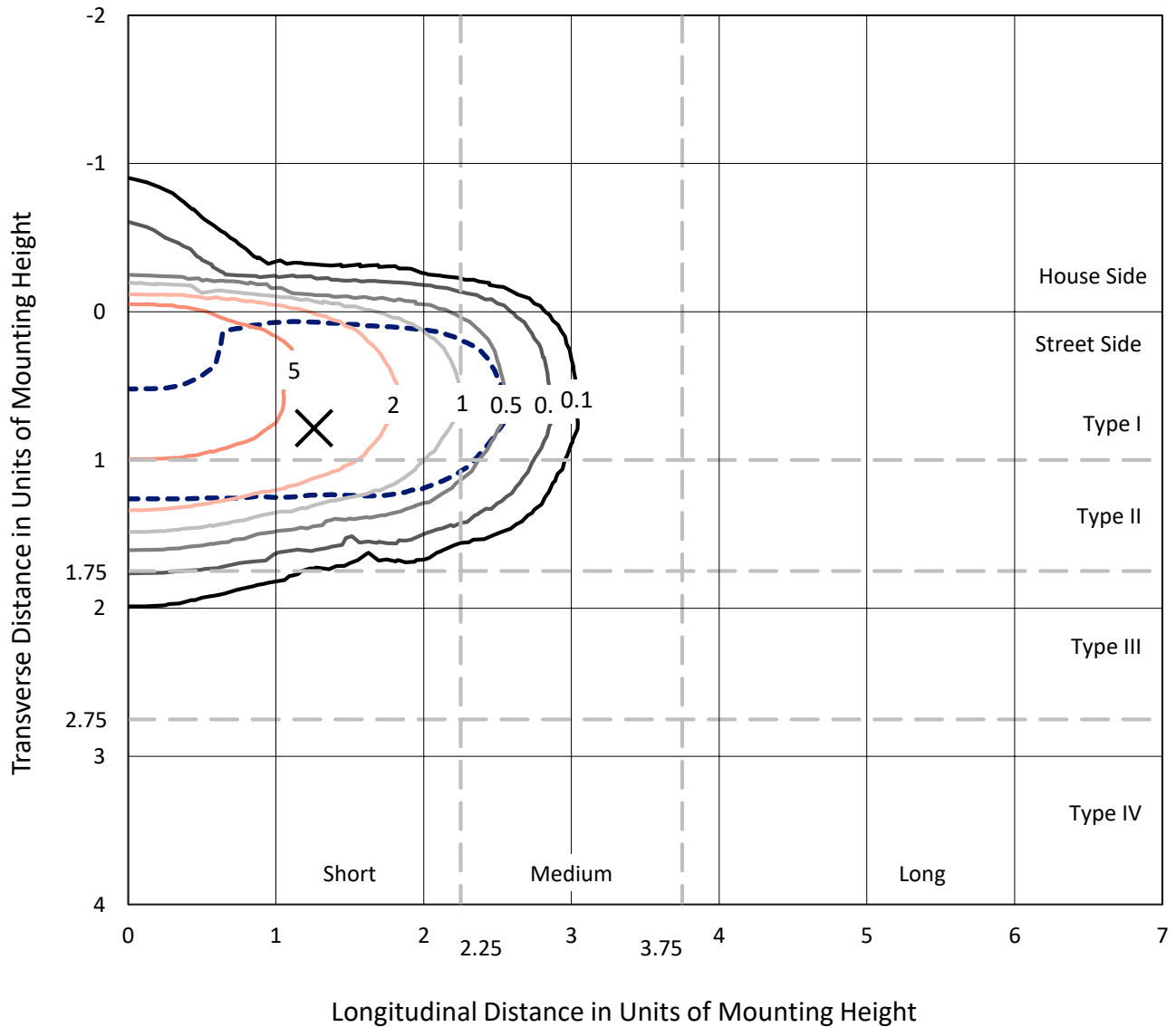


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### Iso-Footcandle Lines of Horizontal Illumination

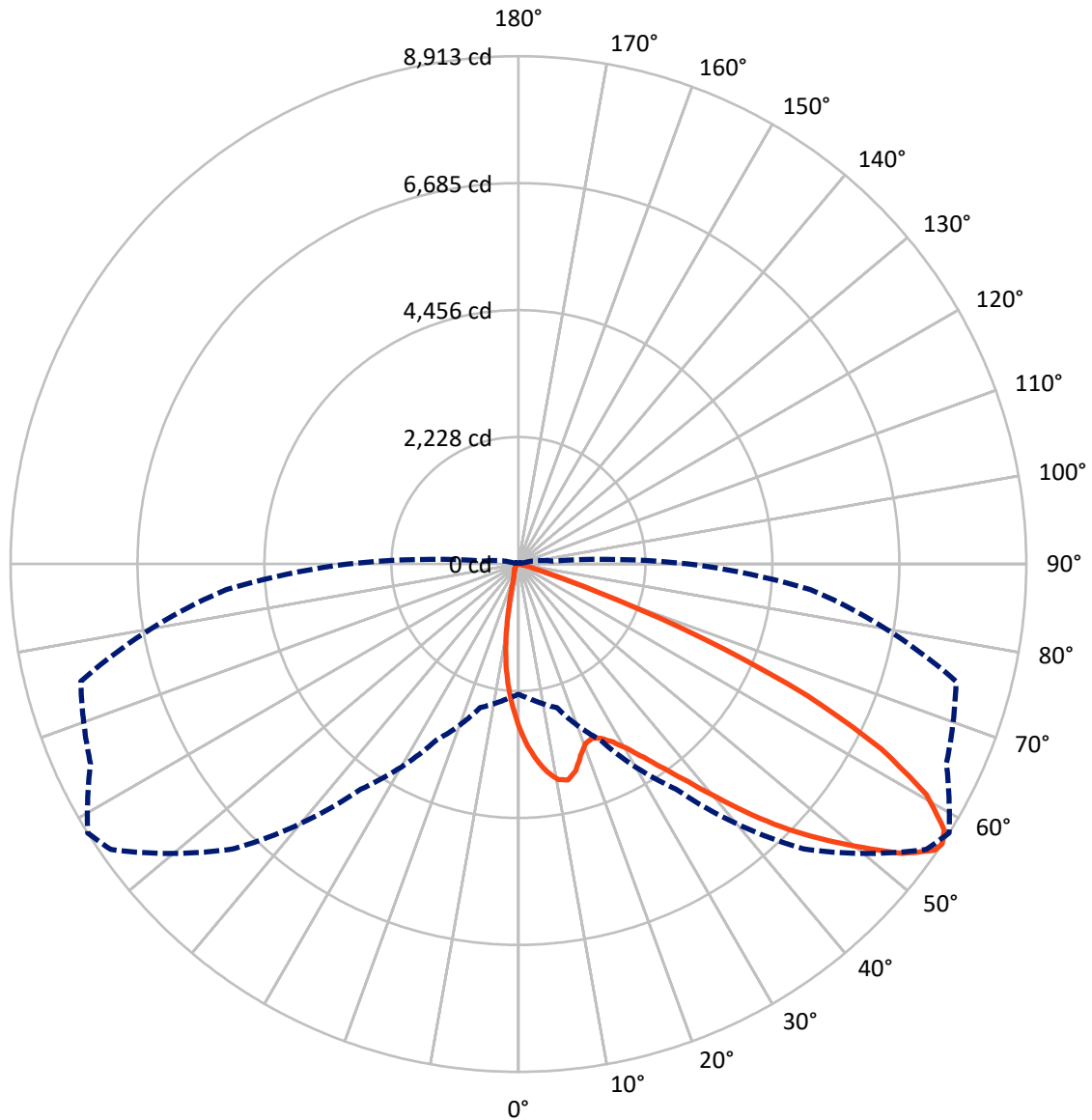
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 56-Deg Vertical

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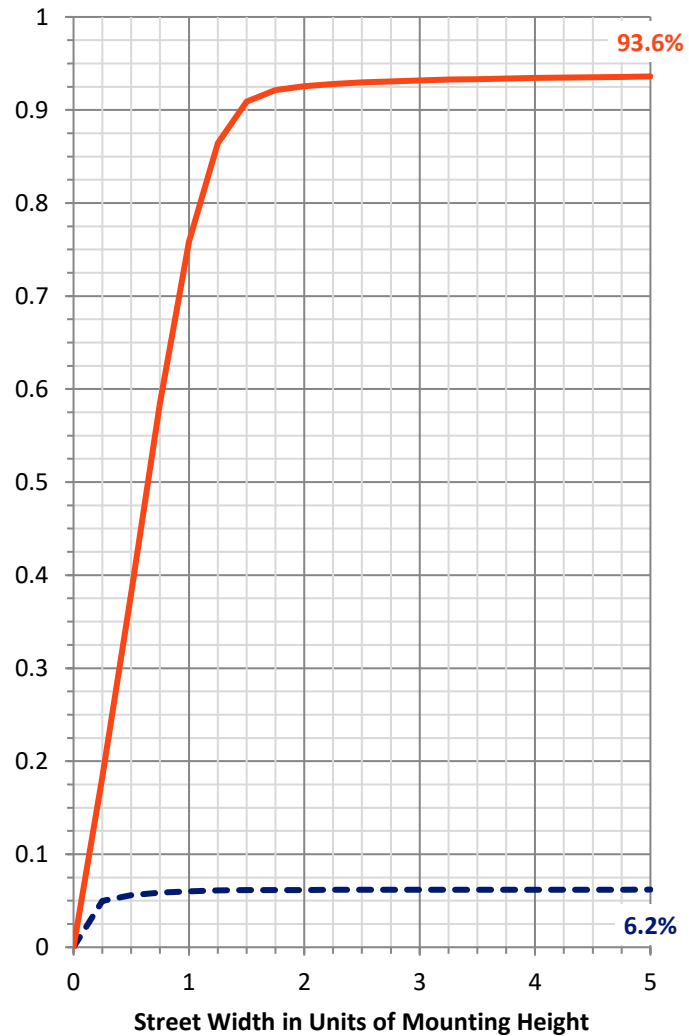
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	638.2	0.0	638.2
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	9585.8	0.0	9585.8
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	10224.0	0.0	10224.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	246.9	2.4
10°-20°	574.6	5.6
20°-30°	966.8	9.5
30°-40°	1655.6	16.2
40°-50°	2498.3	24.4
50°-60°	2596.9	25.4
60°-70°	1457.9	14.3
70°-80°	199.8	2.0
80°-90°	27.1	0.3
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°	10224.0	100.0
0°-180°	10224.0	100.0



--- HS    — SS

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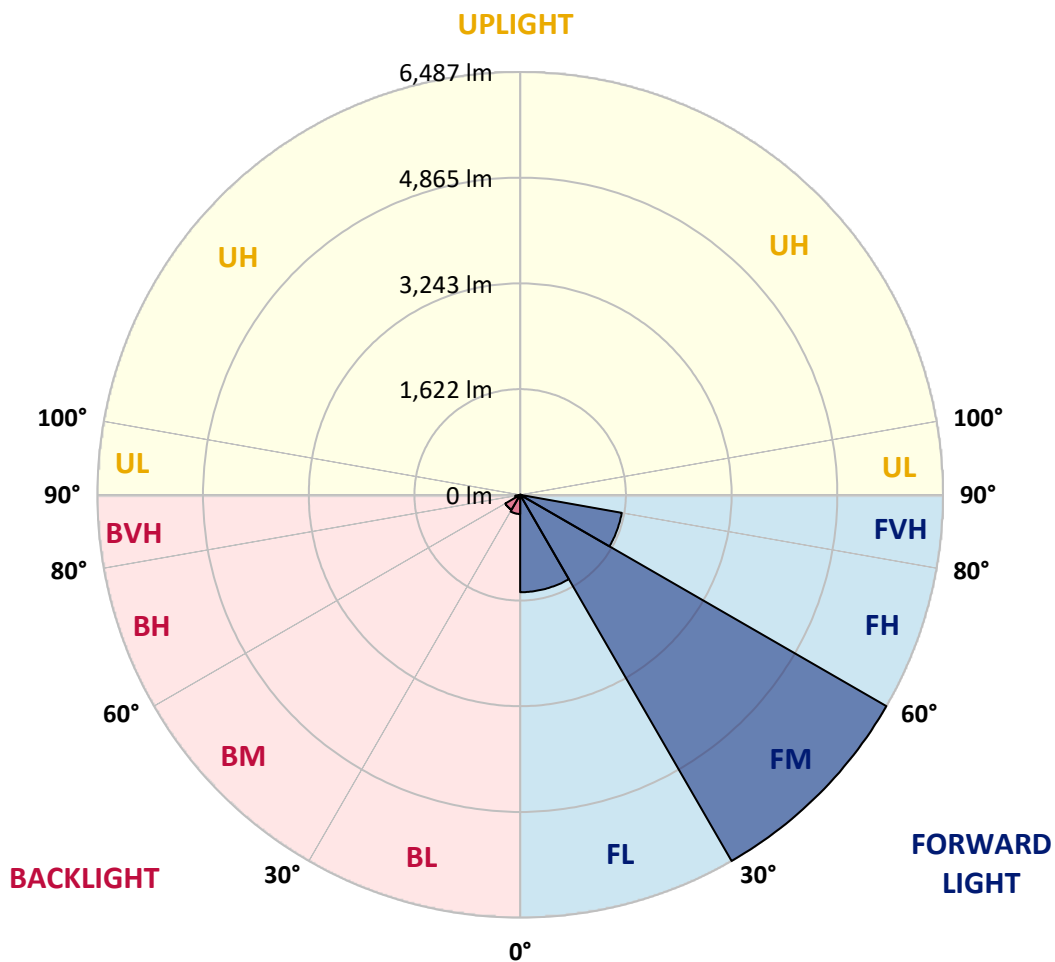
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1494.0	14.6			
FM	(30°-60°)	6486.5	63.4			
FH	(60°-80°)	1582.0	15.5			G1/1800
FVH	(80°-90°)	23.3	0.2			G1/100
BL	(0°-30°)	294.4	2.9	B1/500		
BM	(30°-60°)	264.3	2.6	B1/1000		
BH	(60°-80°)	75.7	0.7	B0/110		G0/110
BVH	(80°-90°)	3.7	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-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7
2.5°	3482.9	3461.8	3440.0	3399.4	3362.0	3304.2	3224.7	3205.2	3142.8	3039.8	2943.9
5°	3783.2	3779.3	3764.5	3731.7	3691.1	3620.9	3531.2	3471.2	3374.4	3212.2	3027.3
7.5°	3605.3	3638.1	3691.9	3768.4	3819.8	3812.8	3744.2	3691.9	3596.0	3374.4	3109.2
10°	3039.0	3045.3	3119.4	3280.1	3534.4	3771.5	3861.2	3847.2	3759.0	3516.4	3181.0
12.5°	2839.3	2843.2	2860.4	2911.9	3077.3	3408.0	3814.4	3887.7	3880.7	3652.1	3257.4
15°	2854.9	2857.3	2862.0	2878.3	2925.1	3091.3	3577.3	3763.7	3958.7	3780.8	3332.3
17.5°	2978.2	2976.6	2961.8	2946.2	2961.0	3015.6	3335.4	3532.0	3942.3	3889.3	3393.9
20°	3218.4	3226.2	3176.3	3106.9	3071.0	3073.4	3216.1	3363.5	3850.3	3973.5	3440.0
22.5°	3556.2	3561.7	3479.8	3359.6	3254.3	3201.3	3241.1	3319.1	3744.2	4051.5	3477.4
25°	3959.5	3959.5	3844.8	3674.0	3511.0	3394.7	3360.4	3390.0	3703.6	4139.7	3514.9
27.5°	4394.7	4410.3	4260.6	4036.7	3821.4	3651.4	3543.7	3538.3	3734.8	4250.4	3557.0
30°	4868.2	4882.3	4704.4	4430.6	4175.5	3957.9	3792.5	3756.7	3854.2	4399.4	3618.6
32.5°	5339.4	5351.1	5154.5	4875.2	4578.0	4322.2	4104.6	4047.6	4068.7	4617.0	3709.1
35°	5938.4	5940.8	5691.9	5359.6	5042.2	4741.9	4466.5	4410.3	4386.9	4891.6	3839.4
37.5°	6415.0	6396.3	6238.7	5924.4	5560.1	5246.5	4922.8	4849.5	4793.3	5277.7	4041.4
40°	6527.4	6527.4	6504.0	6409.6	6120.2	5818.3	5504.7	5395.5	5271.5	5732.5	4312.8
42.5°	6234.8	6253.6	6408.0	6613.2	6615.5	6422.1	6115.5	6023.5	5805.0	6250.5	4609.2
45°	5580.4	5585.9	5956.4	6510.2	6886.2	6996.9	6770.7	6643.6	6340.9	6788.7	4880.7
47.5°	5344.8	5362.0	5519.6	6196.6	6906.5	7462.6	7399.4	7224.7	6837.0	7280.1	5134.2
50°	4982.9	5003.9	5196.6	5734.8	6723.9	7761.4	8000.9	7813.6	7288.7	7689.6	5259.8
52.5°	4117.0	4149.8	4422.0	5124.1	6267.6	7773.9	8551.6	8439.2	7751.2	7908.8	5245.0
55°	2833.1	2857.3	3174.8	4000.0	5347.2	7392.4	8788.7	8865.9	8163.9	7958.0	5173.2
56°	2285.5	2376.0	2608.4	3408.0	4823.0	7067.9	8734.1	8912.7	8286.4	7950.2	5142.0
57.5°	1510.9	1528.1	1781.6	2469.6	3872.9	6363.6	8487.6	8812.9	8443.9	7910.4	5119.4
60°	710.6	718.4	809.7	1139.6	2096.0	4637.3	7686.5	8226.3	8501.6	7826.9	5118.6
62.5°	463.3	464.9	475.8	543.7	857.3	2525.8	6372.1	7149.1	8023.5	7817.5	5103.8
65°	381.4	385.3	372.1	380.7	448.5	952.4	4494.6	5573.4	6901.0	7597.6	4936.9
67.5°	336.2	337.0	319.0	308.9	328.4	418.1	2264.5	3515.6	5161.5	6455.6	4066.3
70°	306.6	305.8	285.5	262.1	262.9	277.7	737.9	1460.2	2855.7	3833.1	2334.7
72.5°	272.2	273.8	262.1	229.3	218.4	196.6	277.7	393.9	971.9	1230.9	615.5
75°	238.7	235.6	223.9	202.8	182.5	131.8	139.6	167.7	253.5	251.2	132.6
77.5°	181.0	177.8	183.3	173.2	142.7	92.0	76.4	87.4	114.7	106.9	53.8
80°	138.1	136.5	124.8	148.2	130.3	69.4	52.3	53.8	62.4	56.9	26.5
82.5°	99.8	99.1	94.4	91.3	82.7	50.7	39.8	42.1	46.8	39.8	19.5
85°	38.2	38.2	74.1	62.4	56.9	34.3	28.1	30.4	35.9	28.9	13.3
87.5°	6.2	6.2	49.9	41.3	25.7	17.2	17.9	19.5	21.1	17.2	10.1
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°	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7	2894.7
2.5°	2886.9	2834.7	2720.0	2609.2	2512.5	2406.4	2352.6	2290.2	2266.8	2220.0	2224.7
5°	2916.6	2807.4	2577.2	2334.7	2112.3	1886.1	1725.4	1574.1	1489.9	1406.4	1406.4
7.5°	2947.0	2780.1	2424.4	2036.7	1662.3	1274.6	1000.0	780.0	657.6	575.7	573.3
10°	2968.0	2745.0	2250.4	1691.1	1138.9	656.8	396.3	312.0	281.6	268.3	267.6
12.5°	2995.3	2709.9	2052.3	1283.9	632.6	312.0	247.3	234.0	228.6	225.4	225.4
15°	3018.7	2659.9	1812.0	863.5	332.3	234.0	213.0	208.3	207.5	206.7	207.5
17.5°	3024.2	2588.9	1524.2	505.5	241.0	204.4	195.0	191.1	191.1	190.3	190.3
20°	3011.7	2495.3	1205.9	312.0	208.3	188.0	177.8	173.2	172.4	172.4	172.4
22.5°	2986.0	2376.0	891.6	236.4	189.5	173.2	159.9	155.2	155.2	156.0	156.8
25°	2954.0	2234.8	612.3	203.6	175.5	157.6	144.3	139.6	141.2	142.7	143.5
27.5°	2913.4	2066.3	400.9	176.3	156.8	142.0	130.3	127.1	130.3	133.4	134.9
30°	2872.9	1881.5	271.5	152.9	135.7	124.8	117.8	117.0	121.7	128.7	129.5
32.5°	2846.4	1691.9	205.2	137.3	119.3	110.0	106.9	108.4	115.4	123.2	124.8
35°	2844.0	1507.0	174.7	124.8	108.4	99.8	98.3	103.0	110.8	117.0	118.6
37.5°	2880.7	1333.9	158.3	115.4	99.8	91.3	88.9	97.5	104.5	110.8	112.3
40°	2954.8	1178.6	147.4	106.9	92.8	82.7	81.1	88.1	95.2	102.2	104.5
42.5°	3047.6	1033.6	134.9	98.3	85.0	73.3	71.8	77.2	84.2	94.4	95.9
45°	3128.0	898.6	121.7	88.9	76.4	63.2	62.4	68.6	74.1	83.5	85.0
47.5°	3195.8	786.3	109.2	78.8	65.5	56.2	55.4	58.5	61.6	70.2	71.8
50°	3159.9	691.1	96.7	64.7	53.0	48.4	47.6	47.6	51.5	60.1	61.6
52.5°	3071.8	631.8	85.0	53.8	43.7	41.3	39.0	39.8	43.7	47.6	48.4
55°	3000.8	603.7	74.9	47.6	36.7	34.3	32.0	31.2	32.0	30.4	28.9
56°	2983.6	600.6	72.5	46.0	35.1	32.0	28.9	27.3	26.5	23.4	22.6
57.5°	2975.8	600.6	68.6	42.9	32.8	28.9	25.0	21.8	18.7	16.4	16.4
60°	2969.6	604.5	64.0	37.4	28.1	23.4	17.9	13.3	10.9	10.9	10.9
62.5°	2956.3	603.0	58.5	31.2	24.2	17.9	10.9	8.6	7.8	8.6	9.4
65°	2807.4	560.1	51.5	25.0	18.7	12.5	6.2	6.2	7.0	8.6	9.4
67.5°	2262.1	424.3	42.1	19.5	13.3	9.4	5.5	5.5	7.0	8.6	9.4
70°	1242.6	223.9	35.9	14.0	10.1	7.8	5.5	4.7	7.0	8.6	9.4
72.5°	303.4	93.6	32.8	10.9	9.4	7.0	4.7	4.7	7.0	8.6	9.4
75°	74.9	70.2	26.5	8.6	7.8	6.2	4.7	4.7	7.0	8.6	9.4
77.5°	35.1	92.8	17.9	7.8	7.0	5.5	4.7	4.7	7.0	8.6	8.6
80°	21.1	70.2	10.9	7.0	6.2	5.5	4.7	4.7	7.0	8.6	9.4
82.5°	12.5	20.3	7.8	7.0	6.2	4.7	4.7	4.7	7.0	8.6	9.4
85°	10.9	10.1	7.8	7.0	6.2	5.5	4.7	4.7	7.8	9.4	9.4
87.5°	8.6	7.8	7.0	6.2	6.2	5.5	4.7	4.7	7.0	8.6	9.4
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)