

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: P197085

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197085
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-SL3-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 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: 13764 lumens
Efficiency: N/A
Efficacy: 72.1 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

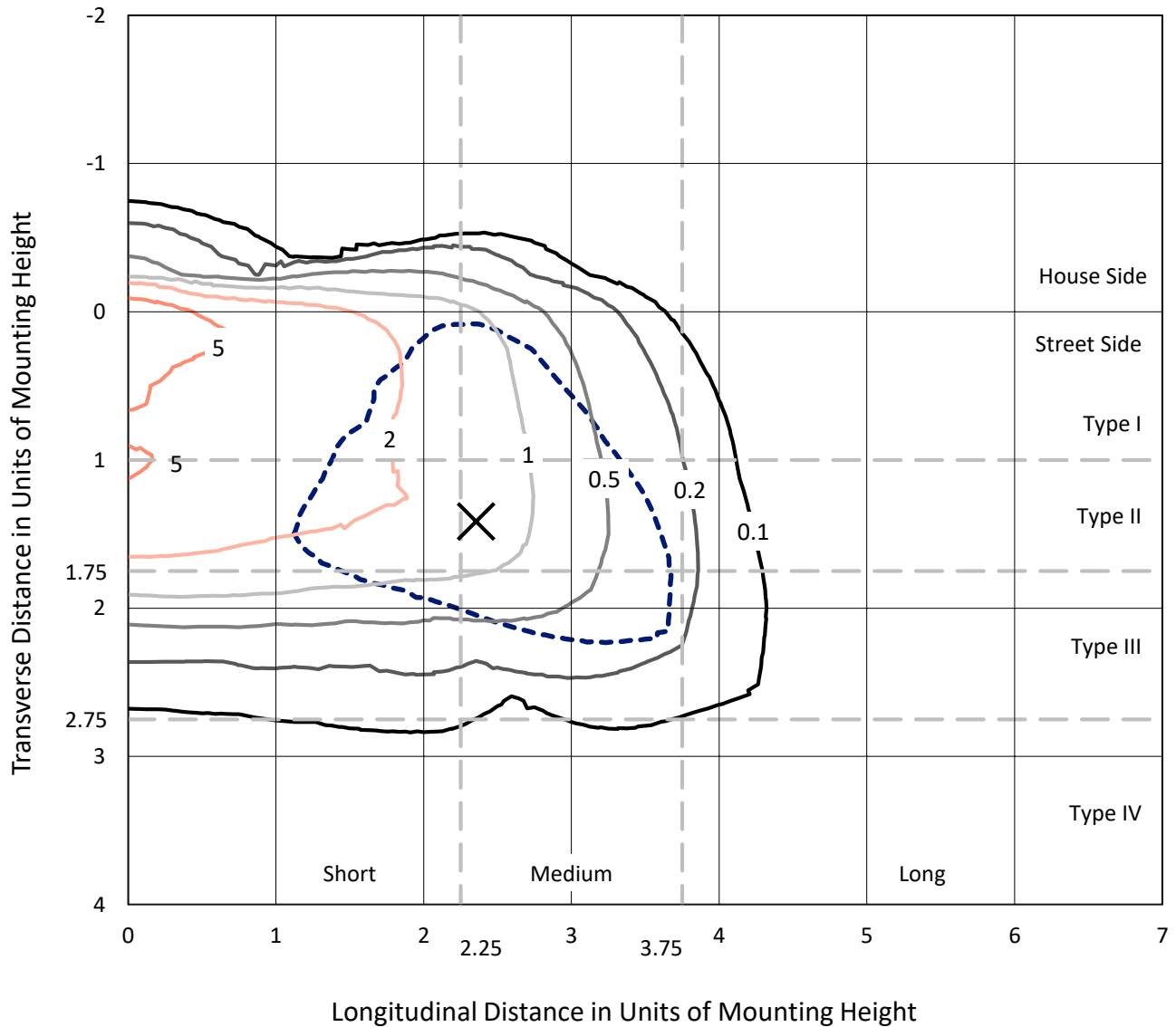
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

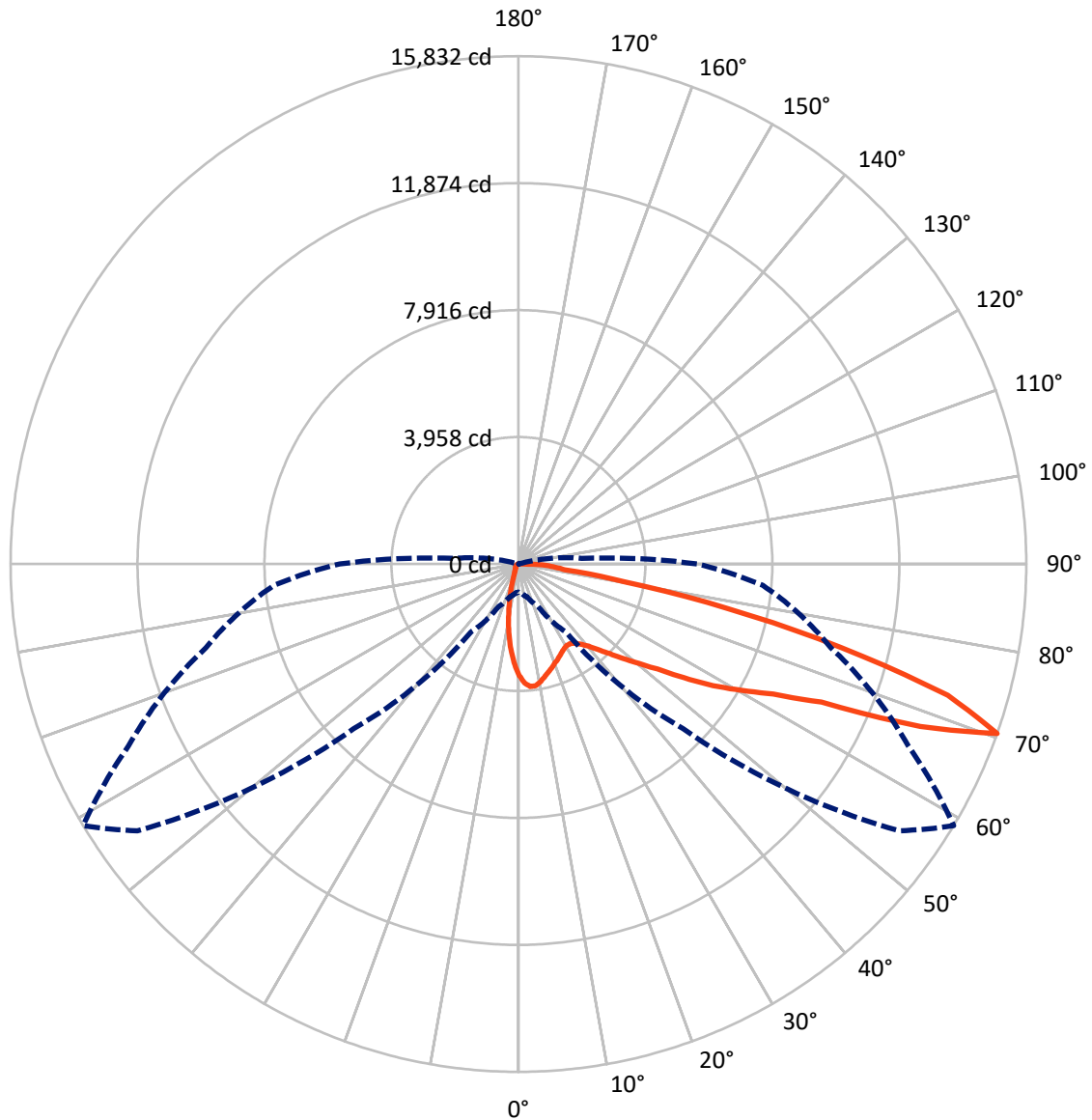
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.3 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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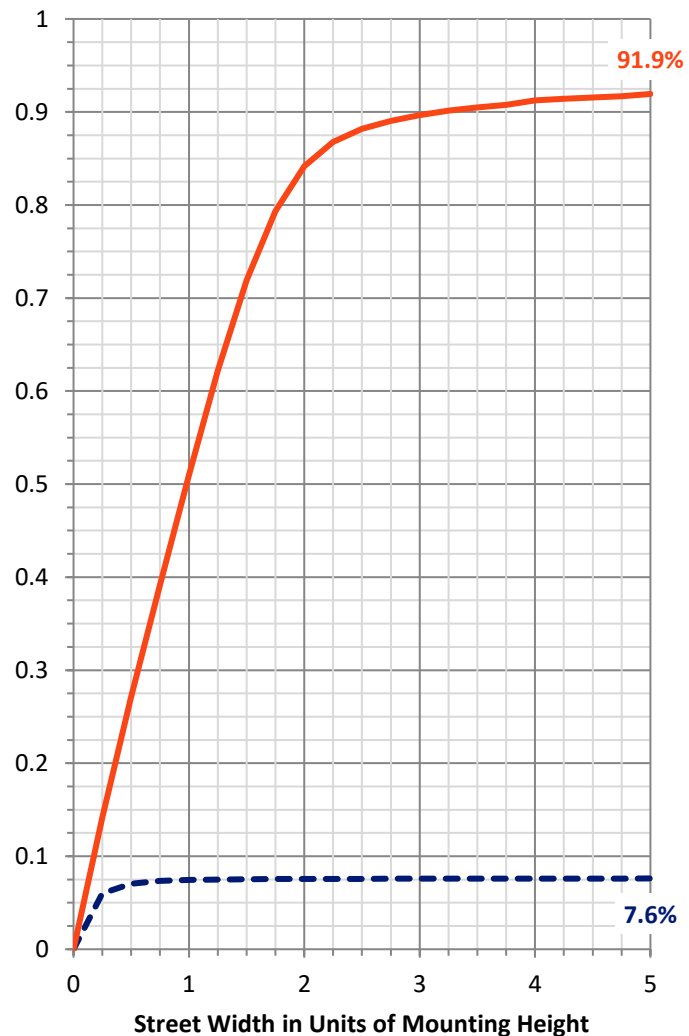
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1058.1	0.0	1058.1
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	12705.9	0.0	12705.9
	% Fixture	92.3	0.0	92.3
Total	Lumens	13764.0	0.0	13764.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	286.2	2.1
10°-20°	600.3	4.4
20°-30°	812.6	5.9
30°-40°	1172.7	8.5
40°-50°	1947.5	14.1
50°-60°	2979.0	21.6
60°-70°	3705.2	26.9
70°-80°	2048.2	14.9
80°-90°	212.4	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°	13764.0	100.0
0°-180°	13764.0	100.0



--- HS — SS

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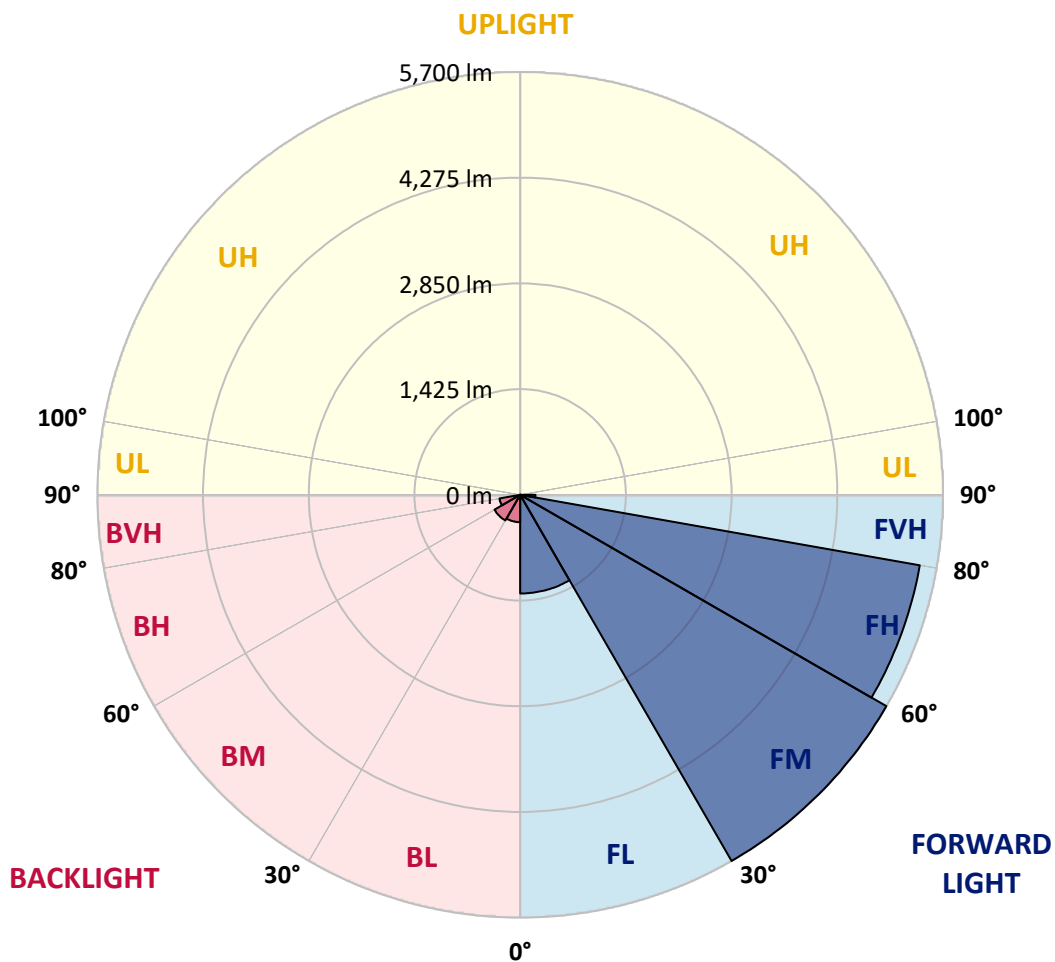
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1330.3	9.7			
FM	(30°-60°)	5699.8	41.4			
FH	(60°-80°)	5469.5	39.7			G3/7500
FVH	(80°-90°)	206.2	1.5			G2/225
BL	(0°-30°)	368.7	2.7	B1/500		
BM	(30°-60°)	399.4	2.9	B1/1000		
BH	(60°-80°)	283.8	2.1	B1/500		G1/500
BVH	(80°-90°)	6.1	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°	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4
2.5°	3934.2	3927.9	3902.0	3896.8	3867.7	3809.6	3742.1	3715.1	3660.0	3572.8	3476.3
5°	3999.6	4002.7	4004.8	3993.3	3989.2	3941.4	3866.7	3834.5	3760.8	3617.5	3441.0
7.5°	3754.5	3762.8	3788.8	3800.2	3850.1	3868.7	3853.2	3832.4	3774.3	3605.0	3356.9
10°	3496.0	3511.6	3539.6	3558.3	3619.6	3669.4	3732.7	3737.9	3725.5	3563.5	3262.4
12.5°	3273.8	3288.3	3319.5	3356.9	3419.2	3483.5	3578.0	3611.2	3652.8	3536.5	3194.9
15°	3082.7	3086.9	3117.0	3163.7	3245.8	3334.0	3446.2	3495.0	3575.9	3526.1	3143.0
17.5°	2915.6	2916.6	2936.3	2978.9	3078.6	3194.9	3325.7	3390.1	3492.9	3511.6	3097.3
20°	2805.5	2804.5	2805.5	2828.4	2916.6	3054.7	3213.6	3281.1	3412.9	3493.9	3050.6
22.5°	2768.1	2762.9	2739.1	2730.8	2786.8	2908.3	3098.3	3186.6	3341.3	3488.7	3016.3
25°	2813.8	2810.7	2759.8	2712.1	2717.3	2793.1	2981.0	3089.0	3285.2	3507.4	3008.0
27.5°	2961.3	2955.0	2877.2	2783.7	2724.5	2738.0	2893.8	3007.0	3240.6	3553.1	3019.4
30°	3154.4	3155.4	3072.4	2959.2	2820.1	2743.2	2847.1	2954.0	3210.5	3621.6	3044.3
32.5°	3369.3	3368.3	3309.1	3178.3	3000.7	2838.7	2867.8	2958.1	3214.6	3722.3	3092.1
35°	3591.5	3580.1	3560.4	3445.1	3237.5	3005.9	2962.3	3028.8	3258.2	3855.3	3173.1
37.5°	3848.0	3843.8	3863.6	3742.1	3530.3	3252.0	3128.4	3173.1	3368.3	4051.5	3303.9
40°	4256.0	4233.2	4242.5	4077.4	3860.4	3583.2	3361.0	3372.4	3543.8	4311.1	3510.5
42.5°	5033.7	4941.3	4767.9	4458.5	4223.9	3950.8	3665.2	3645.5	3791.9	4625.7	3782.6
45°	5963.0	5857.1	5420.0	4879.0	4587.3	4345.3	4041.1	3988.2	4097.2	5000.5	4133.5
47.5°	6738.6	6624.4	6045.0	5318.2	4956.9	4752.4	4457.5	4395.2	4462.7	5435.6	4555.1
50°	7003.4	6940.1	6431.3	5683.7	5329.7	5209.2	4979.7	4875.9	4892.5	5904.9	5047.2
52.5°	6881.9	6860.1	6519.6	5934.0	5674.4	5713.8	5551.9	5442.8	5424.1	6417.8	5591.3
55°	6625.5	6615.1	6449.0	6073.1	5978.6	6175.9	6354.5	6260.0	6083.5	6962.9	6040.9
57.5°	6258.9	6298.4	6417.8	6341.0	6352.4	6663.9	7100.0	7148.8	6885.0	7396.9	6374.2
60°	5279.8	5385.7	5932.9	6628.6	7161.2	7475.8	7898.4	7989.8	7564.1	7693.9	6759.4
62.5°	3903.0	4054.6	4834.4	6112.5	7606.7	9019.8	8960.6	8920.1	8212.0	8091.6	7460.3
65°	2292.6	2470.1	3129.5	4776.2	6934.9	10012.4	10943.8	10383.1	9199.4	8918.1	8576.5
67.5°	1142.1	1143.2	1441.2	2521.0	5125.1	9319.9	13838.6	13514.7	11298.9	10136.0	9016.7
70°	878.4	902.3	1066.3	1465.1	2591.6	7258.8	14502.1	15832.2	13408.8	10082.0	7650.3
72.5°	744.5	760.0	949.0	1275.0	1937.5	3985.0	12554.2	13994.4	12795.1	8518.3	5639.1
75°	535.8	548.2	840.0	1156.7	1783.8	1976.9	8611.8	10379.0	9600.2	5992.1	3103.5
77.5°	132.9	131.9	292.8	938.6	1595.9	1646.8	4941.3	6655.6	5508.2	2453.5	797.4
80°	59.2	57.1	66.5	197.3	1484.8	1554.4	2173.2	3361.0	2113.0	397.7	244.0
82.5°	41.5	39.5	41.5	72.7	496.3	1442.2	1313.5	1456.8	773.5	136.0	103.8
85°	13.5	12.5	22.8	61.3	139.1	831.7	1281.3	1088.2	575.2	58.1	69.6
87.5°	2.1	2.1	8.3	33.2	40.5	277.2	751.7	753.8	258.5	34.3	31.1
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°	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4	3480.4
2.5°	3427.5	3366.2	3280.0	3193.8	3116.0	3036.0	2971.6	2941.5	2928.0	2909.3	2868.9
5°	3348.6	3237.5	3048.5	2862.6	2689.2	2523.1	2380.8	2299.9	2212.6	2208.5	2165.9
7.5°	3221.9	3064.1	2766.1	2477.4	2212.6	1959.3	1741.2	1600.0	1503.5	1443.3	1401.7
10°	3080.7	2878.2	2483.6	2077.7	1717.4	1378.9	1098.5	915.8	804.7	748.6	716.4
12.5°	2968.5	2714.1	2205.4	1694.5	1242.9	854.5	593.9	461.0	401.8	379.0	368.6
15°	2872.0	2563.6	1944.8	1351.9	829.6	491.1	343.7	300.1	290.7	290.7	289.7
17.5°	2774.4	2418.2	1691.4	1015.5	522.3	321.9	271.0	264.8	265.8	268.9	268.9
20°	2682.0	2280.1	1447.4	723.7	342.6	257.5	246.1	244.0	247.1	251.3	250.2
22.5°	2607.2	2158.6	1219.0	497.4	263.7	233.6	226.4	223.2	225.3	228.4	227.4
25°	2554.2	2054.8	1009.2	346.8	229.5	212.9	204.5	200.4	198.3	200.4	199.4
27.5°	2522.1	1967.6	812.0	260.6	205.6	192.1	181.7	173.4	168.2	168.2	166.1
30°	2501.3	1885.6	636.5	216.0	185.9	171.3	156.8	145.4	137.1	135.0	133.9
32.5°	2500.3	1815.0	475.5	191.0	167.2	150.6	132.9	118.4	109.0	106.9	105.9
35°	2526.2	1757.9	349.9	172.4	150.6	130.8	111.1	95.5	87.2	87.2	86.2
37.5°	2593.7	1724.6	264.8	157.8	137.1	114.2	93.4	78.9	71.6	73.7	73.7
40°	2719.3	1718.4	216.0	146.4	125.6	99.7	75.8	64.4	61.3	64.4	64.4
42.5°	2911.4	1751.6	192.1	138.1	115.3	85.1	63.3	55.0	54.0	57.1	57.1
45°	3161.7	1817.0	178.6	130.8	103.8	70.6	53.0	47.8	46.7	50.9	50.9
47.5°	3464.8	1905.3	166.1	122.5	92.4	58.1	44.6	40.5	40.5	44.6	45.7
50°	3824.1	2024.7	153.7	114.2	83.1	48.8	37.4	34.3	35.3	39.5	40.5
52.5°	4237.3	2171.1	142.2	106.9	72.7	39.5	31.1	29.1	30.1	34.3	35.3
55°	4593.5	2298.8	128.8	99.7	59.2	32.2	26.0	24.9	26.0	31.1	31.1
57.5°	4903.9	2421.3	116.3	88.3	46.7	26.0	20.8	20.8	22.8	28.0	29.1
60°	5316.2	2614.5	105.9	74.8	35.3	19.7	16.6	17.7	20.8	24.9	26.0
62.5°	6046.1	2942.6	92.4	62.3	26.0	15.6	13.5	14.5	18.7	23.9	24.9
65°	6959.8	3253.0	76.8	51.9	19.7	11.4	10.4	13.5	18.7	23.9	24.9
67.5°	6866.4	2829.4	60.2	41.5	14.5	9.3	8.3	12.5	17.7	23.9	24.9
70°	5568.5	1983.2	44.6	28.0	11.4	8.3	8.3	12.5	17.7	22.8	23.9
72.5°	3862.5	1103.7	34.3	18.7	10.4	8.3	7.3	11.4	16.6	22.8	23.9
75°	1837.8	338.5	27.0	13.5	9.3	7.3	6.2	11.4	16.6	22.8	23.9
77.5°	353.0	86.2	21.8	11.4	8.3	7.3	6.2	10.4	16.6	21.8	22.8
80°	119.4	38.4	17.7	10.4	8.3	7.3	6.2	10.4	15.6	20.8	21.8
82.5°	65.4	21.8	15.6	9.3	8.3	6.2	5.2	9.3	14.5	20.8	21.8
85°	50.9	15.6	12.5	9.3	8.3	6.2	5.2	9.3	14.5	19.7	20.8
87.5°	26.0	11.4	10.4	9.3	8.3	6.2	5.2	8.3	13.5	18.7	20.8
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)