

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: P196137

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196137
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14951.5 lumens
Efficiency: N/A
Efficacy: 120.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

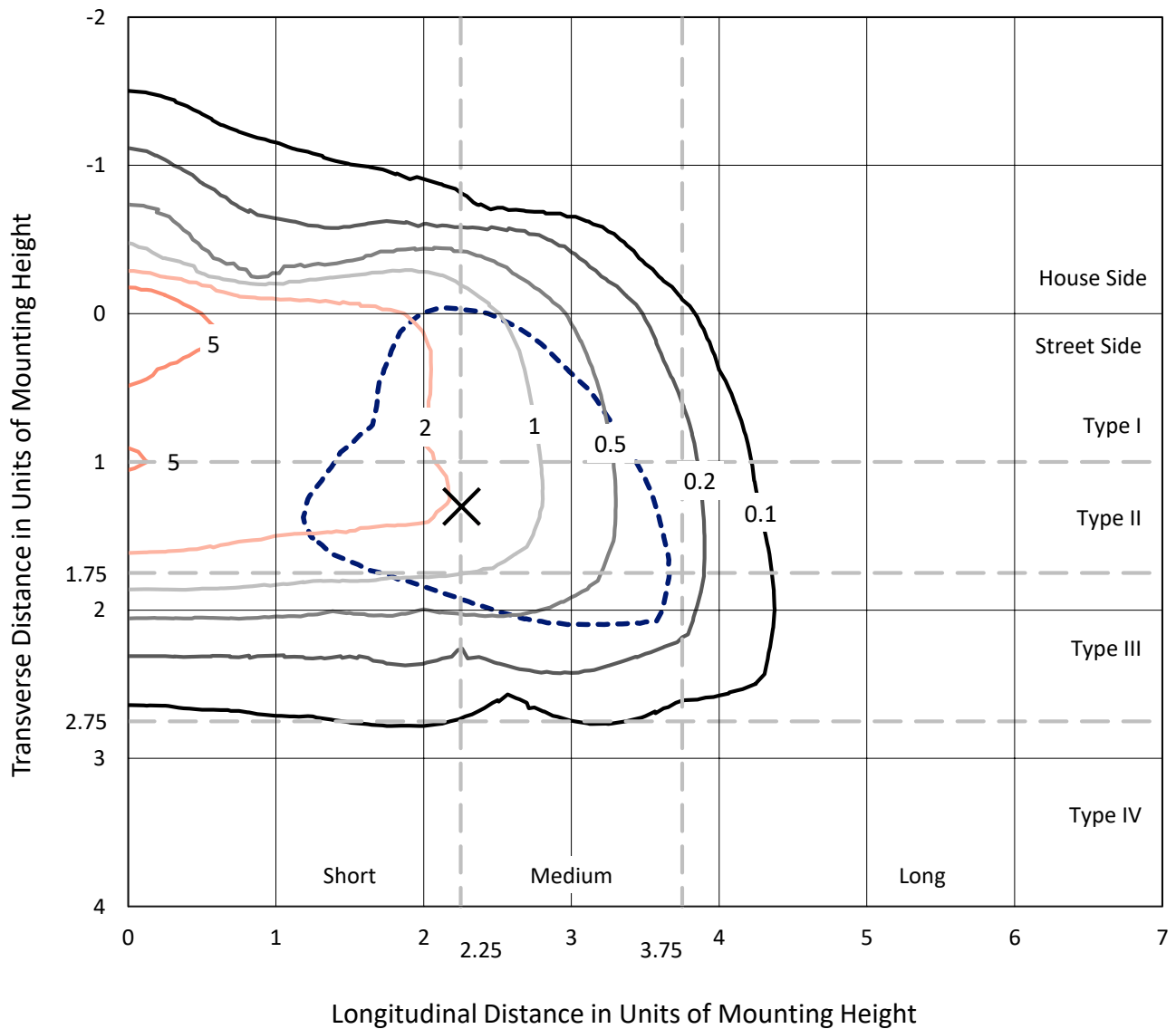
Input Watts (W): 124
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

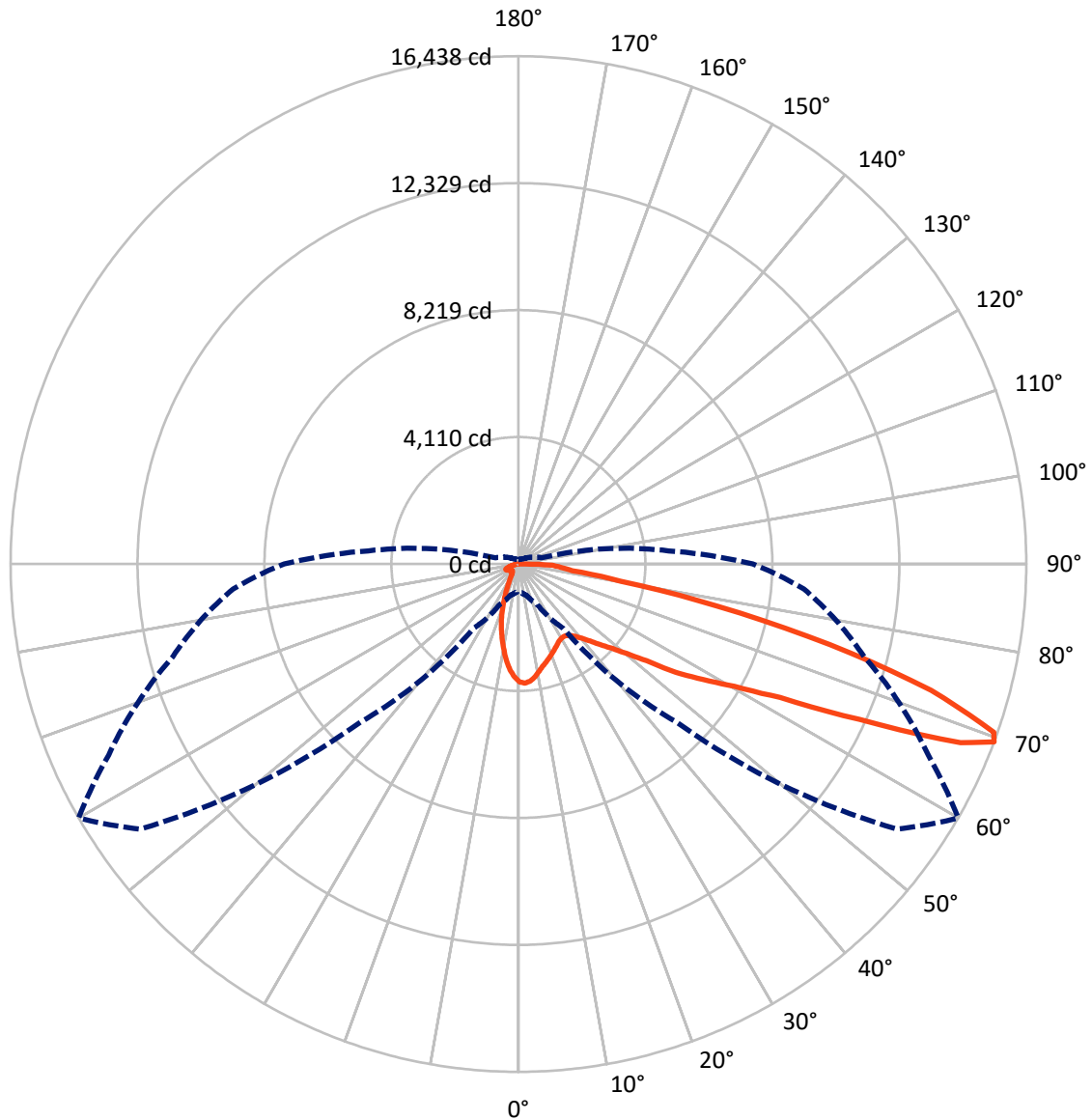
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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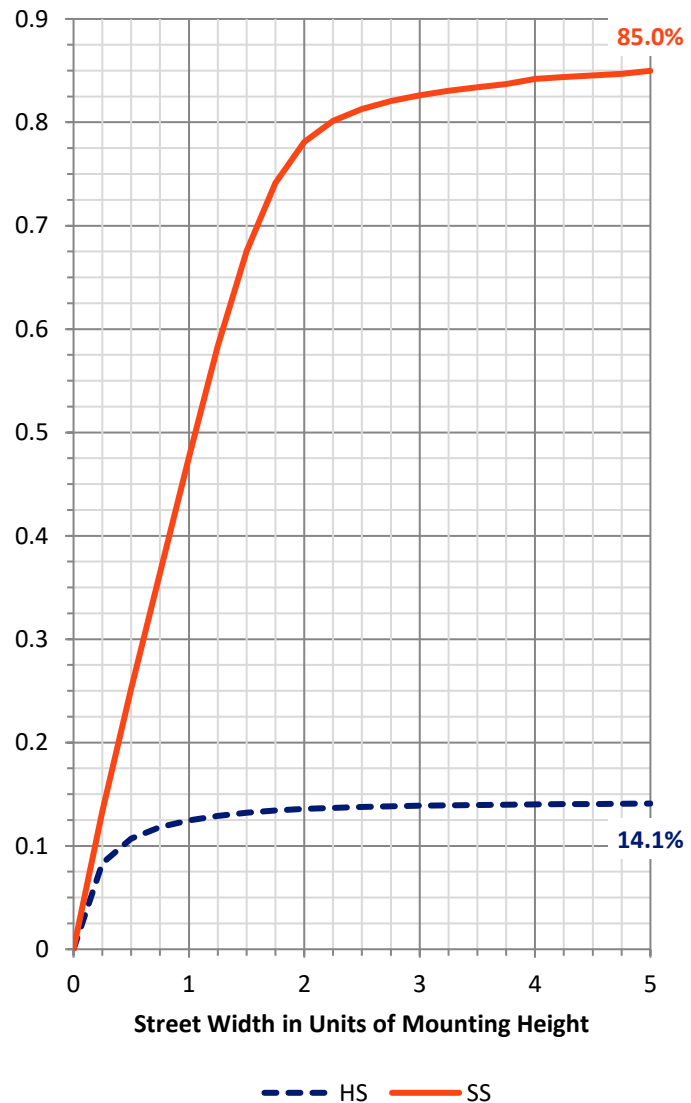
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2132.6	0.0	2132.6
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	12818.9	0.0	12818.9
	% Fixture	85.7	0.0	85.7
Total	Lumens	14951.5	0.0	14951.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.6	2.2
10°-20°	692.9	4.6
20°-30°	884.0	5.9
30°-40°	1216.4	8.1
40°-50°	1970.4	13.2
50°-60°	3092.4	20.7
60°-70°	4122.8	27.6
70°-80°	2293.2	15.3
80°-90°	355.7	2.4
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°	14951.5	100.0
0°-180°	14951.5	100.0

Coefficient of Utilization



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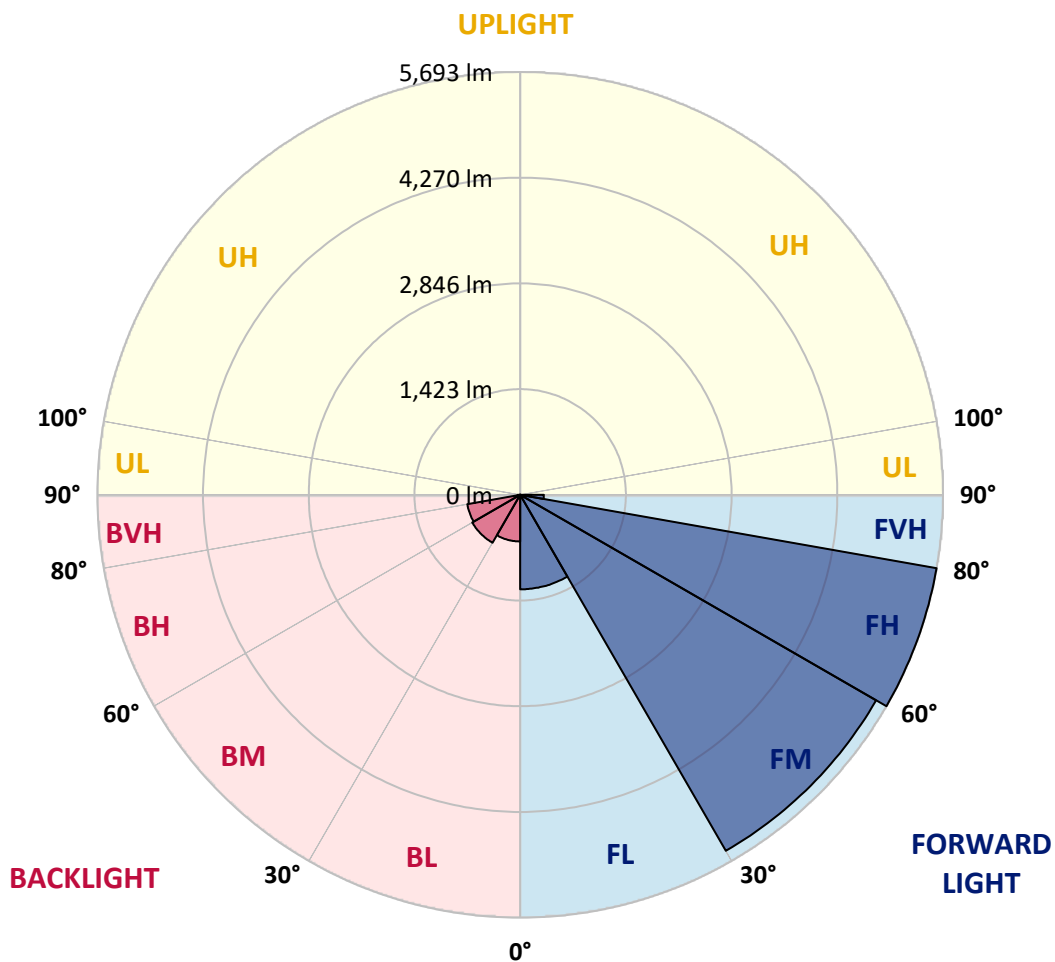
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1272.1	8.5			
FM	(30°-60°)	5534.2	37.0			
FH	(60°-80°)	5692.9	38.1			G3/7500
FVH	(80°-90°)	319.6	2.1			G3/500
BL	(0°-30°)	628.5	4.2	B2/1000		
BM	(30°-60°)	745.0	5.0	B1/1000		
BH	(60°-80°)	723.0	4.8	B2/1000		G2/1000
BVH	(80°-90°)	36.1	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9
2.5°	3916.6	3927.1	3927.1	3918.4	3913.7	3885.9	3869.5	3858.1	3837.9	3800.6	3767.0
5°	3776.5	3796.7	3805.3	3809.2	3834.1	3825.4	3826.4	3818.8	3801.5	3761.2	3706.6
7.5°	3519.6	3523.5	3538.8	3564.7	3625.0	3667.3	3701.8	3708.5	3704.6	3675.0	3598.2
10°	3266.5	3273.2	3291.4	3335.5	3393.0	3453.5	3528.3	3558.9	3582.0	3572.3	3475.5
12.5°	3056.6	3057.5	3077.6	3128.4	3192.6	3268.4	3370.0	3418.0	3472.6	3494.7	3386.4
15°	2854.2	2867.6	2886.9	2948.1	3027.7	3123.7	3240.6	3306.8	3378.7	3441.9	3317.3
17.5°	2700.8	2711.3	2722.9	2773.7	2865.7	2985.6	3130.3	3201.3	3296.3	3393.0	3246.3
20°	2616.5	2620.3	2611.7	2636.6	2714.3	2843.7	3011.5	3096.8	3209.9	3346.1	3173.5
22.5°	2599.2	2599.2	2567.6	2562.8	2597.3	2706.6	2888.7	2993.3	3131.4	3313.4	3108.3
25°	2679.7	2674.0	2614.6	2559.9	2547.5	2603.0	2771.8	2900.3	3064.2	3312.5	3059.4
27.5°	2832.1	2824.5	2750.7	2658.6	2579.1	2555.1	2681.7	2813.0	3011.5	3345.2	3034.5
30°	3022.0	3019.1	2944.4	2829.3	2697.9	2574.3	2646.2	2767.9	2976.0	3405.5	3033.6
32.5°	3230.1	3216.7	3170.6	3055.6	2884.9	2680.7	2667.2	2769.8	2966.5	3493.7	3055.6
35°	3451.5	3441.9	3430.5	3314.5	3122.7	2868.7	2760.2	2836.0	3013.4	3616.4	3117.9
37.5°	3733.5	3722.8	3742.1	3615.5	3405.5	3115.0	2917.6	2968.3	3109.3	3794.7	3233.9
40°	4234.8	4204.1	4150.5	3955.9	3735.3	3417.1	3144.8	3152.4	3273.2	4033.5	3419.9
42.5°	5058.4	4959.7	4694.1	4336.5	4083.3	3767.9	3441.0	3404.6	3499.5	4349.0	3690.3
45°	5883.9	5772.7	5324.0	4751.6	4443.9	4144.7	3807.2	3720.0	3781.3	4716.1	4038.3
47.5°	6417.0	6362.3	5856.1	5166.7	4821.6	4555.1	4226.2	4082.4	4126.5	5132.2	4467.8
50°	6573.3	6526.3	6128.4	5491.8	5178.3	5050.7	4745.0	4554.1	4561.7	5618.4	4982.7
52.5°	6456.3	6437.1	6173.5	5693.1	5506.1	5573.2	5463.1	5197.4	5134.2	6151.4	5540.7
55°	6300.0	6306.7	6205.1	5895.5	5839.8	6060.4	6402.6	6188.9	5920.3	6706.6	6121.6
57.5°	5808.2	5812.9	6079.5	6280.8	6476.4	6743.0	7134.2	7044.0	6731.4	7305.7	6772.7
60°	4676.8	4714.3	5307.7	6201.2	7204.1	8088.1	8184.0	8028.6	7594.4	7996.1	7619.2
62.5°	3341.3	3374.8	4062.2	5383.5	7118.8	9610.6	10122.6	9505.2	8764.9	9028.7	8810.1
65°	1755.5	1749.8	2281.9	3720.0	5996.1	9963.4	13177.2	12126.4	10737.2	10448.6	9960.6
67.5°	980.8	1012.4	1218.5	1876.3	3907.9	8768.8	15128.3	15438.0	13479.2	11575.1	9910.8
69°	906.9	917.5	1055.6	1450.6	2547.5	7234.8	14960.6	16438.0	14635.5	11579.9	9272.1
70°	881.1	892.6	1018.2	1336.5	2139.9	5928.0	14349.7	16321.0	14916.4	11322.9	8691.2
72.5°	790.0	805.4	927.1	1201.4	1803.5	3055.6	11558.8	13969.1	13511.9	9896.3	6739.1
75°	674.0	699.9	883.9	1192.7	1708.5	1942.5	7708.4	10407.4	10056.4	7077.6	3823.6
77.5°	279.0	281.9	386.4	873.4	1792.9	1859.0	4142.8	6592.4	5835.9	3103.5	1151.4
80°	194.7	190.8	192.7	255.0	1446.8	1871.5	2125.6	3352.8	2605.9	818.8	538.8
82.5°	164.0	162.0	169.7	160.1	489.9	2123.6	1777.6	1747.8	1227.2	441.0	257.0
85°	108.3	105.5	139.0	145.8	233.0	1686.4	1911.8	1373.9	914.6	235.9	109.3
87.5°	52.7	53.7	79.6	98.7	123.7	534.0	1831.2	1086.3	706.7	102.6	44.1
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°	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9	3814.9
2.5°	3753.5	3724.8	3698.9	3666.3	3641.4	3620.3	3591.5	3590.6	3585.7	3592.5	3594.4
5°	3670.1	3622.2	3549.3	3467.8	3410.3	3334.6	3260.8	3235.8	3208.0	3205.1	3213.8
7.5°	3544.5	3469.7	3345.2	3220.5	3095.9	2968.3	2847.5	2786.1	2726.7	2708.5	2717.2
10°	3404.6	3309.7	3118.9	2915.6	2740.2	2550.3	2366.2	2247.3	2139.0	2093.0	2104.5
12.5°	3295.2	3174.4	2906.0	2642.4	2379.7	2107.4	1864.8	1629.9	1452.5	1372.9	1377.7
15°	3201.3	3047.0	2706.6	2355.7	2026.8	1653.9	1317.4	1045.0	889.8	832.2	830.3
17.5°	3099.6	2912.8	2498.6	2089.2	1662.5	1201.4	882.1	721.0	659.6	640.5	640.5
20°	2991.3	2774.7	2280.9	1798.7	1279.0	838.9	663.5	601.2	578.2	572.3	571.4
22.5°	2890.7	2639.4	2062.3	1488.9	925.2	636.6	564.7	540.7	536.9	541.7	541.7
25°	2811.1	2520.6	1840.8	1163.0	673.0	533.1	502.4	499.5	513.9	531.1	534.0
27.5°	2751.6	2414.2	1622.2	849.5	529.3	464.0	453.5	466.0	499.5	534.0	540.7
30°	2710.4	2323.1	1360.5	610.7	441.0	406.5	411.3	433.3	484.2	536.9	551.3
32.5°	2692.2	2249.3	1096.8	468.8	376.8	357.6	370.1	398.8	451.5	504.3	521.6
35°	2709.5	2195.6	853.3	389.2	329.8	315.5	329.8	359.6	394.0	419.9	430.5
37.5°	2771.8	2176.4	642.4	345.1	299.1	284.8	296.2	316.4	331.7	341.4	346.1
40°	2903.1	2196.5	503.4	322.1	281.9	265.6	268.4	278.0	288.6	296.2	297.2
42.5°	3112.1	2262.7	447.7	313.5	271.3	250.2	245.4	252.2	263.6	274.3	276.1
45°	3390.2	2372.9	442.0	316.4	266.6	237.7	228.2	234.9	250.2	267.5	270.4
47.5°	3749.7	2547.5	468.8	331.7	269.4	231.1	216.7	223.4	243.6	266.6	270.4
50°	4175.4	2789.1	518.7	354.8	282.8	231.1	211.9	217.7	238.8	264.6	268.4
52.5°	4676.8	3125.5	570.5	377.8	302.0	239.7	213.8	212.9	232.0	255.9	260.8
55°	5230.0	3543.6	620.3	397.9	312.5	251.2	218.6	207.0	222.4	241.6	245.4
57.5°	5881.0	4115.9	707.6	417.1	318.3	259.8	224.3	201.3	210.0	223.4	226.3
60°	6764.1	4956.8	877.3	449.7	328.9	263.6	225.4	195.6	194.7	204.2	205.2
62.5°	7915.5	5941.4	1039.3	488.0	350.0	264.6	221.5	191.8	182.2	185.1	185.1
65°	8734.3	6303.8	992.4	520.6	369.1	263.6	217.7	188.8	172.6	167.8	167.8
67.5°	8268.3	5568.4	842.7	529.3	371.0	253.1	209.0	182.2	164.0	152.4	152.4
69°	7583.7	4881.0	773.8	513.9	355.7	240.6	199.4	175.4	158.1	144.7	144.7
70°	7025.8	4360.4	731.5	495.7	337.5	230.1	190.8	168.8	152.4	141.0	139.9
72.5°	5245.4	2909.9	625.1	427.6	277.1	194.7	166.8	150.5	137.1	129.4	129.4
75°	2767.9	1458.3	512.0	349.0	213.8	155.3	137.1	126.5	118.9	117.9	116.9
77.5°	906.9	659.6	368.2	262.7	157.2	120.8	109.3	102.6	101.6	105.5	105.5
80°	489.9	394.0	236.8	177.4	109.3	90.1	84.4	83.4	86.3	92.1	92.1
82.5°	237.7	194.7	141.0	109.3	74.8	66.2	66.2	67.1	71.0	77.6	77.6
85°	102.6	92.1	81.5	61.4	46.0	41.2	47.0	51.8	54.6	59.4	61.4
87.5°	48.9	43.2	37.4	23.9	20.2	21.1	25.0	30.7	36.4	40.3	41.2
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)