

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: P196125

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196125
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-SL3-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 4000K, 1200mA 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: 17255.1 lumens
Efficiency: N/A
Efficacy: 90.3 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

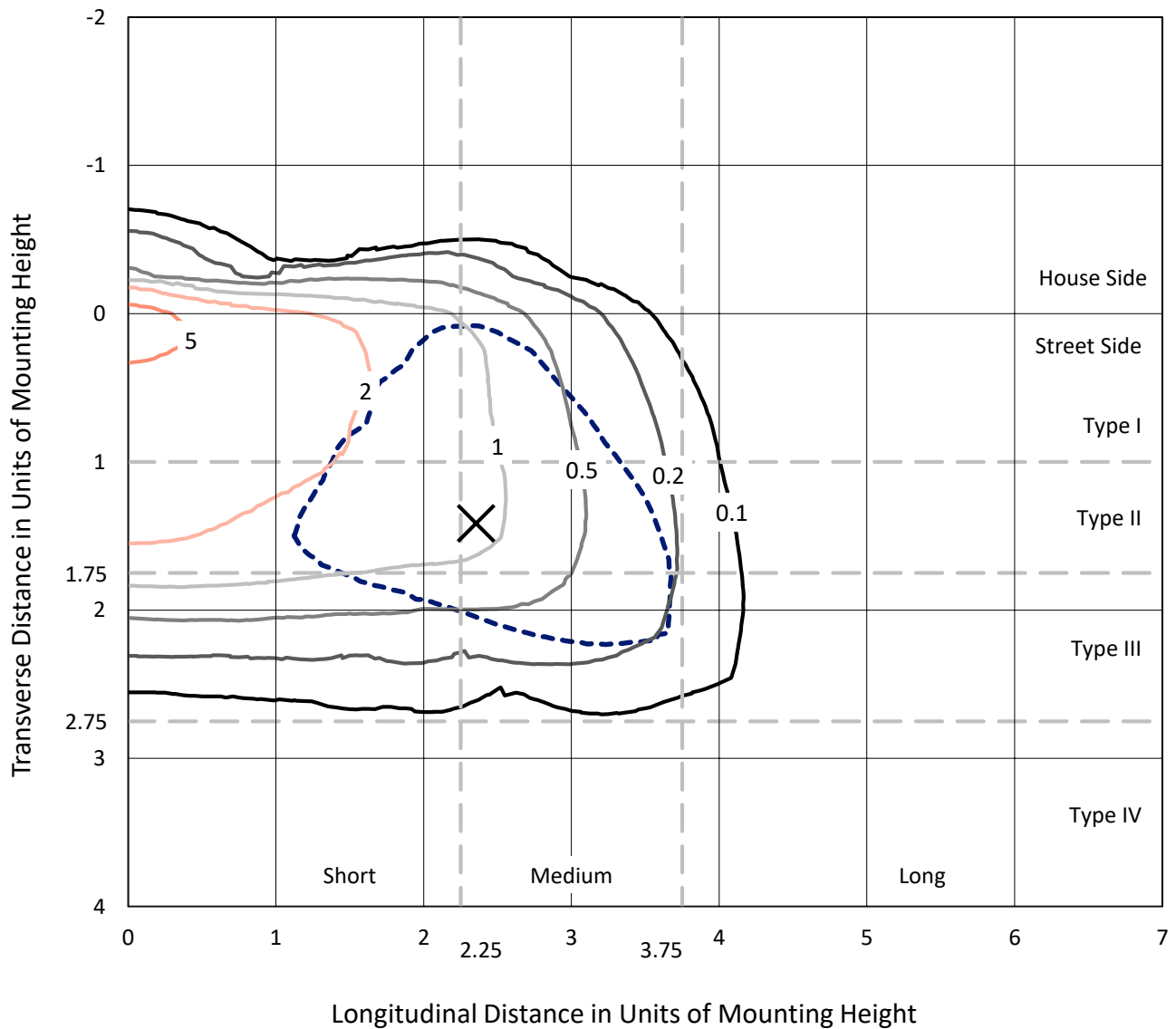
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196125
 CATALOG NUMBER: NAV-AF-03-D-UNV-SL3-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

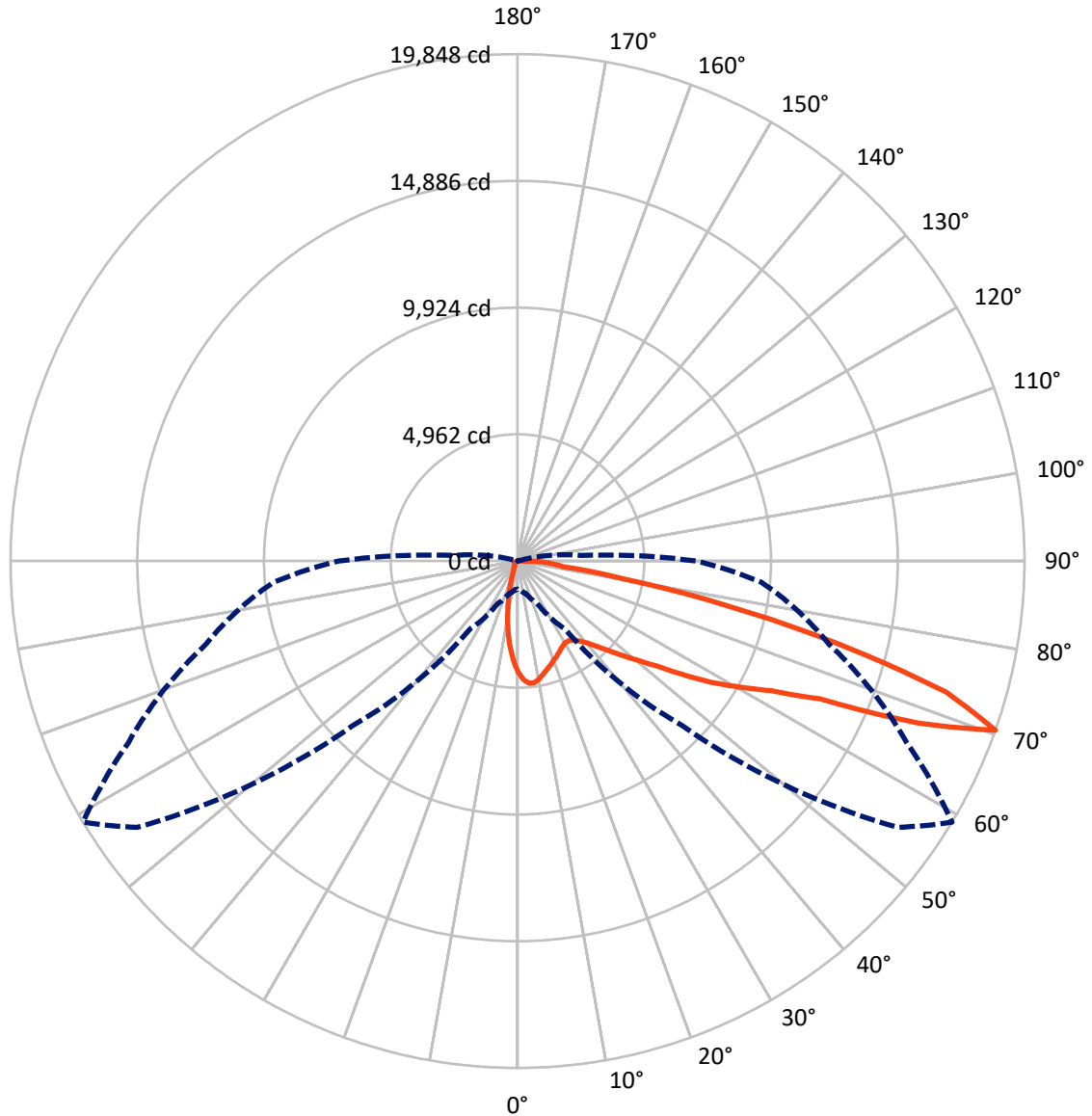
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.4 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P196125
CATALOG NUMBER: NAV-AF-03-D-UNV-SL3-1200-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196125

CATALOG NUMBER: NAV-AF-03-D-UNV-SL3-1200-HSS

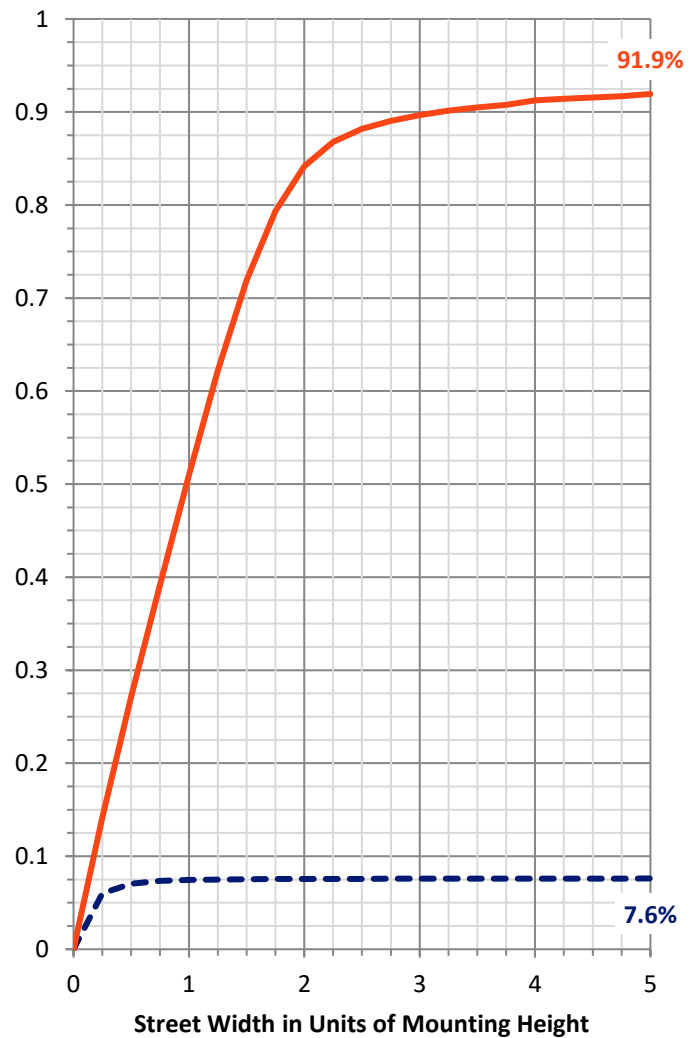
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1326.5	0.0	1326.5
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	15928.7	0.0	15928.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	17255.1	0.0	17255.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.8	2.1
10°-20°	752.5	4.4
20°-30°	1018.7	5.9
30°-40°	1470.1	8.5
40°-50°	2441.5	14.1
50°-60°	3734.6	21.6
60°-70°	4645.0	26.9
70°-80°	2567.7	14.9
80°-90°	266.2	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°	17255.1	100.0
0°-180°	17255.1	100.0



--- HS — SS

REPORT NUMBER: P196125

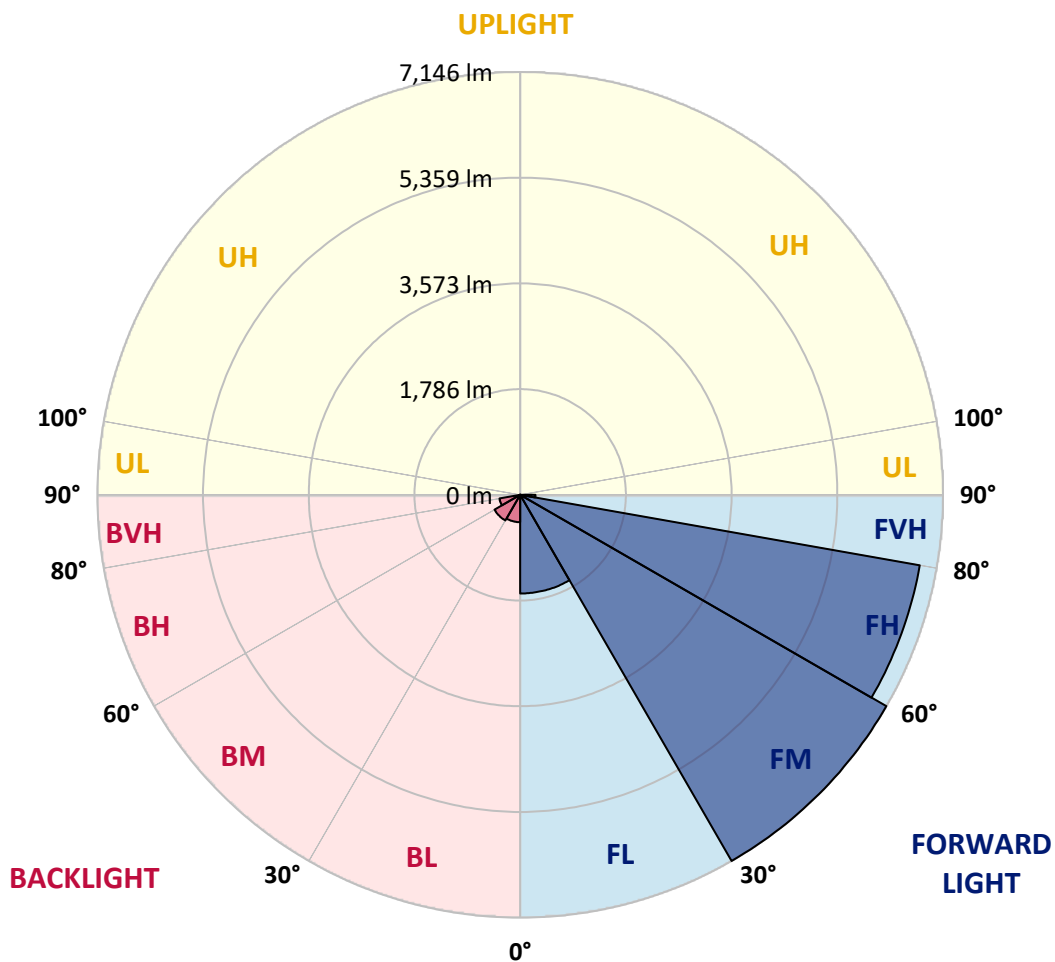
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1667.8	9.7			
FM	(30°-60°)	7145.5	41.4			
FH	(60°-80°)	6856.8	39.7			G3/7500
FVH	(80°-90°)	258.6	1.5			G3/500
BL	(0°-30°)	462.2	2.7	B1/500		
BM	(30°-60°)	500.7	2.9	B1/1000		
BH	(60°-80°)	355.8	2.1	B1/500		G1/500
BVH	(80°-90°)	7.7	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-G3

Type III Medium





REPORT NUMBER: P196125

CATALOG NUMBER: NAV-AF-03-D-UNV-SL3-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2
2.5°	4932.1	4924.2	4891.6	4885.2	4848.7	4775.9	4691.3	4657.4	4588.3	4479.1	4358.0
5°	5014.0	5018.0	5020.5	5006.2	5001.0	4941.2	4847.5	4807.1	4714.7	4535.0	4313.8
7.5°	4706.8	4717.2	4749.8	4764.1	4826.6	4850.0	4830.5	4804.5	4731.6	4519.4	4208.3
10°	4382.7	4402.3	4437.4	4460.8	4537.6	4600.1	4679.5	4686.0	4670.4	4467.3	4089.9
12.5°	4104.2	4122.4	4161.5	4208.3	4286.4	4367.1	4485.5	4527.2	4579.2	4433.5	4005.3
15°	3864.7	3869.8	3907.6	3966.2	4069.0	4179.7	4320.2	4381.4	4483.0	4420.5	3940.2
17.5°	3655.1	3656.4	3681.1	3734.5	3859.5	4005.3	4169.2	4250.0	4378.8	4402.3	3882.9
20°	3517.1	3515.8	3517.1	3545.8	3656.4	3829.5	4028.7	4113.3	4278.6	4380.2	3824.3
22.5°	3470.3	3463.7	3433.8	3423.4	3493.7	3646.0	3884.1	3994.8	4188.8	4373.6	3781.3
25°	3527.5	3523.7	3459.8	3400.0	3406.4	3501.5	3737.1	3872.5	4118.5	4397.1	3770.9
27.5°	3712.4	3704.5	3606.9	3489.8	3415.6	3432.5	3627.8	3769.7	4062.5	4454.3	3785.2
30°	3954.5	3955.8	3851.6	3709.7	3535.3	3439.1	3569.2	3703.3	4024.8	4540.3	3816.5
32.5°	4224.0	4222.6	4148.5	3984.4	3761.8	3558.7	3595.3	3708.5	4030.0	4666.5	3876.4
35°	4502.5	4488.2	4463.4	4318.9	4058.7	3768.3	3713.6	3797.0	4084.6	4833.1	3977.9
37.5°	4824.0	4818.8	4843.6	4691.3	4425.7	4076.9	3921.9	3977.9	4222.6	5079.2	4141.9
40°	5335.5	5306.9	5318.6	5111.7	4839.6	4492.1	4213.5	4227.9	4442.6	5404.6	4400.9
42.5°	6310.5	6194.7	5977.3	5589.4	5295.2	4952.8	4594.9	4570.1	4753.8	5798.9	4742.0
45°	7475.5	7342.7	6794.7	6116.5	5750.8	5447.5	5066.1	4999.7	5136.4	6268.8	5182.0
47.5°	8447.8	8304.6	7578.3	6667.2	6214.2	5957.8	5588.1	5510.0	5594.6	6814.3	5710.4
50°	8779.8	8700.4	8062.6	7125.4	6681.5	6530.5	6242.9	6112.6	6133.5	7402.6	6327.5
52.5°	8627.5	8600.2	8173.2	7439.1	7113.6	7163.1	6960.1	6823.4	6800.0	8045.6	7009.5
55°	8306.0	8293.0	8084.7	7613.5	7495.1	7742.3	7966.2	7847.8	7626.5	8729.0	7573.1
57.5°	7846.4	7896.0	8045.6	7949.4	7963.7	8354.1	8900.8	8962.0	8631.4	9273.2	7991.0
60°	6619.0	6751.8	7437.8	8309.8	8977.6	9372.1	9901.9	10016.3	9482.7	9645.4	8473.9
62.5°	4893.0	5083.0	6060.6	7662.9	9536.0	11307.6	11233.4	11182.7	10294.9	10143.9	9352.5
65°	2874.1	3096.7	3923.2	5987.6	8693.9	12552.0	13719.6	13016.7	11532.8	11180.0	10751.8
67.5°	1431.8	1433.2	1806.7	3160.5	6425.1	11683.8	17348.6	16942.5	14164.8	12706.9	11303.7
70°	1101.2	1131.2	1336.8	1836.7	3249.0	9100.0	18180.5	19847.9	16809.7	12639.3	9590.7
72.5°	933.3	952.8	1189.7	1598.5	2428.9	4995.8	15738.5	17543.9	16040.5	10678.9	7069.4
75°	671.7	687.3	1053.0	1450.0	2236.3	2478.4	10796.0	13011.5	12035.2	7511.9	3890.7
77.5°	166.6	165.3	367.0	1176.7	2000.7	2064.4	6194.7	8343.7	6905.3	3075.8	999.7
80°	74.2	71.6	83.3	247.3	1861.4	1948.6	2724.4	4213.5	2648.9	498.6	305.9
82.5°	52.1	49.5	52.1	91.1	622.2	1808.1	1646.6	1826.3	969.8	170.5	130.1
85°	16.9	15.7	28.6	76.8	174.4	1042.6	1606.2	1364.1	721.1	72.9	87.3
87.5°	2.6	2.6	10.4	41.6	50.7	347.5	942.4	945.0	324.1	43.0	39.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196125

CATALOG NUMBER: NAV-AF-03-D-UNV-SL3-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2	4363.2
2.5°	4296.8	4220.0	4112.0	4003.9	3906.3	3806.1	3725.4	3687.6	3670.8	3647.3	3596.5
5°	4197.9	4058.7	3821.7	3588.7	3371.3	3163.1	2984.8	2883.2	2773.8	2768.6	2715.3
7.5°	4039.1	3841.3	3467.7	3105.8	2773.8	2456.2	2182.9	2005.9	1884.8	1809.3	1757.2
10°	3862.0	3608.3	3113.6	2604.6	2153.0	1728.6	1377.2	1148.1	1008.8	938.5	898.2
12.5°	3721.5	3402.5	2764.7	2124.4	1558.1	1071.2	744.6	578.0	503.7	475.2	462.1
15°	3600.4	3213.8	2438.0	1694.8	1040.0	615.7	430.9	376.1	364.5	364.5	363.1
17.5°	3478.0	3031.6	2120.4	1273.1	654.8	403.6	339.7	331.9	333.3	337.2	337.2
20°	3362.2	2858.4	1814.5	907.3	429.5	322.8	308.5	305.9	309.7	315.0	313.7
22.5°	3268.5	2706.2	1528.2	623.5	330.6	292.9	283.8	279.9	282.4	286.3	285.1
25°	3202.1	2576.0	1265.2	434.8	287.7	266.9	256.5	251.2	248.6	251.2	249.9
27.5°	3161.7	2466.6	1017.9	326.7	257.7	240.8	227.8	217.4	210.8	210.8	208.3
30°	3135.8	2363.8	797.9	270.8	233.0	214.8	196.5	182.2	171.9	169.2	167.9
32.5°	3134.4	2275.3	596.2	239.5	209.6	188.7	166.6	148.4	136.7	134.1	132.8
35°	3167.0	2203.7	438.6	216.0	188.7	164.0	139.3	119.8	109.4	109.4	108.0
37.5°	3251.6	2162.1	331.9	197.8	171.9	143.2	117.1	98.9	89.8	92.4	92.4
40°	3409.1	2154.2	270.8	183.5	157.5	125.0	95.0	80.7	76.8	80.7	80.7
42.5°	3649.9	2196.0	240.8	173.1	144.4	106.7	79.4	68.9	67.7	71.6	71.6
45°	3963.6	2277.9	223.9	164.0	130.1	88.5	66.4	59.8	58.6	63.8	63.8
47.5°	4343.7	2388.6	208.3	153.6	115.8	72.9	56.0	50.7	50.7	56.0	57.3
50°	4794.1	2538.2	192.6	143.2	104.1	61.2	46.9	43.0	44.3	49.5	50.7
52.5°	5312.1	2721.8	178.3	134.1	91.1	49.5	39.1	36.4	37.7	43.0	44.3
55°	5758.6	2881.9	161.4	125.0	74.2	40.3	32.5	31.2	32.5	39.1	39.1
57.5°	6147.8	3035.5	145.8	110.7	58.6	32.5	26.0	26.0	28.6	35.2	36.4
60°	6664.5	3277.6	132.8	93.7	44.3	24.8	20.9	22.1	26.0	31.2	32.5
62.5°	7579.7	3689.0	115.8	78.1	32.5	19.5	16.9	18.2	23.4	30.0	31.2
65°	8725.1	4078.1	96.4	65.1	24.8	14.3	13.0	16.9	23.4	30.0	31.2
67.5°	8607.9	3547.1	75.5	52.1	18.2	11.8	10.4	15.7	22.1	30.0	31.2
70°	6980.8	2486.2	56.0	35.2	14.3	10.4	10.4	15.7	22.1	28.6	30.0
72.5°	4842.2	1383.6	43.0	23.4	13.0	10.4	9.1	14.3	20.9	28.6	30.0
75°	2304.0	424.3	33.9	16.9	11.8	9.1	7.8	14.3	20.9	28.6	30.0
77.5°	442.5	108.0	27.3	14.3	10.4	9.1	7.8	13.0	20.9	27.3	28.6
80°	149.7	48.2	22.1	13.0	10.4	9.1	7.8	13.0	19.5	26.0	27.3
82.5°	82.0	27.3	19.5	11.8	10.4	7.8	6.5	11.8	18.2	26.0	27.3
85°	63.8	19.5	15.7	11.8	10.4	7.8	6.5	11.8	18.2	24.8	26.0
87.5°	32.5	14.3	13.0	11.8	10.4	7.8	6.5	10.4	16.9	23.4	26.0
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)