

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: P270436

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270436
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-SL3-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 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: 12698.4 lumens
Efficiency: N/A
Efficacy: 102.4 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 (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

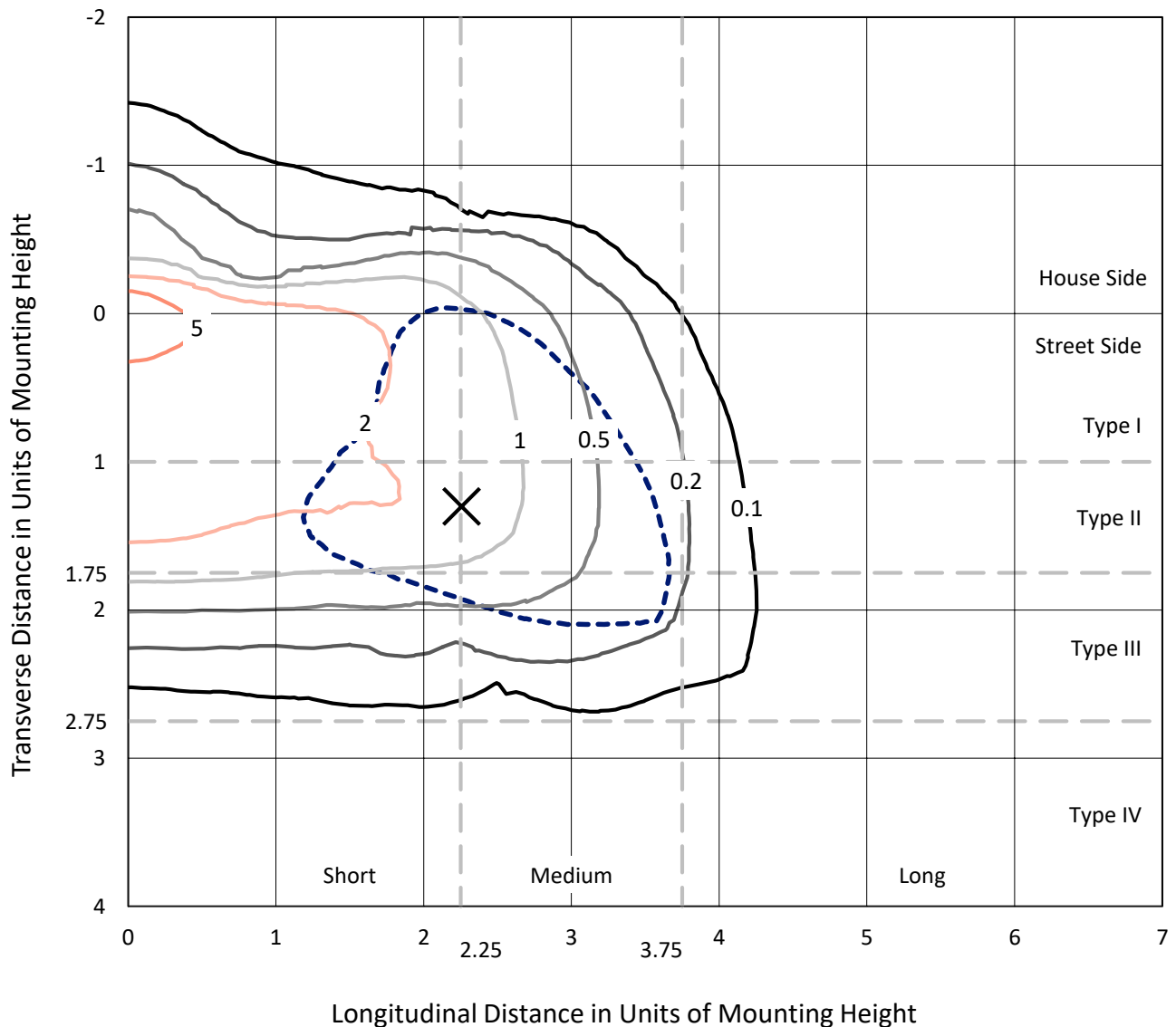


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

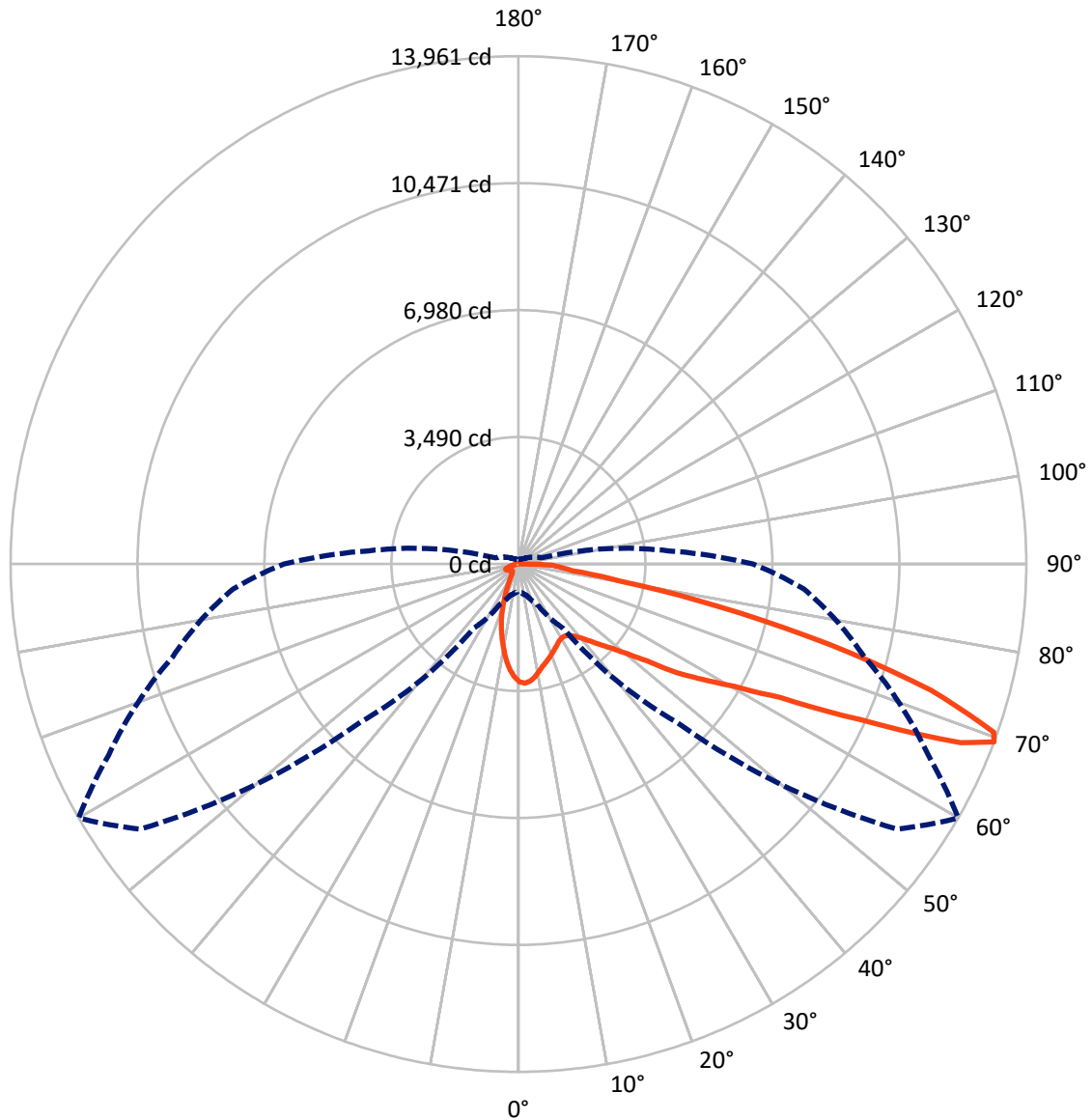


Based on 20 foot mounting height. Maximum calculated value = 8.1 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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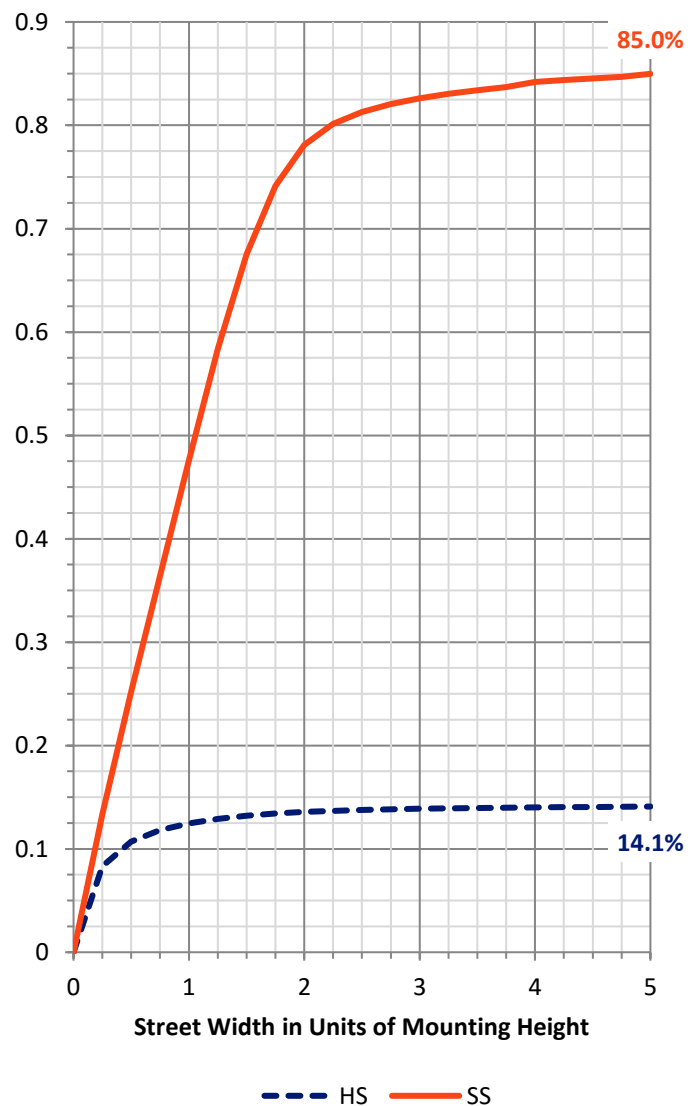
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1811.2	0.0	1811.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	10887.2	0.0	10887.2
	% Fixture	85.7	0.0	85.7
Total	Lumens	12698.4	0.0	12698.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.9	2.2
10°-20°	588.5	4.6
20°-30°	750.8	5.9
30°-40°	1033.1	8.1
40°-50°	1673.5	13.2
50°-60°	2626.4	20.7
60°-70°	3501.5	27.6
70°-80°	1947.7	15.3
80°-90°	302.1	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°	12698.4	100.0
0°-180°	12698.4	100.0

Coefficient of Utilization



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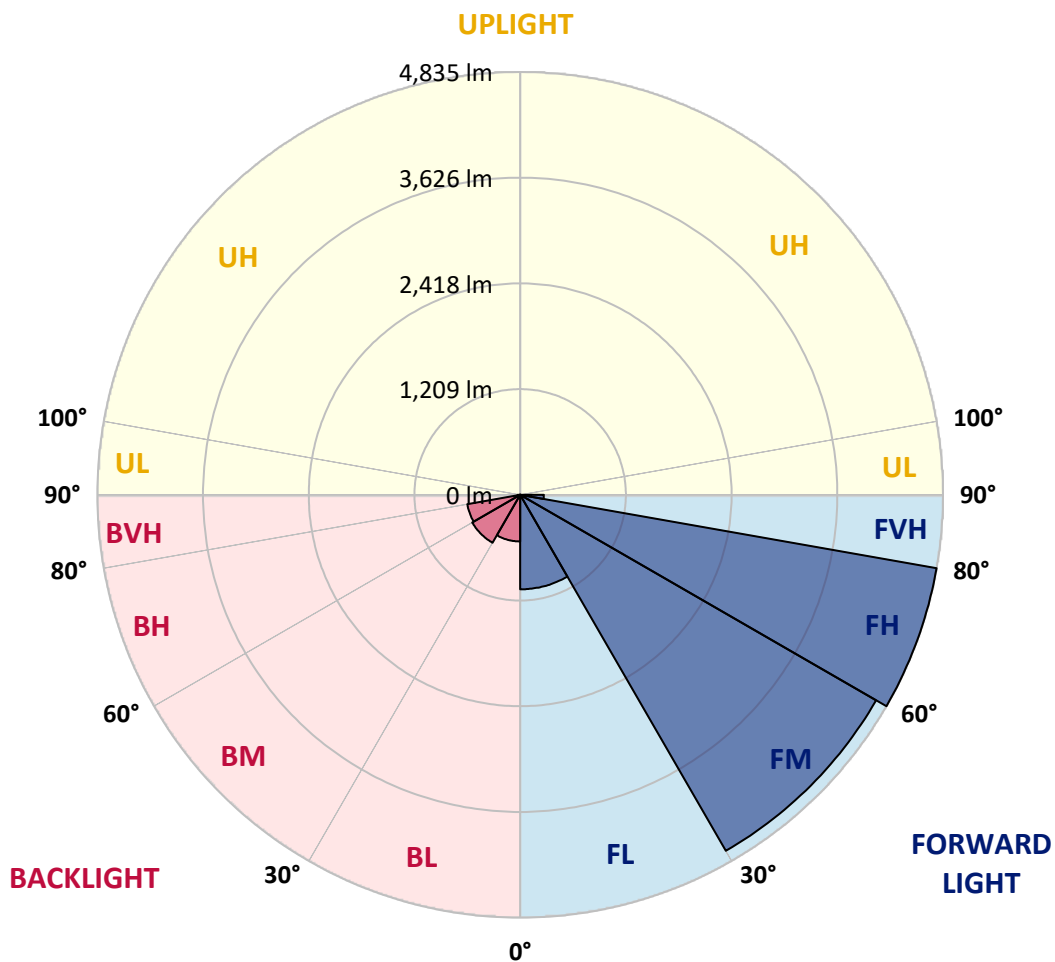
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1080.4	8.5			
FM	(30°-60°)	4700.3	37.0			
FH	(60°-80°)	4835.1	38.1			G2/5000
FVH	(80°-90°)	271.5	2.1			G3/500
BL	(0°-30°)	533.8	4.2	B2/1000		
BM	(30°-60°)	632.7	5.0	B1/1000		
BH	(60°-80°)	614.1	4.8	B2/1000		G2/1000
BVH	(80°-90°)	30.6	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°	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0
2.5°	3326.3	3335.2	3335.2	3328.0	3323.9	3300.4	3286.4	3276.7	3259.6	3227.8	3199.4
5°	3207.5	3224.6	3231.9	3235.2	3256.4	3249.0	3249.8	3243.3	3228.7	3194.5	3148.0
7.5°	2989.2	2992.6	3005.5	3027.5	3078.9	3114.7	3144.0	3149.6	3146.5	3121.2	3056.0
10°	2774.2	2780.0	2795.4	2832.8	2881.8	2933.1	2996.6	3022.6	3042.2	3034.0	2951.8
12.5°	2595.9	2596.7	2613.9	2656.9	2711.5	2775.9	2862.2	2903.0	2949.3	2968.1	2876.1
15°	2424.2	2435.6	2451.8	2503.9	2571.5	2653.0	2752.2	2808.6	2869.5	2923.3	2817.4
17.5°	2293.8	2302.7	2312.5	2355.7	2433.9	2535.6	2658.7	2718.9	2799.5	2881.8	2757.2
20°	2222.1	2225.5	2218.2	2239.3	2305.2	2415.2	2557.7	2630.1	2726.3	2841.9	2695.3
22.5°	2207.6	2207.6	2180.6	2176.7	2205.9	2298.8	2453.5	2542.3	2659.4	2814.2	2639.8
25°	2275.9	2271.1	2220.6	2174.2	2163.6	2210.8	2354.1	2463.2	2602.5	2813.3	2598.3
27.5°	2405.4	2398.8	2336.2	2258.0	2190.4	2170.0	2277.6	2389.1	2557.7	2841.0	2577.1
30°	2566.6	2564.2	2500.7	2403.0	2291.3	2186.4	2247.4	2350.9	2527.6	2892.4	2576.3
32.5°	2743.3	2731.9	2692.8	2595.2	2450.1	2276.8	2265.3	2352.5	2519.3	2967.2	2595.2
35°	2931.3	2923.3	2913.6	2815.0	2652.2	2436.4	2344.3	2408.6	2559.4	3071.5	2648.1
37.5°	3170.8	3161.9	3178.2	3070.6	2892.4	2645.6	2477.9	2521.1	2640.7	3222.8	2746.6
40°	3596.8	3570.7	3524.9	3359.8	3172.5	2902.2	2670.8	2677.4	2780.0	3425.6	2904.6
42.5°	4296.1	4212.3	3986.8	3683.1	3468.0	3200.1	2922.5	2891.6	2972.1	3693.7	3134.1
45°	4997.4	4902.8	4521.7	4035.5	3774.1	3520.2	3233.4	3159.3	3211.5	4005.5	3429.8
47.5°	5449.9	5403.6	4973.6	4388.2	4095.1	3868.7	3589.4	3467.2	3504.6	4358.8	3794.6
50°	5582.7	5542.8	5204.9	4664.2	4397.9	4289.6	4029.8	3867.8	3874.4	4771.6	4231.8
52.5°	5483.4	5467.2	5243.1	4835.2	4676.4	4733.3	4639.7	4414.2	4360.6	5224.5	4705.7
55°	5350.7	5356.4	5270.0	5007.1	4959.8	5147.1	5437.8	5256.3	5028.3	5696.0	5199.2
57.5°	4933.0	4937.1	5163.4	5334.3	5500.5	5726.9	6059.1	5982.5	5717.2	6204.9	5752.0
60°	3972.0	4003.8	4507.9	5266.9	6118.5	6869.2	6950.7	6818.9	6449.9	6791.1	6471.1
62.5°	2837.7	2866.3	3450.1	4572.3	6046.0	8162.4	8597.1	8072.8	7444.2	7668.1	7482.4
65°	1490.9	1486.1	1938.1	3159.3	5092.5	8462.0	11191.5	10299.1	9119.1	8874.0	8459.6
67.5°	833.0	859.9	1034.9	1593.6	3319.0	7447.5	12848.5	13111.7	11448.0	9830.8	8417.3
69°	770.2	779.3	896.5	1232.0	2163.6	6144.5	12706.0	13960.9	12430.0	9835.0	7874.9
70°	748.3	758.1	864.8	1135.1	1817.5	5034.7	12187.5	13861.6	12668.6	9616.6	7381.6
72.5°	670.9	684.0	787.5	1020.3	1531.7	2595.2	9816.9	11864.2	11475.7	8405.0	5723.6
75°	572.4	594.4	750.8	1013.0	1451.0	1649.7	6546.8	8839.1	8541.1	6011.1	3247.4
77.5°	237.0	239.4	328.2	741.8	1522.6	1579.0	3518.5	5599.0	4956.6	2635.8	978.0
80°	165.3	162.1	163.8	216.6	1228.7	1589.6	1805.2	2847.5	2213.2	695.4	457.6
82.5°	139.2	137.6	144.1	136.1	416.2	1803.6	1509.7	1484.4	1042.4	374.6	218.2
85°	92.0	89.7	118.0	123.7	197.8	1432.3	1623.6	1166.9	776.9	200.3	92.9
87.5°	44.7	45.6	67.6	83.9	105.0	453.6	1555.2	922.6	600.2	87.1	37.5
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°	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0	3240.0
2.5°	3187.9	3163.6	3141.6	3113.9	3092.7	3074.8	3050.4	3049.4	3045.4	3051.2	3052.8
5°	3117.1	3076.3	3014.5	2945.3	2896.4	2832.0	2769.4	2748.3	2724.6	2722.1	2729.5
7.5°	3010.4	2946.9	2841.0	2735.2	2629.2	2521.1	2418.4	2366.3	2315.8	2300.4	2307.7
10°	2891.6	2810.8	2648.8	2476.3	2327.1	2166.1	2009.7	1908.7	1816.6	1777.6	1787.4
12.5°	2798.7	2696.2	2468.2	2244.1	2021.0	1789.9	1583.8	1384.3	1233.6	1166.1	1170.1
15°	2718.9	2587.7	2298.8	2000.6	1721.4	1404.6	1118.7	887.5	755.7	706.7	705.2
17.5°	2632.7	2473.8	2122.1	1774.3	1412.0	1020.3	749.1	612.4	560.3	544.0	544.0
20°	2540.5	2356.6	1937.1	1527.6	1086.3	712.4	563.4	510.5	491.1	486.2	485.4
22.5°	2455.1	2241.7	1751.5	1264.5	785.7	540.7	479.6	459.3	456.0	460.1	460.1
25°	2387.4	2140.8	1563.4	987.7	571.6	452.7	426.6	424.2	436.4	451.0	453.6
27.5°	2337.0	2050.4	1377.8	721.5	449.5	394.0	385.2	395.8	424.2	453.6	459.3
30°	2301.9	1972.9	1155.5	518.7	374.6	345.3	349.4	368.0	411.2	456.0	468.1
32.5°	2286.5	1910.3	931.5	398.2	320.1	303.7	314.2	338.8	383.5	428.3	443.0
35°	2301.2	1864.7	724.8	330.5	280.1	268.0	280.1	305.3	334.7	356.6	365.6
37.5°	2354.1	1848.4	545.6	293.1	254.1	241.9	251.6	268.8	281.8	290.0	293.9
40°	2465.7	1865.5	427.6	273.7	239.4	225.6	228.0	236.2	245.1	251.6	252.5
42.5°	2643.2	1921.7	380.3	266.3	230.4	212.4	208.4	214.2	223.9	232.9	234.5
45°	2879.2	2015.3	375.4	268.8	226.4	201.9	193.9	199.6	212.4	227.2	229.6
47.5°	3184.8	2163.6	398.2	281.8	228.8	196.2	184.1	189.7	206.8	226.4	229.6
50°	3546.1	2368.7	440.4	301.3	240.1	196.2	180.0	184.8	202.7	224.8	228.0
52.5°	3972.0	2654.6	484.5	320.9	256.5	203.6	181.5	180.7	197.1	217.4	221.5
55°	4441.8	3009.6	526.9	337.9	265.4	213.3	185.7	175.9	189.0	205.3	208.4
57.5°	4994.8	3495.8	601.0	354.2	270.3	220.7	190.5	170.9	178.4	189.7	192.1
60°	5744.8	4209.8	745.1	381.9	279.4	223.9	191.3	166.0	165.3	173.5	174.2
62.5°	6722.7	5046.0	882.7	414.5	297.2	224.8	188.0	162.9	154.7	157.2	157.2
65°	7418.2	5353.9	842.8	442.1	313.5	223.9	184.8	160.3	146.6	142.6	142.6
67.5°	7022.4	4729.3	715.8	449.5	315.1	215.0	177.5	154.7	139.2	129.4	129.4
69°	6440.9	4145.5	657.1	436.4	302.1	204.4	169.4	148.9	134.3	123.0	123.0
70°	5967.1	3703.4	621.3	420.9	286.6	195.4	162.1	143.3	129.4	119.7	118.8
72.5°	4455.0	2471.3	530.9	363.2	235.4	165.3	141.8	127.9	116.4	110.0	110.0
75°	2350.9	1238.6	434.8	296.4	181.5	132.0	116.4	107.4	101.0	100.2	99.4
77.5°	770.2	560.3	312.7	223.0	133.6	102.5	92.9	87.1	86.2	89.7	89.7
80°	416.2	334.7	201.1	150.6	92.9	76.5	71.7	70.8	73.3	78.2	78.2
82.5°	201.9	165.3	119.7	92.9	63.5	56.1	56.1	57.0	60.2	65.9	65.9
85°	87.1	78.2	69.2	52.1	39.0	35.0	40.0	43.9	46.4	50.5	52.1
87.5°	41.5	36.7	31.8	20.3	17.1	18.0	21.2	26.1	30.9	34.1	35.0
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)