

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: P196599

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196599
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-SL3-7030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 1050mA 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: 14872.4 lumens
Efficiency: N/A
Efficacy: 89.6 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

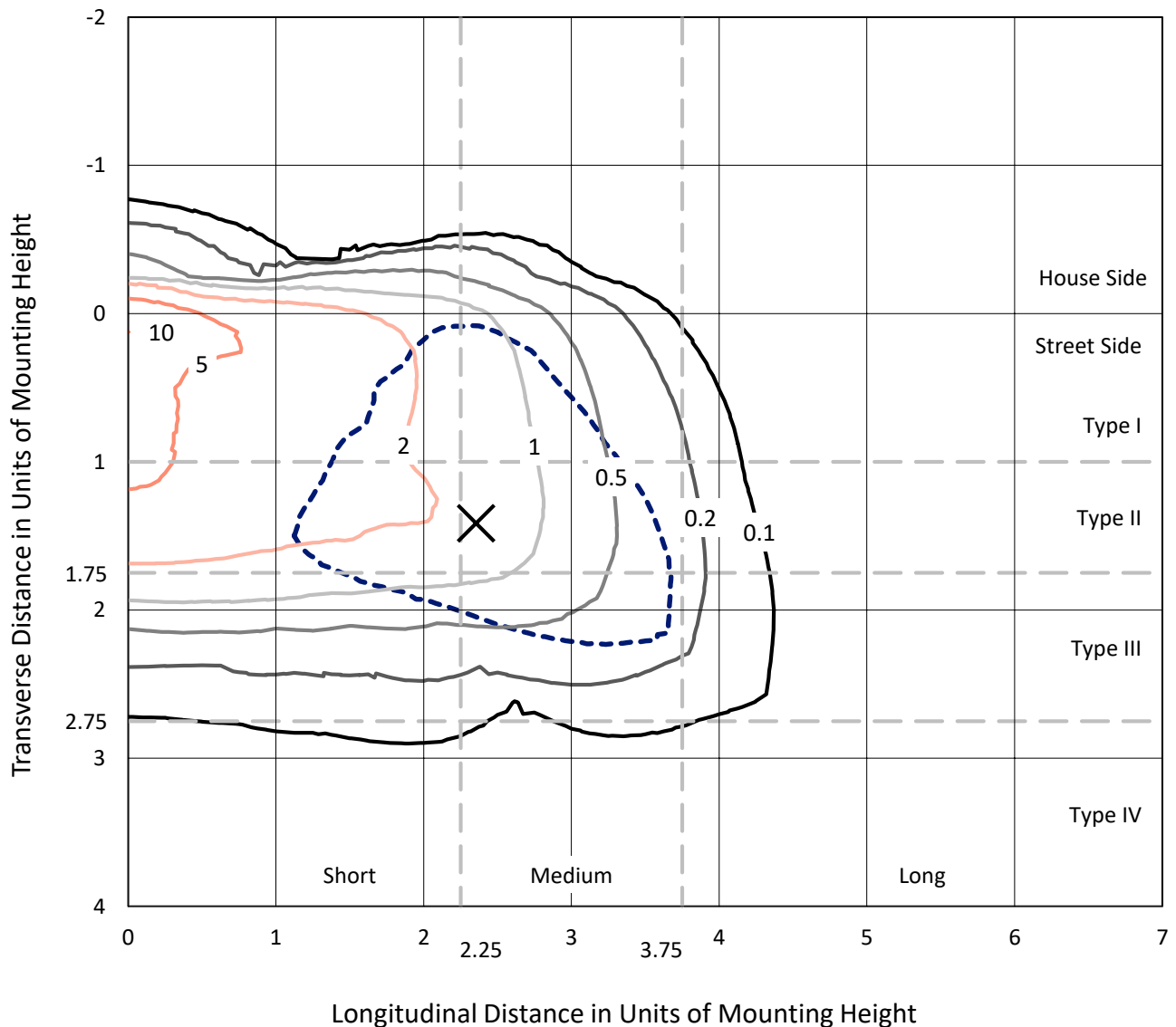
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

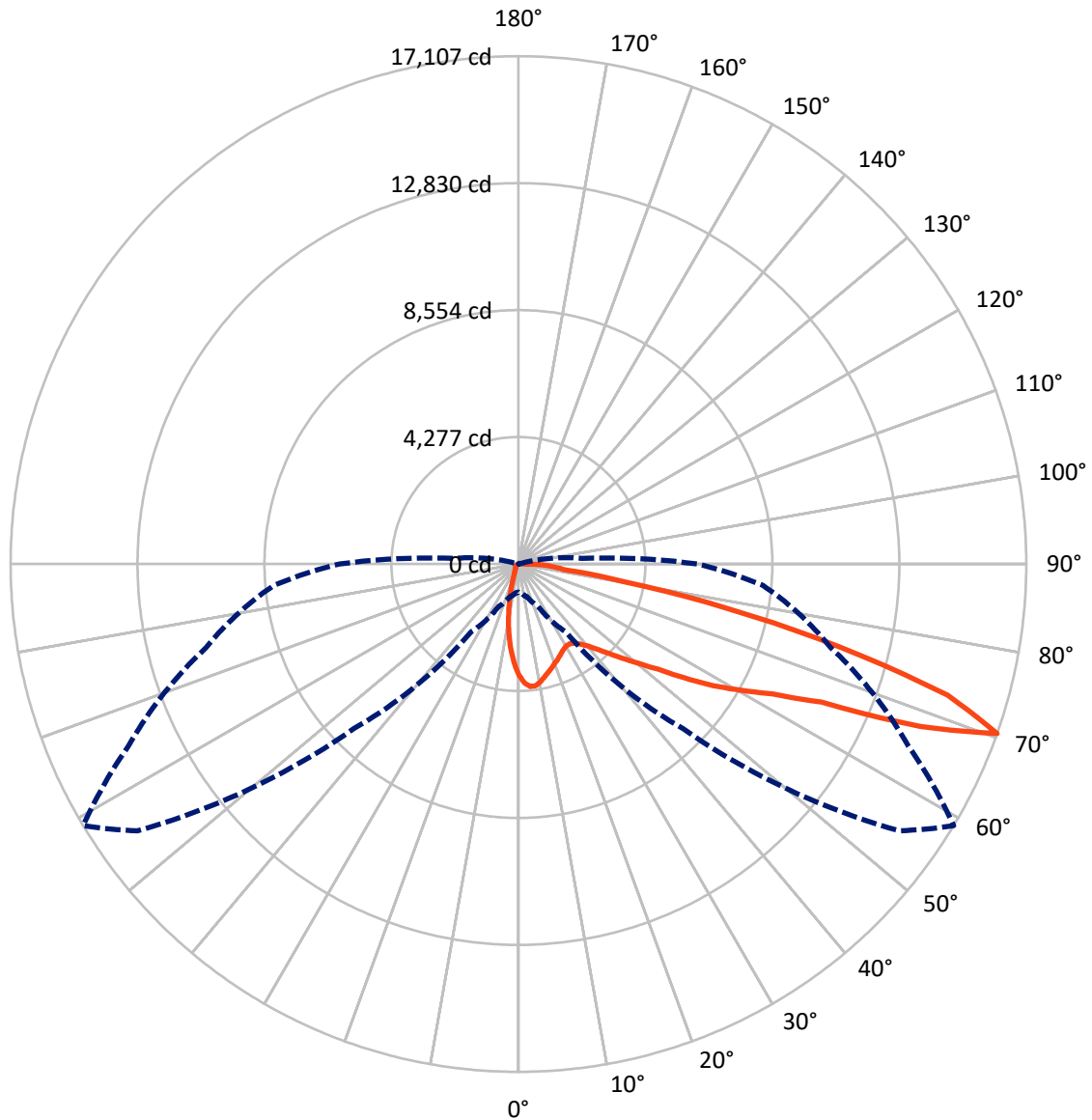


Based on 20 foot mounting height. Maximum calculated value = 10 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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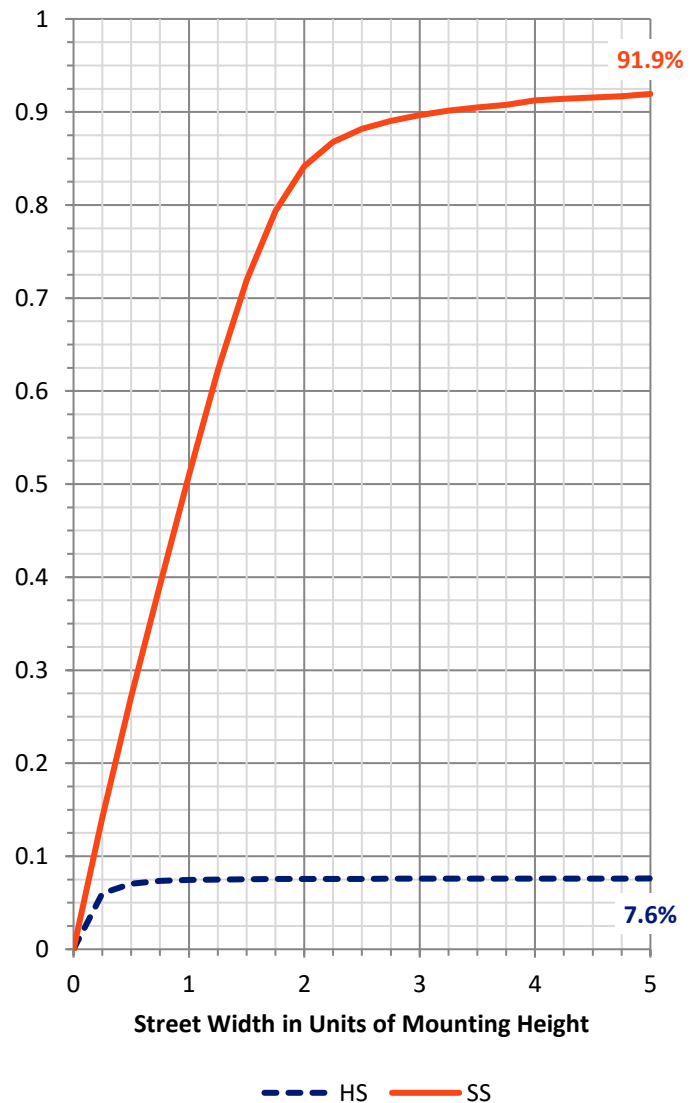
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1143.3	0.0	1143.3
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	13729.1	0.0	13729.1
	% Fixture	92.3	0.0	92.3
Total	Lumens	14872.4	0.0	14872.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	309.2	2.1
10°-20°	648.6	4.4
20°-30°	878.0	5.9
30°-40°	1267.1	8.5
40°-50°	2104.4	14.1
50°-60°	3218.9	21.6
60°-70°	4003.5	26.9
70°-80°	2213.1	14.9
80°-90°	229.5	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°	14872.4	100.0
0°-180°	14872.4	100.0

Coefficient of Utilization



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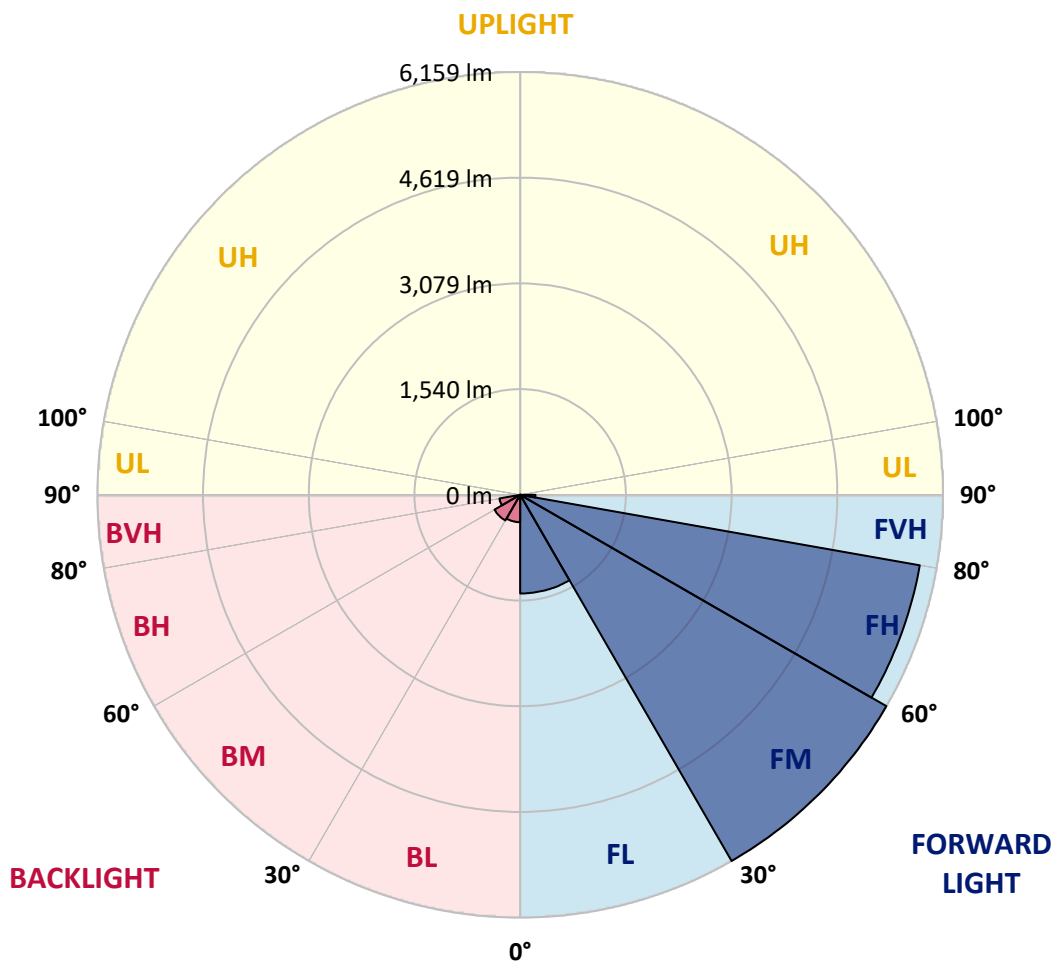
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1437.5	9.7			
FM	(30°-60°)	6158.8	41.4			
FH	(60°-80°)	5910.0	39.7			G3/7500
FVH	(80°-90°)	222.9	1.5			G2/225
BL	(0°-30°)	398.4	2.7	B1/500		
BM	(30°-60°)	431.6	2.9	B1/1000		
BH	(60°-80°)	306.7	2.1	B1/500		G1/500
BVH	(80°-90°)	6.6	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°	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7
2.5°	4250.9	4244.2	4216.2	4210.6	4179.1	4116.4	4043.3	4014.3	3954.7	3860.5	3756.3
5°	4321.6	4325.0	4327.2	4314.8	4310.4	4258.8	4178.1	4143.2	4063.6	3908.7	3718.1
7.5°	4056.9	4065.9	4094.0	4106.3	4160.0	4180.3	4163.5	4141.0	4078.2	3895.3	3627.2
10°	3777.5	3794.3	3824.6	3844.9	3911.1	3964.9	4033.3	4038.9	4025.4	3850.4	3525.0
12.5°	3537.4	3553.1	3586.8	3627.2	3694.5	3764.1	3866.1	3902.0	3946.9	3821.3	3452.1
15°	3331.0	3335.4	3368.0	3418.5	3507.1	3602.5	3723.7	3776.4	3864.0	3810.1	3396.1
17.5°	3150.4	3151.5	3172.8	3218.8	3326.5	3452.1	3593.5	3663.0	3774.2	3794.3	3346.7
20°	3031.4	3030.3	3031.4	3056.1	3151.5	3300.7	3472.4	3545.3	3687.7	3775.2	3296.3
22.5°	2991.1	2985.4	2959.7	2950.6	3011.3	3142.6	3347.8	3443.2	3610.4	3769.7	3259.2
25°	3040.4	3037.1	2982.1	2930.5	2936.2	3018.0	3221.1	3337.8	3549.8	3789.8	3250.3
27.5°	3199.7	3193.0	3108.9	3007.9	2943.9	2958.5	3126.8	3249.1	3501.5	3839.3	3262.6
30°	3408.5	3409.6	3319.8	3197.5	3047.1	2964.1	3076.3	3191.9	3469.0	3913.2	3289.5
32.5°	3640.6	3639.5	3575.6	3434.2	3242.4	3067.4	3098.7	3196.4	3473.5	4022.1	3341.0
35°	3880.8	3868.5	3847.1	3722.6	3498.2	3248.0	3200.9	3272.7	3520.6	4165.7	3428.5
37.5°	4157.9	4153.4	4174.7	4043.3	3814.6	3513.9	3380.4	3428.5	3639.5	4377.7	3569.9
40°	4598.7	4574.0	4584.2	4405.8	4171.3	3871.7	3631.7	3644.1	3829.1	4658.3	3793.3
42.5°	5439.0	5339.3	5151.9	4817.6	4564.0	4268.9	3960.4	3939.2	4097.2	4998.2	4087.2
45°	6443.2	6328.8	5856.4	5271.9	4956.6	4695.2	4366.5	4309.3	4427.0	5403.2	4466.4
47.5°	7281.2	7157.9	6531.8	5746.5	5356.1	5135.0	4816.3	4749.1	4822.0	5873.2	4921.9
50°	7567.4	7498.9	6949.2	6141.5	5758.8	5628.7	5380.7	5268.6	5286.5	6380.4	5453.6
52.5°	7436.0	7412.5	7044.6	6411.8	6131.3	6173.9	5998.9	5881.1	5860.8	6934.5	6041.6
55°	7159.0	7147.7	6968.2	6562.1	6460.1	6673.2	6866.2	6764.0	6573.4	7523.6	6527.3
57.5°	6762.9	6805.5	6934.5	6851.5	6863.8	7200.5	7671.7	7724.4	7439.5	7992.6	6887.4
60°	5705.0	5819.3	6410.7	7162.4	7738.0	8077.9	8534.5	8633.2	8173.2	8313.4	7303.8
62.5°	4217.3	4381.1	5223.6	6604.7	8219.2	9746.2	9682.2	9638.5	8873.3	8743.2	8061.0
65°	2477.2	2669.1	3381.5	5160.9	7493.3	10818.8	11825.0	11219.3	9940.2	9636.2	9267.1
67.5°	1234.1	1235.2	1557.3	2724.1	5537.8	10070.4	14953.0	14602.9	12208.7	10952.2	9742.7
70°	949.1	974.9	1152.2	1583.0	2800.4	7843.4	15669.9	17107.0	14488.6	10893.9	8266.3
72.5°	804.3	821.3	1025.4	1377.8	2093.5	4305.9	13565.2	15121.3	13825.4	9204.2	6093.2
75°	579.0	592.4	907.6	1249.8	1927.5	2136.1	9305.3	11214.7	10373.3	6474.6	3353.3
77.5°	143.5	142.5	316.5	1014.3	1724.4	1779.4	5339.3	7191.6	5951.8	2651.0	861.6
80°	63.9	61.7	71.8	213.2	1604.4	1679.6	2348.2	3631.7	2283.1	429.7	263.7
82.5°	44.9	42.6	44.9	78.5	536.3	1558.4	1419.3	1574.1	835.9	147.0	112.2
85°	14.5	13.4	24.7	66.2	150.3	898.6	1384.5	1175.7	621.5	62.9	75.2
87.5°	2.3	2.3	9.0	35.9	43.7	299.6	812.3	814.5	279.3	37.0	33.7
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°	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7	3760.7
2.5°	3703.5	3637.2	3544.2	3451.1	3367.0	3280.5	3210.9	3178.5	3163.8	3143.6	3099.9
5°	3618.2	3498.2	3293.9	3093.1	2905.8	2726.2	2572.6	2485.1	2390.8	2386.3	2340.4
7.5°	3481.3	3310.8	2988.8	2677.0	2390.8	2117.1	1881.5	1728.9	1624.5	1559.4	1514.6
10°	3328.7	3109.9	2683.6	2245.0	1855.7	1490.0	1187.0	989.6	869.4	808.9	774.1
12.5°	3207.7	2932.7	2383.0	1830.9	1342.9	923.4	641.8	498.1	434.2	409.5	398.2
15°	3103.3	2770.0	2101.4	1460.8	896.4	530.7	371.4	324.3	314.1	314.1	313.0
17.5°	2997.7	2612.9	1827.6	1097.3	564.4	347.8	292.9	286.0	287.3	290.6	290.6
20°	2897.9	2463.8	1563.9	782.0	370.3	278.3	265.9	263.7	267.0	271.5	270.4
22.5°	2817.1	2332.4	1317.1	537.4	284.9	252.4	244.6	241.3	243.4	246.8	245.8
25°	2759.9	2220.2	1090.5	374.8	247.9	230.0	221.0	216.6	214.2	216.6	215.5
27.5°	2725.2	2126.0	877.4	281.6	222.2	207.6	196.3	187.4	181.7	181.7	179.5
30°	2702.7	2037.4	687.8	233.4	200.8	185.0	169.5	157.2	148.0	145.9	144.8
32.5°	2701.6	1961.1	513.8	206.4	180.6	162.7	143.5	128.0	117.8	115.6	114.4
35°	2729.7	1899.4	378.0	186.3	162.7	141.4	120.0	103.2	94.3	94.3	93.1
37.5°	2802.6	1863.5	286.0	170.6	148.0	123.5	100.9	85.2	77.5	79.6	79.6
40°	2938.3	1856.8	233.4	158.2	135.7	107.7	82.0	69.6	66.2	69.6	69.6
42.5°	3145.9	1892.7	207.6	149.2	124.5	92.0	68.4	59.4	58.4	61.7	61.7
45°	3416.2	1963.4	193.0	141.4	112.2	76.3	57.3	51.6	50.5	54.9	54.9
47.5°	3743.9	2058.8	179.5	132.4	99.9	62.9	48.3	43.7	43.7	48.3	49.3
50°	4132.0	2187.7	166.1	123.5	89.7	52.8	40.4	37.0	38.1	42.6	43.7
52.5°	4578.6	2345.9	153.7	115.6	78.5	42.6	33.7	31.4	32.6	37.0	38.1
55°	4963.4	2483.9	139.1	107.7	63.9	34.8	28.1	26.9	28.1	33.7	33.7
57.5°	5298.8	2616.3	125.6	95.4	50.5	28.1	22.4	22.4	24.7	30.3	31.4
60°	5744.2	2825.0	114.4	80.8	38.1	21.3	17.9	19.1	22.4	26.9	28.1
62.5°	6532.9	3179.6	99.9	67.3	28.1	16.8	14.5	15.8	20.2	25.7	26.9
65°	7520.2	3515.0	83.0	56.0	21.3	12.3	11.3	14.5	20.2	25.7	26.9
67.5°	7419.2	3057.3	65.1	44.9	15.8	10.1	9.0	13.4	19.1	25.7	26.9
70°	6016.9	2142.9	48.3	30.3	12.3	9.0	9.0	13.4	19.1	24.7	25.7
72.5°	4173.6	1192.6	37.0	20.2	11.3	9.0	7.8	12.3	17.9	24.7	25.7
75°	1985.8	365.8	29.2	14.5	10.1	7.8	6.8	12.3	17.9	24.7	25.7
77.5°	381.5	93.1	23.6	12.3	9.0	7.8	6.8	11.3	17.9	23.6	24.7
80°	129.0	41.5	19.1	11.3	9.0	7.8	6.8	11.3	16.8	22.4	23.6
82.5°	70.7	23.6	16.8	10.1	9.0	6.8	5.6	10.1	15.8	22.4	23.6
85°	54.9	16.8	13.4	10.1	9.0	6.8	5.6	10.1	15.8	21.3	22.4
87.5°	28.1	12.3	11.3	10.1	9.0	6.8	5.6	9.0	14.5	20.2	22.4
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)