

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: P270517

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270517
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-SL3-7027-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 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: 14537.7 lumens
Efficiency: N/A
Efficacy: 85.0 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): 171
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

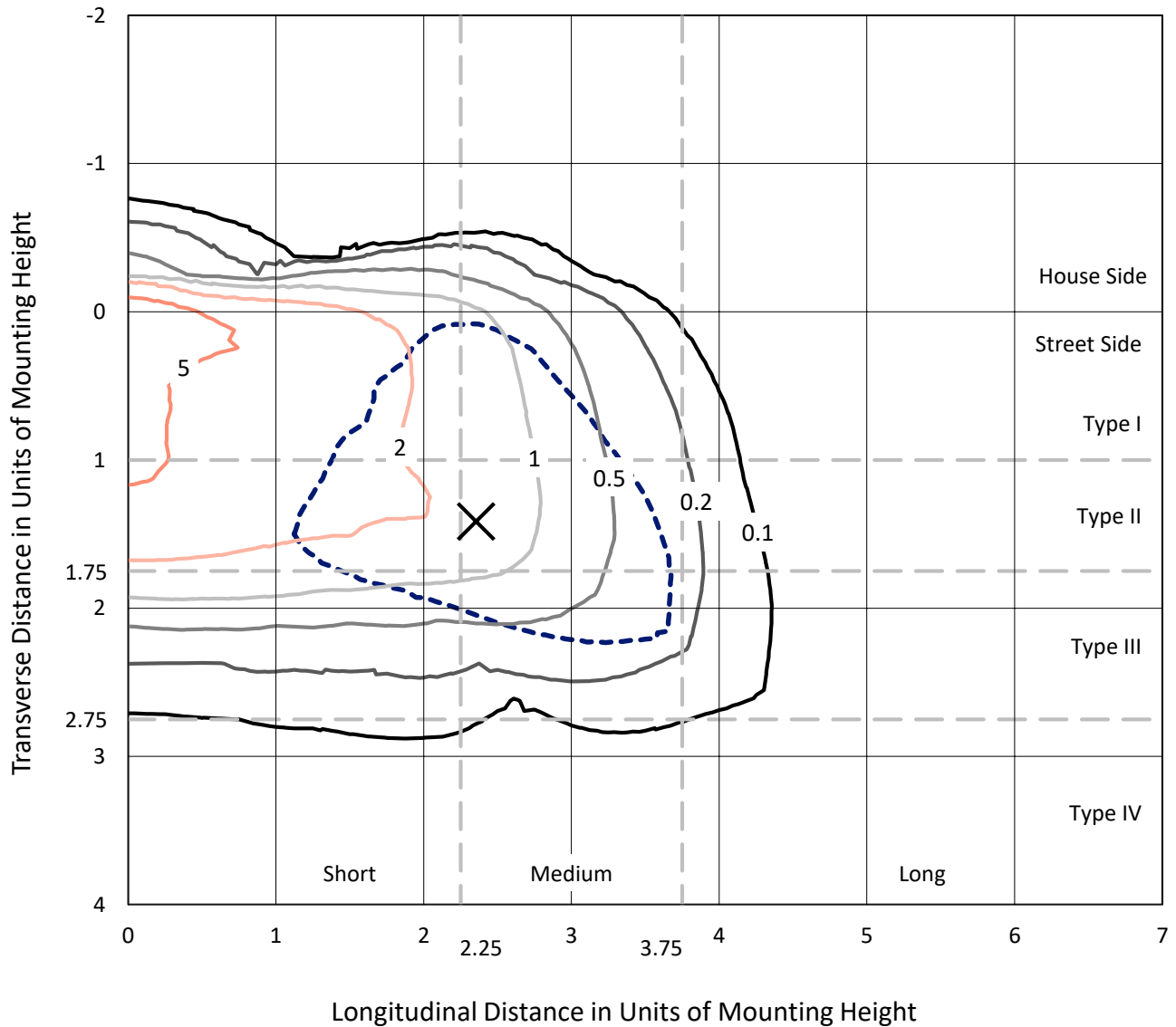


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Iso-Footcandle Lines of Horizontal Illumination

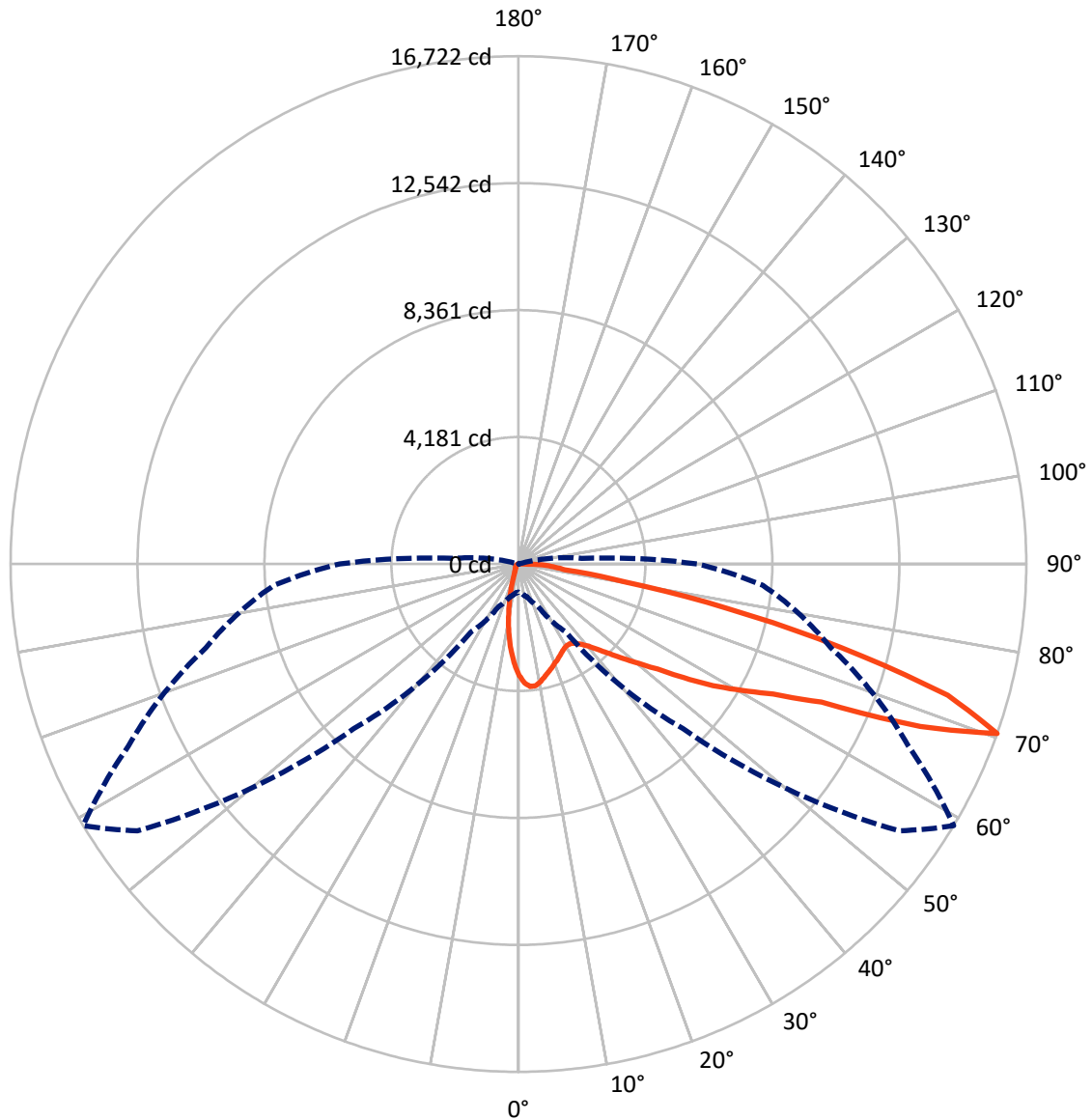
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.8 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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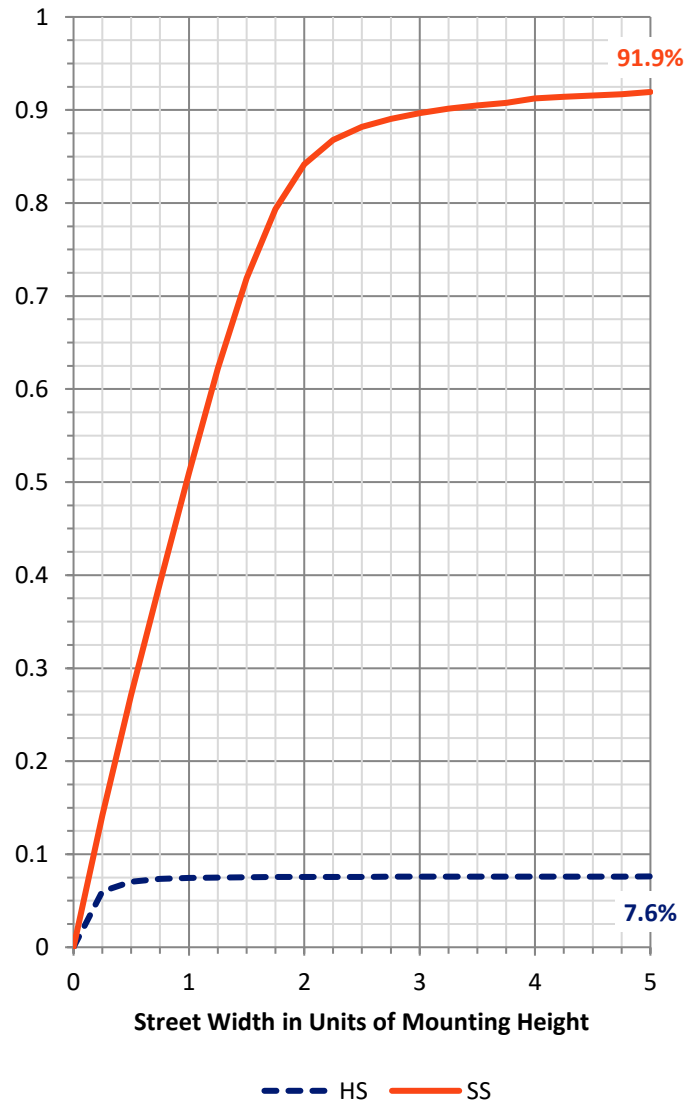
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1117.6	0.0	1117.6
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	13420.1	0.0	13420.1
	% Fixture	92.3	0.0	92.3
Total	Lumens	14537.7	0.0	14537.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.3	2.1
10°-20°	634.0	4.4
20°-30°	858.3	5.9
30°-40°	1238.6	8.5
40°-50°	2057.0	14.1
50°-60°	3146.4	21.6
60°-70°	3913.4	26.9
70°-80°	2163.3	14.9
80°-90°	224.3	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°	14537.7	100.0
0°-180°	14537.7	100.0



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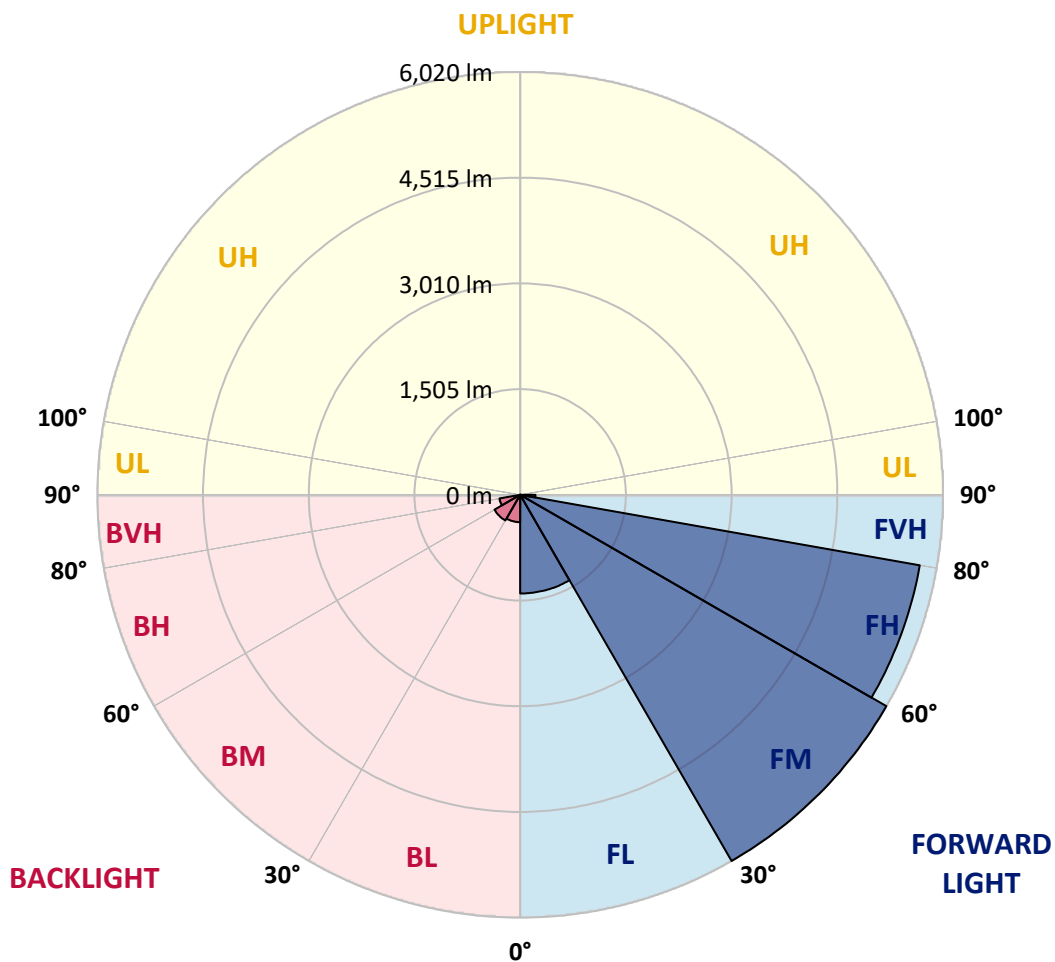
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1405.1	9.7			
FM	(30°-60°)	6020.2	41.4			
FH	(60°-80°)	5777.0	39.7			G3/7500
FVH	(80°-90°)	217.8	1.5			G2/225
BL	(0°-30°)	389.4	2.7	B1/500		
BM	(30°-60°)	421.8	2.9	B1/1000		
BH	(60°-80°)	299.8	2.1	B1/500		G1/500
BVH	(80°-90°)	6.5	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-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0
2.5°	4155.3	4148.7	4121.3	4115.9	4085.1	4023.7	3952.5	3923.8	3865.8	3773.7	3671.7
5°	4224.4	4227.8	4229.8	4217.8	4213.4	4162.9	4084.1	4050.0	3972.1	3820.9	3634.5
7.5°	3965.6	3974.3	4001.8	4013.8	4066.4	4086.2	4069.9	4047.9	3986.4	3807.6	3545.6
10°	3692.6	3708.9	3738.6	3758.2	3822.9	3875.6	3942.5	3948.1	3934.8	3763.8	3445.8
12.5°	3457.8	3473.1	3506.1	3545.6	3611.4	3679.4	3779.2	3814.3	3858.1	3735.3	3374.5
15°	3256.0	3260.4	3292.2	3341.5	3428.2	3521.4	3639.8	3691.4	3777.0	3724.4	3319.6
17.5°	3079.5	3080.6	3101.4	3146.4	3251.7	3374.5	3512.6	3580.6	3689.2	3708.9	3271.4
20°	2963.1	2962.2	2963.1	2987.4	3080.6	3226.4	3394.2	3465.5	3604.8	3690.2	3222.0
22.5°	2923.8	2918.2	2893.0	2884.3	2943.4	3071.8	3272.4	3365.7	3529.1	3684.8	3185.8
25°	2972.0	2968.7	2915.0	2864.5	2870.1	2950.0	3148.6	3262.6	3470.0	3704.6	3177.0
27.5°	3127.7	3121.2	3038.8	2940.2	2877.7	2892.0	3056.5	3176.0	3422.7	3752.8	3189.2
30°	3331.8	3332.8	3245.0	3125.6	2978.6	2897.5	3007.0	3120.1	3390.9	3825.3	3215.5
32.5°	3558.7	3557.6	3495.1	3357.0	3169.4	2998.4	3029.1	3124.5	3395.4	3931.6	3265.9
35°	3793.5	3781.3	3760.6	3638.8	3419.5	3174.9	3128.8	3199.0	3441.3	4071.9	3351.4
37.5°	4064.3	4059.9	4080.7	3952.5	3728.8	3434.8	3304.2	3351.4	3557.6	4279.3	3489.6
40°	4495.3	4471.1	4481.0	4306.7	4077.4	3784.6	3549.9	3562.0	3743.0	4553.4	3707.8
42.5°	5316.7	5219.2	5036.0	4709.2	4461.3	4172.8	3871.2	3850.4	4005.1	4885.7	3995.2
45°	6298.2	6186.4	5724.7	5153.2	4845.1	4589.6	4268.2	4212.3	4327.4	5281.7	4365.9
47.5°	7117.5	6996.8	6384.9	5617.2	5235.5	5019.5	4708.0	4642.3	4713.5	5741.1	4811.1
50°	7397.2	7330.2	6792.9	6003.3	5629.3	5501.9	5259.7	5150.1	5167.5	6236.8	5330.9
52.5°	7268.7	7245.8	6886.0	6267.6	5993.3	6035.1	5864.0	5748.8	5729.0	6778.6	5905.5
55°	6997.8	6986.9	6811.5	6414.4	6314.6	6523.0	6711.6	6611.9	6425.4	7354.3	6380.5
57.5°	6610.7	6652.5	6778.6	6697.5	6709.5	7038.5	7499.1	7550.7	7272.0	7812.6	6732.4
60°	5576.6	5688.4	6266.3	7001.2	7563.8	7896.1	8342.4	8438.9	7989.3	8126.3	7139.4
62.5°	4122.4	4282.5	5106.1	6456.2	8034.3	9526.9	9464.4	9421.6	8673.7	8546.5	7879.7
65°	2421.6	2608.9	3305.5	5044.7	7324.7	10575.2	11559.0	10966.8	9716.5	9419.4	9058.6
67.5°	1206.3	1207.4	1522.2	2662.8	5413.1	9843.7	14616.5	14274.3	11934.1	10705.8	9523.6
70°	927.8	953.0	1126.3	1547.4	2737.3	7666.9	15317.3	16722.0	14162.5	10648.8	8080.3
72.5°	786.3	802.7	1002.4	1346.6	2046.3	4209.1	13259.9	14781.0	13514.3	8997.2	5956.0
75°	565.9	579.0	887.3	1221.7	1884.0	2088.1	9095.9	10962.3	10139.9	6328.9	3277.9
77.5°	140.3	139.2	309.2	991.4	1685.6	1739.3	5219.2	7029.6	5817.9	2591.4	842.3
80°	62.5	60.4	70.2	208.3	1568.3	1641.7	2295.3	3549.9	2231.7	420.0	257.8
82.5°	43.8	41.7	43.8	76.7	524.3	1523.3	1387.3	1538.6	817.0	143.6	109.7
85°	14.3	13.1	24.2	64.7	147.0	878.5	1353.2	1149.3	607.6	61.4	73.5
87.5°	2.2	2.2	8.8	35.2	42.8	292.8	794.0	796.2	273.1	36.2	32.9
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°	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0	3676.0
2.5°	3620.1	3555.4	3464.5	3373.3	3291.1	3206.7	3138.7	3106.9	3092.7	3072.9	3030.2
5°	3536.7	3419.5	3219.9	3023.5	2840.4	2664.9	2514.6	2429.1	2337.0	2332.5	2287.7
7.5°	3403.0	3236.4	2921.6	2616.7	2337.0	2069.4	1839.1	1690.0	1588.1	1524.3	1480.4
10°	3253.8	3040.0	2623.2	2194.5	1813.9	1456.4	1160.3	967.3	849.9	790.7	756.7
12.5°	3135.4	2866.8	2329.3	1789.8	1312.8	902.5	627.2	486.9	424.4	400.3	389.3
15°	3033.3	2707.8	2054.1	1427.9	876.2	518.7	362.9	316.9	307.1	307.1	306.0
17.5°	2930.4	2554.2	1786.5	1072.5	551.6	340.0	286.2	279.6	280.7	284.0	284.0
20°	2832.7	2408.3	1528.7	764.4	361.8	271.9	259.9	257.8	261.0	265.4	264.3
22.5°	2753.8	2280.0	1287.5	525.2	278.6	246.8	239.0	235.7	238.1	241.3	240.1
25°	2697.8	2170.3	1066.0	366.2	242.4	224.8	216.0	211.7	209.5	211.7	210.6
27.5°	2663.8	2078.1	857.6	275.3	217.1	202.8	191.9	183.2	177.7	177.7	175.4
30°	2641.8	1991.5	672.2	228.1	196.3	181.0	165.6	153.5	144.7	142.7	141.5
32.5°	2640.7	1917.1	502.3	201.8	176.5	159.0	140.3	125.0	115.2	112.9	111.8
35°	2668.2	1856.6	369.7	182.0	159.0	138.2	117.4	100.9	92.2	92.2	91.0
37.5°	2739.6	1821.7	279.6	166.6	144.7	120.6	98.8	83.4	75.6	77.9	77.9
40°	2872.2	1814.9	228.1	154.6	132.7	105.3	80.0	68.0	64.7	68.0	68.0
42.5°	3075.1	1850.1	202.8	145.9	121.7	89.9	67.0	58.1	57.0	60.4	60.4
45°	3339.4	1919.1	188.6	138.2	109.7	74.6	56.0	50.5	49.3	53.8	53.8
47.5°	3659.7	2012.5	175.4	129.4	97.6	61.4	47.2	42.8	42.8	47.2	48.2
50°	4039.0	2138.5	162.4	120.6	87.8	51.6	39.4	36.2	37.3	41.7	42.8
52.5°	4475.5	2293.2	150.2	112.9	76.7	41.7	32.9	30.7	31.8	36.2	37.3
55°	4851.7	2428.1	136.1	105.3	62.5	34.0	27.4	26.3	27.4	32.9	32.9
57.5°	5179.5	2557.5	122.8	93.2	49.3	27.4	21.9	21.9	24.2	29.6	30.7
60°	5614.9	2761.4	111.8	79.1	37.3	20.8	17.5	18.7	21.9	26.3	27.4
62.5°	6386.0	3108.0	97.6	65.8	27.4	16.4	14.3	15.4	19.8	25.2	26.3
65°	7351.0	3435.8	81.1	54.8	20.8	12.0	11.0	14.3	19.8	25.2	26.3
67.5°	7252.3	2988.4	63.6	43.8	15.4	9.9	8.8	13.1	18.7	25.2	26.3
70°	5881.6	2094.7	47.2	29.6	12.0	8.8	8.8	13.1	18.7	24.2	25.2
72.5°	4079.7	1165.8	36.2	19.8	11.0	8.8	7.6	12.0	17.5	24.2	25.2
75°	1941.1	357.5	28.6	14.3	9.9	7.6	6.6	12.0	17.5	24.2	25.2
77.5°	372.8	91.0	23.0	12.0	8.8	7.6	6.6	11.0	17.5	23.0	24.2
80°	126.1	40.6	18.7	11.0	8.8	7.6	6.6	11.0	16.4	21.9	23.0
82.5°	69.1	23.0	16.4	9.9	8.8	6.6	5.5	9.9	15.4	21.9	23.0
85°	53.8	16.4	13.1	9.9	8.8	6.6	5.5	9.9	15.4	20.8	21.9
87.5°	27.4	12.0	11.0	9.9	8.8	6.6	5.5	8.8	14.3	19.8	21.9
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)