

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: P197069

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197069
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-05-D-UNV-SL3-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 615mA 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: 13723 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 162
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

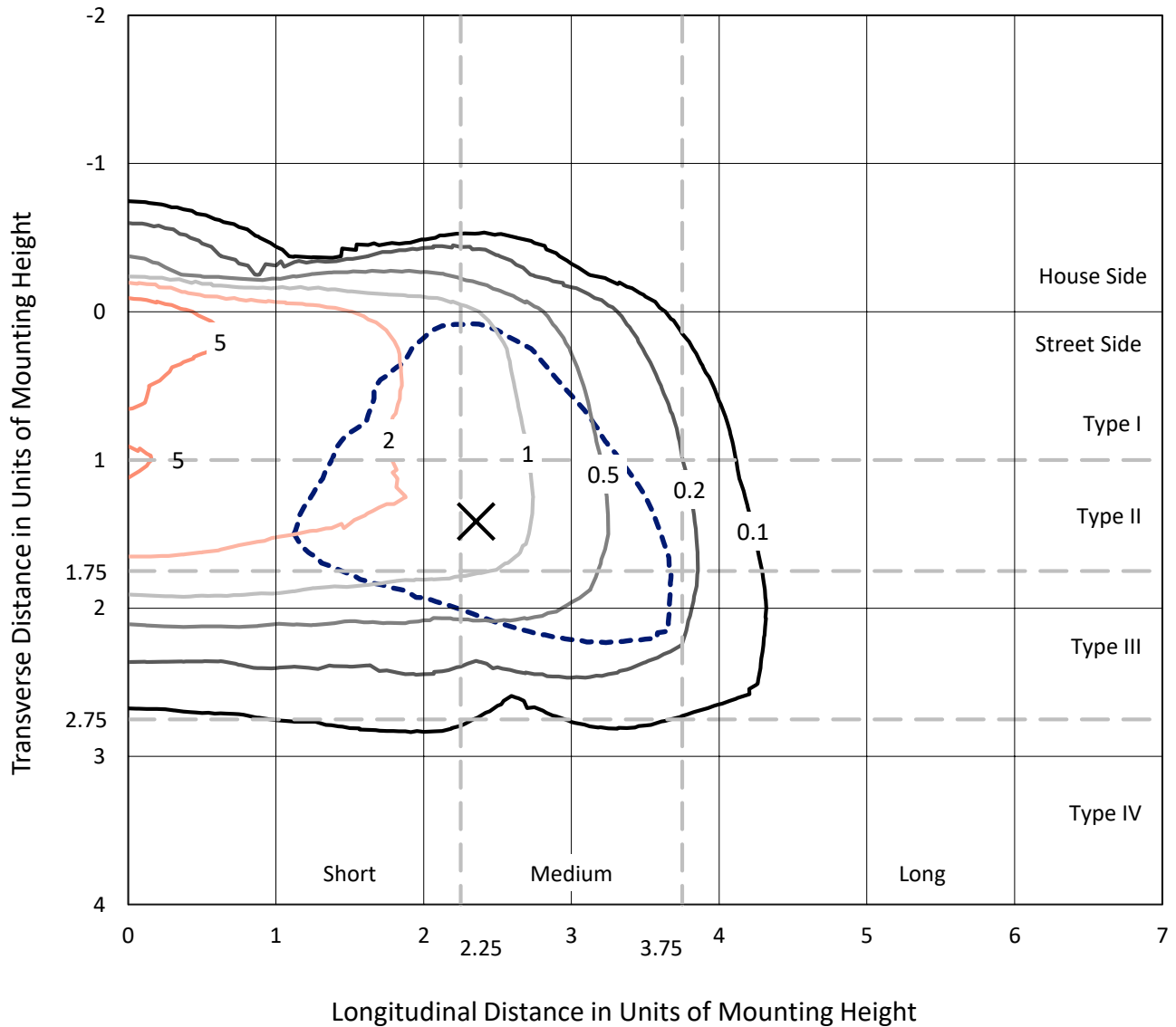


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

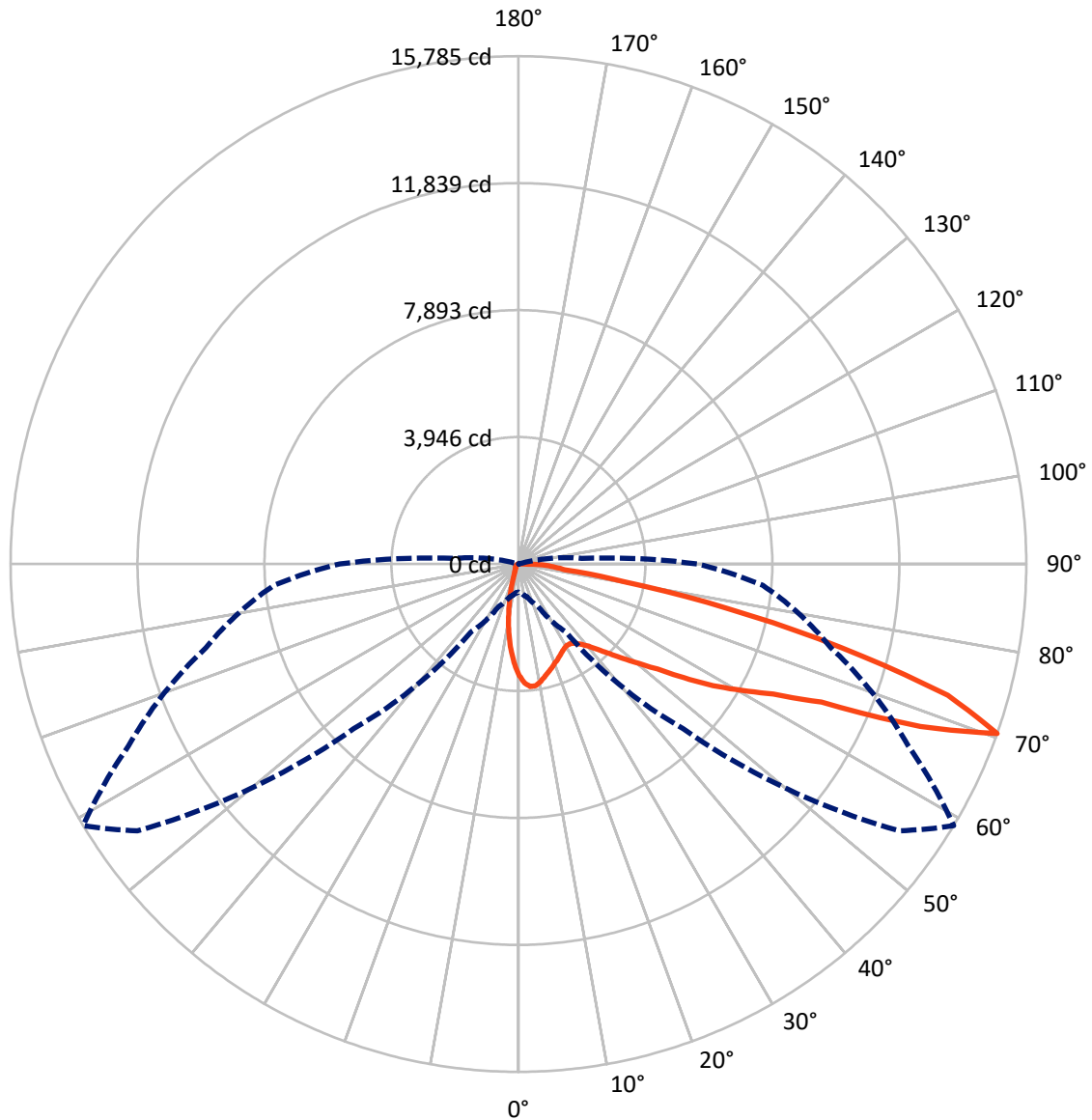


Based on 20 foot mounting height. Maximum calculated value = 9.2 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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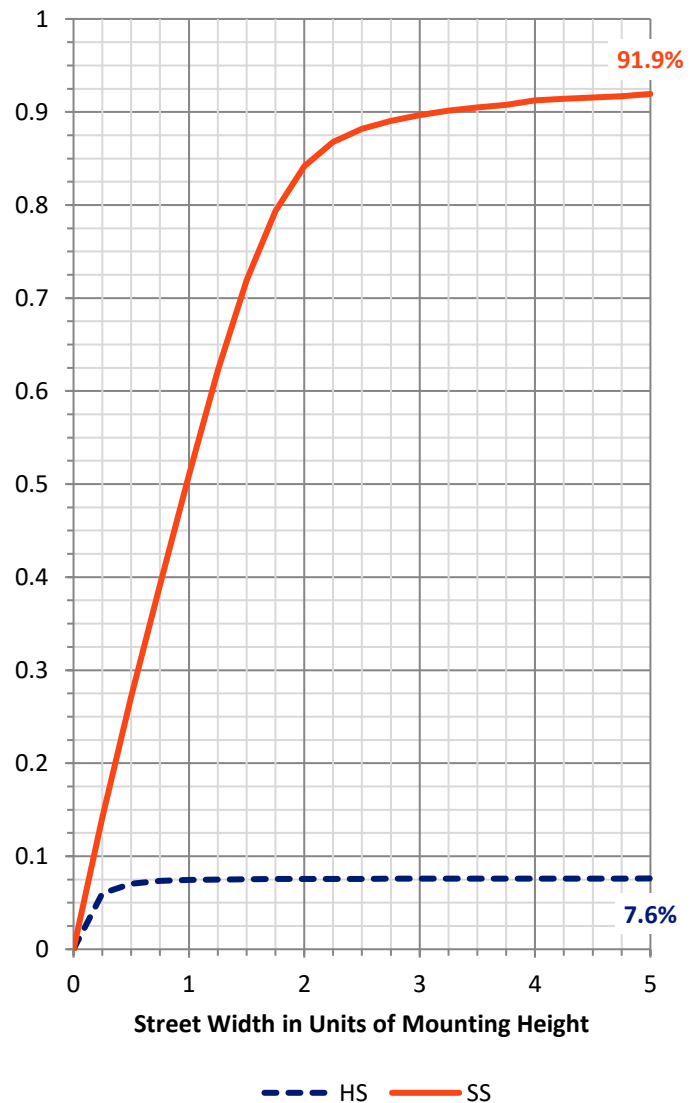
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1054.9	0.0	1054.9
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	12668.1	0.0	12668.1
	% Fixture	92.3	0.0	92.3
Total	Lumens	13723.0	0.0	13723.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.3	2.1
10°-20°	598.5	4.4
20°-30°	810.2	5.9
30°-40°	1169.2	8.5
40°-50°	1941.7	14.1
50°-60°	2970.1	21.6
60°-70°	3694.1	26.9
70°-80°	2042.1	14.9
80°-90°	211.7	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°	13723.0	100.0
0°-180°	13723.0	100.0



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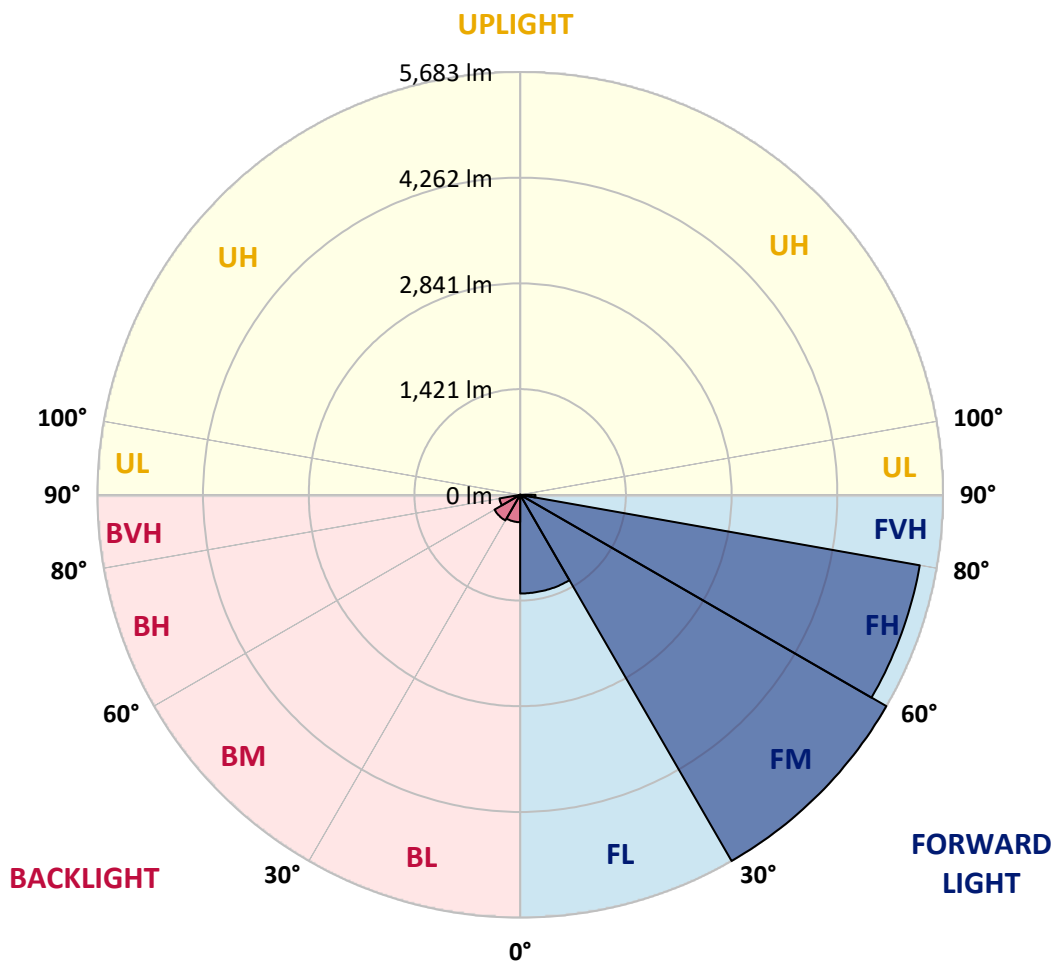
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1326.4	9.7			
FM	(30°-60°)	5682.8	41.4			
FH	(60°-80°)	5453.2	39.7			G3/7500
FVH	(80°-90°)	205.6	1.5			G2/225
BL	(0°-30°)	367.6	2.7	B1/500		
BM	(30°-60°)	398.2	2.9	B1/1000		
BH	(60°-80°)	283.0	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°	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1
2.5°	3922.4	3916.2	3890.4	3885.2	3856.2	3798.2	3730.9	3704.0	3649.1	3562.2	3465.9
5°	3987.7	3990.8	3992.8	3981.5	3977.3	3929.7	3855.2	3823.1	3749.6	3606.7	3430.7
7.5°	3743.4	3751.6	3777.5	3788.9	3838.6	3857.2	3841.7	3821.0	3763.0	3594.3	3346.9
10°	3485.6	3501.1	3529.1	3547.7	3608.8	3658.5	3721.6	3726.8	3714.4	3552.9	3252.7
12.5°	3264.0	3278.5	3309.6	3346.9	3409.0	3473.2	3567.4	3600.5	3641.9	3526.0	3185.4
15°	3073.6	3077.7	3107.7	3154.3	3236.1	3324.1	3435.9	3484.5	3565.3	3515.6	3133.6
17.5°	2906.9	2907.9	2927.6	2970.0	3069.4	3185.4	3315.8	3380.0	3482.5	3501.1	3088.1
20°	2797.2	2796.1	2797.2	2819.9	2907.9	3045.6	3204.0	3271.3	3402.8	3483.5	3041.5
22.5°	2759.9	2754.7	2730.9	2722.6	2778.5	2899.6	3089.1	3177.1	3331.3	3478.3	3007.3
25°	2805.4	2802.3	2751.6	2704.0	2709.2	2784.7	2972.1	3079.8	3275.4	3497.0	2999.0
27.5°	2952.4	2946.2	2868.6	2775.4	2716.4	2729.9	2885.2	2998.0	3230.9	3542.5	3010.4
30°	3145.0	3146.0	3063.2	2950.4	2811.7	2735.0	2838.6	2945.2	3200.9	3610.8	3035.3
32.5°	3359.3	3358.2	3299.2	3168.8	2991.8	2830.3	2859.3	2949.3	3205.0	3711.3	3082.9
35°	3580.8	3569.4	3549.8	3434.9	3227.8	2997.0	2953.5	3019.7	3248.5	3843.8	3163.6
37.5°	3836.5	3832.4	3852.0	3730.9	3519.7	3242.3	3119.1	3163.6	3358.2	4039.4	3294.1
40°	4243.4	4220.6	4229.9	4065.3	3848.9	3572.5	3351.0	3362.4	3533.2	4298.2	3500.1
42.5°	5018.7	4926.6	4753.7	4445.2	4211.3	3939.0	3654.3	3634.7	3780.6	4611.9	3771.3
45°	5945.3	5839.7	5403.8	4864.5	4573.6	4332.4	4029.1	3976.3	4085.0	4985.6	4121.2
47.5°	6718.6	6604.7	6027.0	5302.4	4942.1	4738.2	4444.2	4382.1	4449.4	5419.4	4541.5
50°	6982.5	6919.4	6412.1	5666.8	5313.8	5193.7	4964.9	4861.4	4878.0	5887.3	5032.2
52.5°	6861.4	6839.7	6500.1	5916.3	5657.5	5696.8	5535.3	5426.6	5408.0	6398.7	5574.7
55°	6605.7	6595.4	6429.7	6055.0	5960.8	6157.5	6335.5	6241.3	6065.3	6942.2	6022.9
57.5°	6240.3	6279.6	6398.7	6322.1	6333.5	6644.0	7078.8	7127.5	6864.5	7374.9	6355.2
60°	5264.1	5369.7	5915.2	6608.8	7139.9	7453.6	7874.9	7966.0	7541.6	7671.0	6739.3
62.5°	3891.4	4042.5	4820.0	6094.3	7584.0	8992.9	8933.9	8893.6	8187.5	8067.5	7438.0
65°	2285.8	2462.8	3120.1	4762.0	6914.2	9982.6	10911.2	10352.2	9172.0	8891.5	8550.9
67.5°	1138.7	1139.8	1436.9	2513.5	5109.8	9292.1	13797.4	13474.4	11265.2	10105.8	8989.8
70°	875.8	899.6	1063.2	1460.7	2583.9	7237.2	14458.9	15785.0	13368.8	10052.0	7627.5
72.5°	742.3	757.8	946.2	1271.2	1931.7	3973.2	12516.8	13952.7	12757.0	8492.9	5622.3
75°	534.2	546.6	837.5	1153.2	1778.5	1971.1	8586.1	10348.0	9571.6	5974.2	3094.3
77.5°	132.5	131.5	291.9	935.8	1591.1	1641.9	4926.6	6635.8	5491.8	2446.2	795.0
80°	59.0	56.9	66.3	196.7	1480.4	1549.7	2166.7	3351.0	2106.7	396.5	243.3
82.5°	41.4	39.3	41.4	72.5	494.8	1437.9	1309.6	1452.4	771.2	135.6	103.5
85°	13.5	12.4	22.8	61.1	138.7	829.2	1277.5	1084.9	573.5	58.0	69.4
87.5°	2.1	2.1	8.3	33.1	40.4	276.4	749.5	751.6	257.8	34.2	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°	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1
2.5°	3417.3	3356.2	3270.3	3184.3	3106.7	3027.0	2962.8	2932.8	2919.3	2900.7	2860.3
5°	3338.6	3227.8	3039.4	2854.1	2681.2	2515.6	2373.8	2293.0	2206.1	2201.9	2159.5
7.5°	3212.3	3054.9	2757.8	2470.0	2206.1	1953.5	1736.1	1595.3	1499.0	1439.0	1397.5
10°	3071.5	2869.6	2476.2	2071.5	1712.3	1374.8	1095.3	913.1	802.3	746.4	714.3
12.5°	2959.7	2706.1	2198.8	1689.5	1239.2	852.0	592.1	459.6	400.6	377.9	367.5
15°	2863.4	2556.0	1939.0	1347.9	827.1	489.7	342.7	299.2	289.9	289.9	288.8
17.5°	2766.1	2411.0	1686.4	1012.4	520.7	320.9	270.2	264.0	265.0	268.1	268.1
20°	2674.0	2273.3	1443.1	721.5	341.6	256.7	245.3	243.3	246.4	250.5	249.5
22.5°	2599.4	2152.2	1215.3	495.9	262.9	232.9	225.7	222.6	224.6	227.7	226.7
25°	2546.6	2048.7	1006.2	345.8	228.8	212.2	203.9	199.8	197.7	199.8	198.8
27.5°	2514.5	1961.7	809.5	259.8	205.0	191.5	181.2	172.9	167.7	167.7	165.6
30°	2493.8	1880.0	634.6	215.3	185.3	170.8	156.3	144.9	136.6	134.6	133.5
32.5°	2492.8	1809.6	474.1	190.5	166.7	150.1	132.5	118.0	108.7	106.6	105.6
35°	2518.7	1752.6	348.9	171.8	150.1	130.4	110.8	95.2	87.0	87.0	85.9
37.5°	2586.0	1719.5	264.0	157.4	136.6	113.9	93.2	78.7	71.4	73.5	73.5
40°	2711.2	1713.3	215.3	146.0	125.3	99.4	75.6	64.2	61.1	64.2	64.2
42.5°	2902.8	1746.4	191.5	137.7	114.9	84.9	63.1	54.9	53.8	56.9	56.9
45°	3152.2	1811.6	178.1	130.4	103.5	70.4	52.8	47.6	46.6	50.7	50.7
47.5°	3454.5	1899.6	165.6	122.2	92.1	58.0	44.5	40.4	40.4	44.5	45.5
50°	3812.7	2018.7	153.2	113.9	82.8	48.7	37.3	34.2	35.2	39.3	40.4
52.5°	4224.7	2164.6	141.8	106.6	72.5	39.3	31.1	29.0	30.0	34.2	35.2
55°	4579.8	2292.0	128.4	99.4	59.0	32.1	25.9	24.8	25.9	31.1	31.1
57.5°	4889.3	2414.1	115.9	88.0	46.6	25.9	20.7	20.7	22.8	28.0	29.0
60°	5300.3	2606.7	105.6	74.5	35.2	19.7	16.6	17.6	20.7	24.8	25.9
62.5°	6028.1	2933.8	92.1	62.1	25.9	15.5	13.5	14.5	18.6	23.8	24.8
65°	6939.1	3243.3	76.6	51.8	19.7	11.4	10.4	13.5	18.6	23.8	24.8
67.5°	6845.9	2821.0	60.0	41.4	14.5	9.3	8.3	12.4	17.6	23.8	24.8
70°	5551.9	1977.3	44.5	28.0	11.4	8.3	8.3	12.4	17.6	22.8	23.8
72.5°	3851.0	1100.4	34.2	18.6	10.4	8.3	7.2	11.4	16.6	22.8	23.8
75°	1832.3	337.5	26.9	13.5	9.3	7.2	6.2	11.4	16.6	22.8	23.8
77.5°	352.0	85.9	21.7	11.4	8.3	7.2	6.2	10.4	16.6	21.7	22.8
80°	119.1	38.3	17.6	10.4	8.3	7.2	6.2	10.4	15.5	20.7	21.7
82.5°	65.2	21.7	15.5	9.3	8.3	6.2	5.2	9.3	14.5	20.7	21.7
85°	50.7	15.5	12.4	9.3	8.3	6.2	5.2	9.3	14.5	19.7	20.7
87.5°	25.9	11.4	10.4	9.3	8.3	6.2	5.2	8.3	13.5	18.6	20.7
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)