

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: P196472

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196472
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-AFL-7030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7990.1 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 85
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

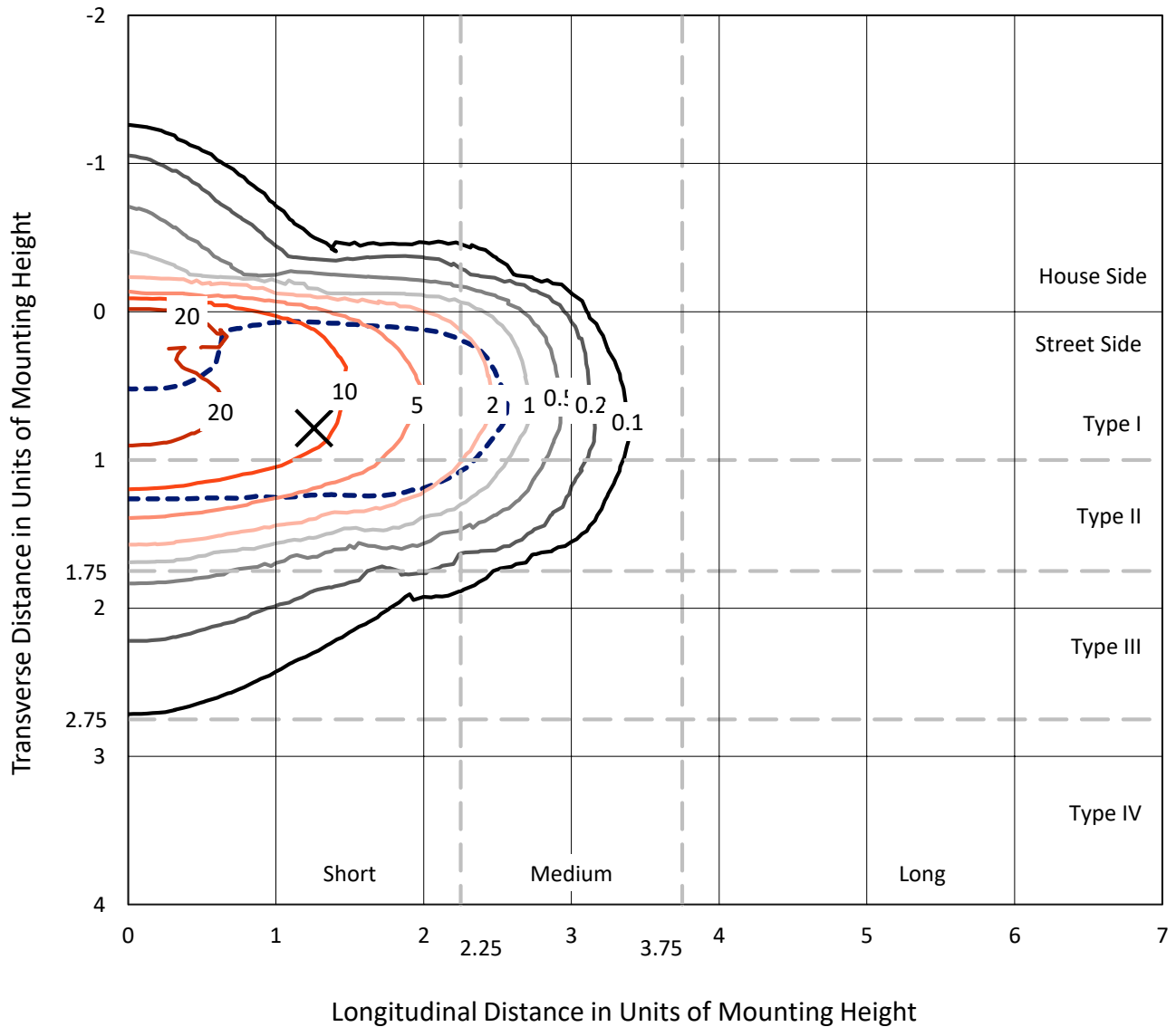


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

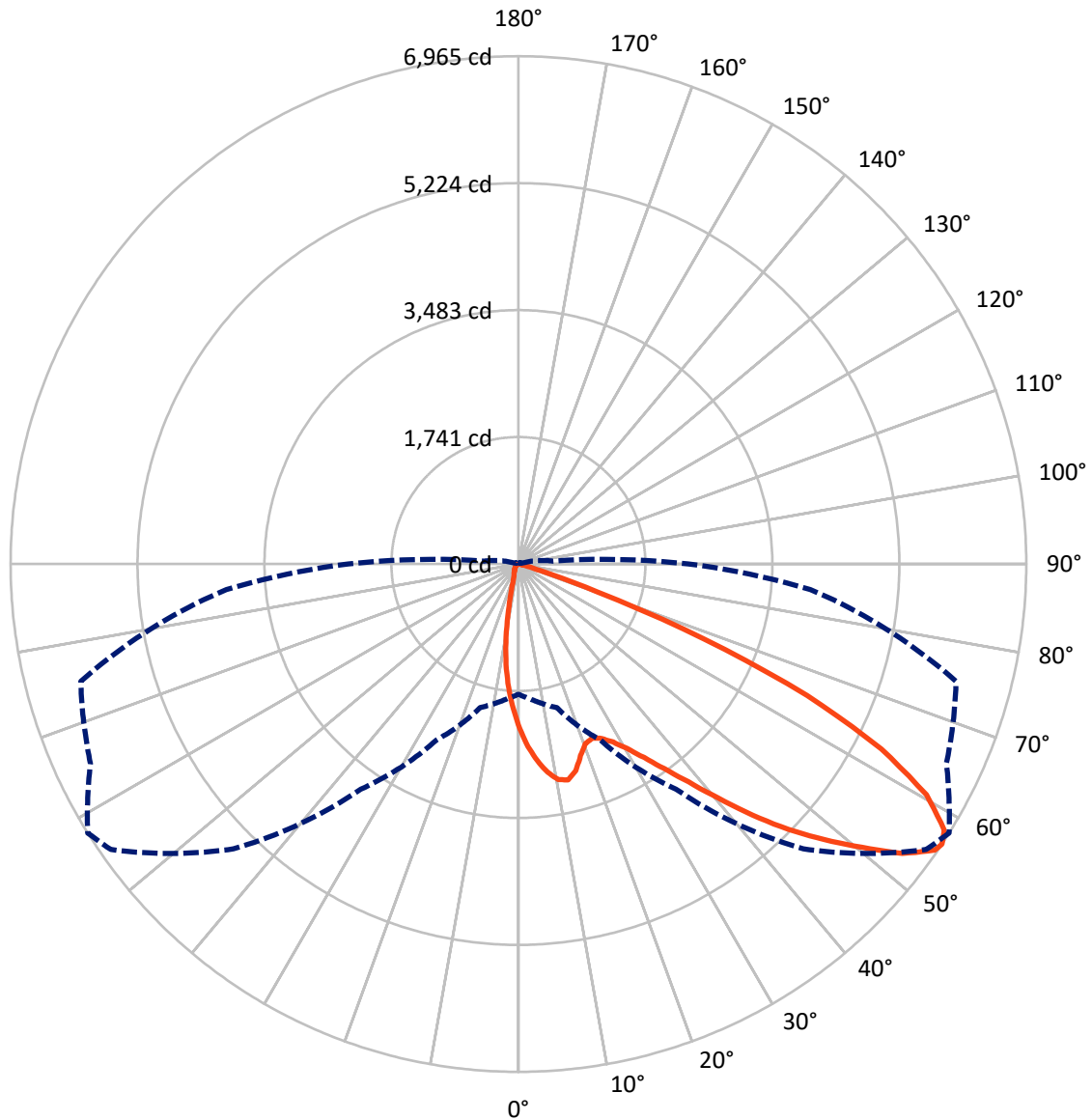


Based on 10 foot mounting height. Maximum calculated value = 28.1 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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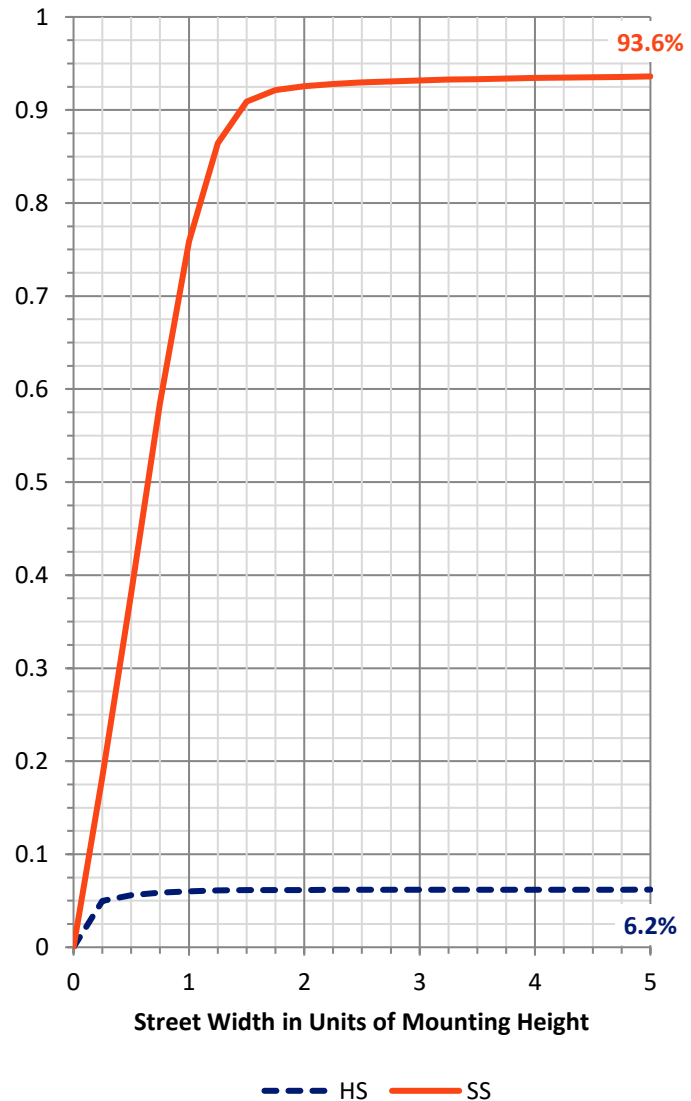
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	498.7	0.0	498.7
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	7491.4	0.0	7491.4
	% Fixture	93.8	0.0	93.8
Total	Lumens	7990.1	0.0	7990.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.0	2.4
10°-20°	449.0	5.6
20°-30°	755.6	9.5
30°-40°	1293.9	16.2
40°-50°	1952.5	24.4
50°-60°	2029.5	25.4
60°-70°	1139.3	14.3
70°-80°	156.1	2.0
80°-90°	21.2	0.3
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°	7990.1	100.0
0°-180°	7990.1	100.0



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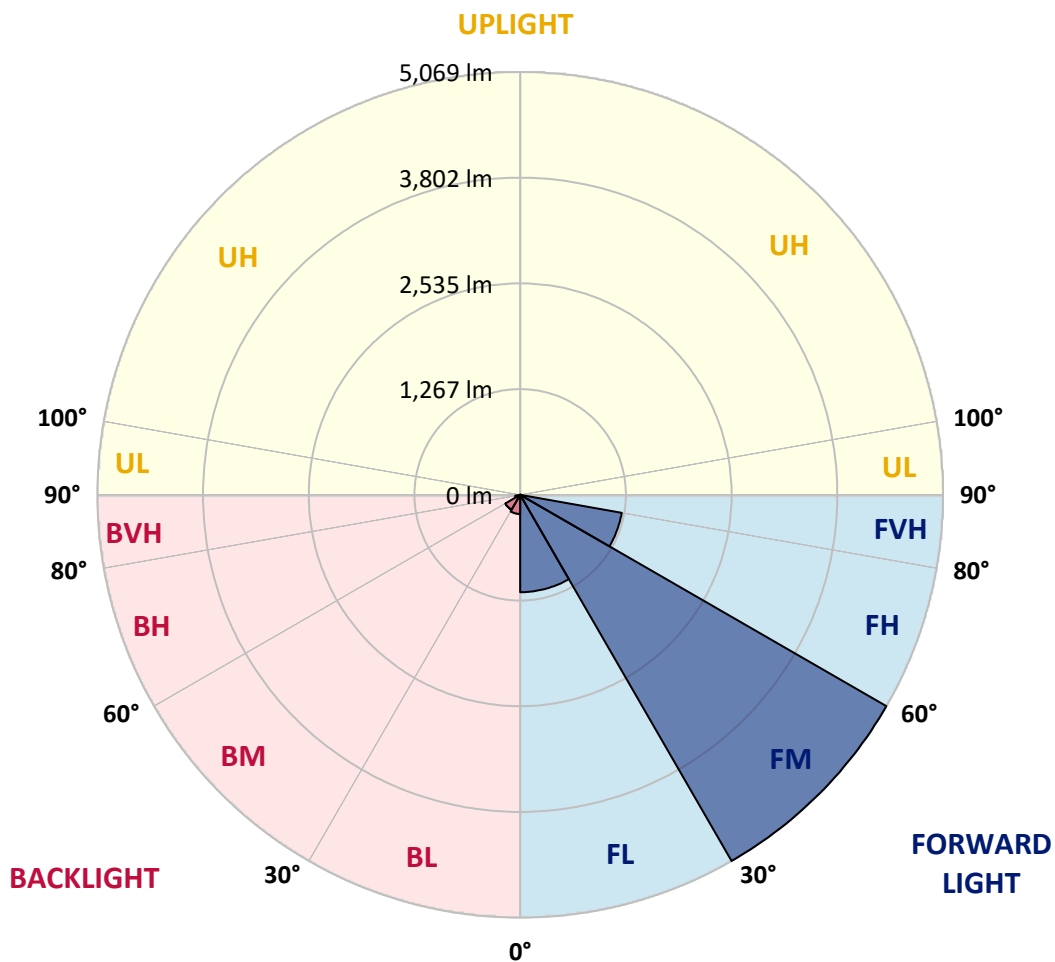
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1167.5	14.6			
FM (30°-60°)	5069.3	63.4			
FH (60°-80°)	1236.3	15.5			G1/1800
FVH (80°-90°)	18.2	0.2			G1/100
BL (0°-30°)	230.1	2.9	B1/500		
BM (30°-60°)	206.6	2.6	B0/220		
BH (60°-80°)	59.2	0.7	B0/110		G0/110
BVH (80°-90°)	2.9	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-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2
2.5°	2721.8	2705.5	2688.4	2656.6	2627.3	2582.4	2520.1	2504.9	2456.1	2375.7	2300.7
5°	2956.5	2953.5	2942.0	2916.3	2884.7	2829.9	2759.7	2712.8	2637.2	2510.3	2365.9
7.5°	2817.6	2843.3	2885.3	2945.0	2985.3	2979.7	2926.1	2885.3	2810.2	2637.2	2429.9
10°	2375.1	2379.8	2437.8	2563.4	2762.1	2947.5	3017.5	3006.6	2937.7	2748.1	2485.9
12.5°	2218.9	2222.0	2235.5	2275.7	2404.9	2663.4	2980.9	3038.3	3032.8	2854.2	2545.7
15°	2231.2	2233.0	2236.6	2249.4	2286.0	2415.8	2795.6	2941.4	3093.7	2954.8	2604.2
17.5°	2327.4	2326.2	2314.6	2302.5	2314.1	2356.7	2606.7	2760.3	3081.0	3039.5	2652.4
20°	2515.2	2521.3	2482.3	2428.1	2400.0	2401.8	2513.4	2628.7	3009.0	3105.3	2688.4
22.5°	2779.2	2783.5	2719.5	2625.6	2543.2	2501.8	2532.9	2594.0	2926.1	3166.4	2717.6
25°	3094.3	3094.3	3004.7	2871.3	2743.8	2653.1	2626.1	2649.3	2894.4	3235.1	2746.9
27.5°	3434.6	3446.7	3329.6	3154.8	2986.5	2853.6	2769.4	2765.2	2918.8	3321.7	2779.8
30°	3804.5	3815.6	3676.6	3462.5	3263.2	3093.1	2963.8	2935.9	3012.1	3438.2	2827.9
32.5°	4172.7	4181.9	4028.3	3810.1	3577.8	3377.9	3207.8	3163.3	3179.7	3608.3	2898.6
35°	4640.9	4642.8	4448.3	4188.6	3940.6	3705.7	3490.7	3446.7	3428.4	3822.9	3000.5
37.5°	5013.4	4998.7	4875.5	4630.0	4345.2	4100.2	3847.2	3789.8	3746.1	4124.6	3158.3
40°	5101.2	5101.2	5082.8	5009.1	4783.0	4547.1	4302.0	4216.7	4119.7	4479.9	3370.5
42.5°	4872.5	4887.1	5007.9	5168.3	5170.0	5019.0	4779.3	4707.3	4536.7	4884.8	3602.2
45°	4361.1	4365.4	4655.0	5087.7	5381.6	5468.2	5291.4	5192.0	4955.5	5305.4	3814.3
47.5°	4177.0	4190.4	4313.5	4842.7	5397.4	5832.2	5782.8	5646.2	5343.3	5689.4	4012.4
50°	3894.1	3910.6	4061.1	4481.9	5254.9	6065.5	6252.7	6106.4	5696.1	6009.5	4110.6
52.5°	3217.4	3243.2	3455.9	4004.5	4898.2	6075.4	6683.1	6595.3	6057.7	6180.8	4099.0
55°	2214.1	2233.0	2481.1	3126.0	4178.8	5777.2	6868.5	6928.7	6380.0	6219.1	4042.9
56°	1786.2	1856.9	2038.6	2663.4	3769.2	5523.6	6825.8	6965.4	6475.8	6213.1	4018.5
57.5°	1180.8	1194.2	1392.3	1930.1	3026.7	4973.2	6633.1	6887.3	6598.9	6182.0	4000.8
60°	555.4	561.5	632.7	890.7	1638.1	3624.1	6007.1	6429.0	6644.0	6116.8	4000.2
62.5°	362.0	363.3	371.8	424.9	670.0	1973.9	4979.8	5587.1	6270.4	6109.4	3988.6
65°	298.1	301.1	290.7	297.5	350.5	744.4	3512.5	4355.6	5393.1	5937.5	3858.2
67.5°	262.8	263.4	249.3	241.4	256.6	326.8	1769.7	2747.6	4033.8	5045.0	3178.0
70°	239.6	239.0	223.1	204.9	205.4	217.0	576.7	1141.2	2231.7	2995.6	1824.5
72.5°	212.7	213.9	204.9	179.1	170.7	153.6	217.0	307.9	759.6	961.9	481.0
75°	186.5	184.1	175.0	158.5	142.7	103.0	109.2	131.1	198.1	196.3	103.7
77.5°	141.4	139.0	143.2	135.4	111.6	71.9	59.8	68.3	89.6	83.5	42.1
80°	107.9	106.6	97.6	115.9	101.8	54.3	40.9	42.1	48.7	44.5	20.8
82.5°	78.0	77.5	73.8	71.3	64.6	39.7	31.1	32.9	36.6	31.1	15.2
85°	29.8	29.8	57.9	48.7	44.5	26.8	22.0	23.8	28.1	22.5	10.4
87.5°	4.9	4.9	39.0	32.3	20.1	13.4	13.9	15.2	16.5	13.4	7.9
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°	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2	2262.2
2.5°	2256.2	2215.3	2125.7	2039.1	1963.5	1880.7	1838.7	1789.7	1771.5	1734.9	1738.7
5°	2279.3	2193.9	2014.0	1824.5	1650.8	1474.0	1348.5	1230.1	1164.3	1099.1	1099.1
7.5°	2303.0	2172.6	1894.7	1591.7	1299.1	996.1	781.5	609.5	513.8	449.9	448.1
10°	2319.6	2145.2	1758.7	1321.6	890.0	513.3	309.6	243.8	220.0	209.7	209.1
12.5°	2340.9	2117.8	1603.9	1003.4	494.4	243.8	193.3	182.9	178.6	176.1	176.1
15°	2359.1	2078.7	1416.1	674.7	259.7	182.9	166.4	162.8	162.1	161.6	162.1
17.5°	2363.5	2023.3	1191.2	395.0	188.4	159.7	152.4	149.3	149.3	148.7	148.7
20°	2353.7	1950.2	942.5	243.8	162.8	147.0	139.0	135.4	134.7	134.7	134.7
22.5°	2333.6	1856.9	696.7	184.7	148.1	135.4	125.0	121.3	121.3	122.0	122.5
25°	2308.5	1746.5	478.5	159.1	137.1	123.1	112.7	109.2	110.4	111.6	112.2
27.5°	2276.9	1614.9	313.3	137.7	122.5	110.9	101.8	99.3	101.8	104.3	105.4
30°	2245.2	1470.4	212.2	119.5	106.1	97.6	92.0	91.4	95.0	100.6	101.2
32.5°	2224.4	1322.2	160.3	107.3	93.3	86.0	83.5	84.7	90.2	96.3	97.6
35°	2222.7	1177.7	136.6	97.6	84.7	78.0	76.8	80.5	86.6	91.4	92.7
37.5°	2251.3	1042.5	123.8	90.2	78.0	71.3	69.5	76.2	81.7	86.6	87.7
40°	2309.2	921.2	115.3	83.5	72.5	64.6	63.4	68.9	74.4	79.9	81.7
42.5°	2381.8	807.8	105.4	76.8	66.4	57.3	56.0	60.3	65.9	73.8	75.0
45°	2444.5	702.3	95.0	69.5	59.8	49.3	48.7	53.6	57.9	65.2	66.4
47.5°	2497.5	614.5	85.3	61.6	51.3	43.9	43.2	45.7	48.2	54.8	56.0
50°	2469.5	540.1	75.6	50.6	41.4	37.8	37.1	37.1	40.2	47.0	48.2
52.5°	2400.7	493.8	66.4	42.1	34.1	32.3	30.5	31.1	34.1	37.1	37.8
55°	2345.1	471.8	58.6	37.1	28.6	26.8	25.0	24.4	25.0	23.8	22.5
56°	2331.7	469.4	56.7	35.9	27.5	25.0	22.5	21.3	20.8	18.2	17.7
57.5°	2325.7	469.4	53.6	33.6	25.5	22.5	19.5	17.1	14.6	12.8	12.8
60°	2320.7	472.4	50.0	29.3	22.0	18.2	13.9	10.4	8.5	8.5	8.5
62.5°	2310.4	471.2	45.7	24.4	18.9	13.9	8.5	6.7	6.1	6.7	7.3
65°	2193.9	437.7	40.2	19.5	14.6	9.8	4.9	4.9	5.5	6.7	7.3
67.5°	1767.9	331.6	32.9	15.2	10.4	7.3	4.3	4.3	5.5	6.7	7.3
70°	971.1	175.0	28.1	10.9	7.9	6.1	4.3	3.6	5.5	6.7	7.3
72.5°	237.1	73.2	25.5	8.5	7.3	5.5	3.6	3.6	5.5	6.7	7.3
75°	58.6	54.8	20.8	6.7	6.1	4.9	3.6	3.6	5.5	6.7	7.3
77.5°	27.5	72.5	13.9	6.1	5.5	4.3	3.6	3.6	5.5	6.7	6.7
80°	16.5	54.8	8.5	5.5	4.9	4.3	3.6	3.6	5.5	6.7	7.3
82.5°	9.8	15.9	6.1	5.5	4.9	3.6	3.6	3.6	5.5	6.7	7.3
85°	8.5	7.9	6.1	5.5	4.9	4.3	3.6	3.6	6.1	7.3	7.3
87.5°	6.7	6.1	5.5	4.9	4.9	4.3	3.6	3.6	5.5	6.7	7.3
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)