

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: P270586

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270586
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16874.6 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - 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

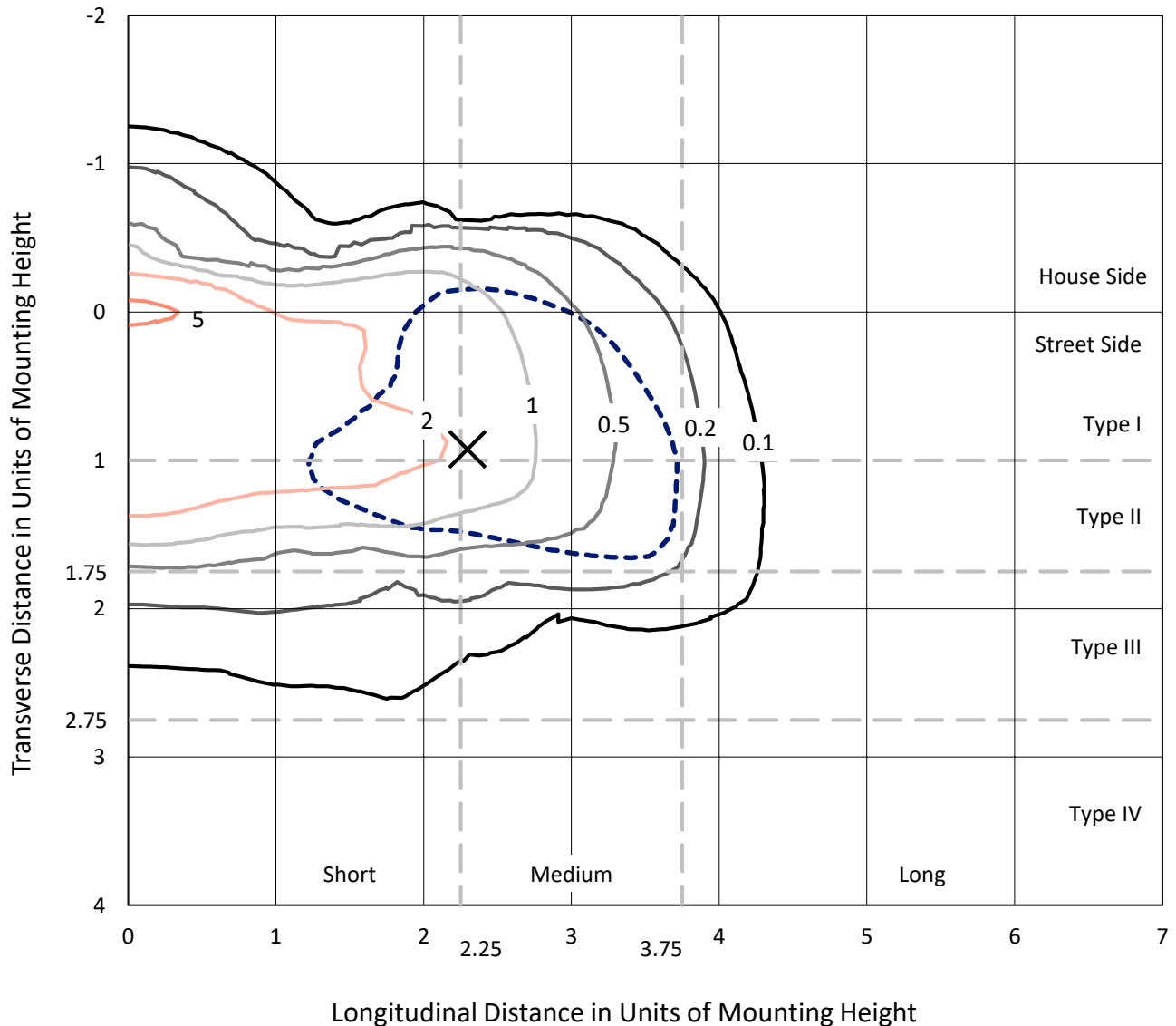


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Iso-Footcandle Lines of Horizontal Illumination

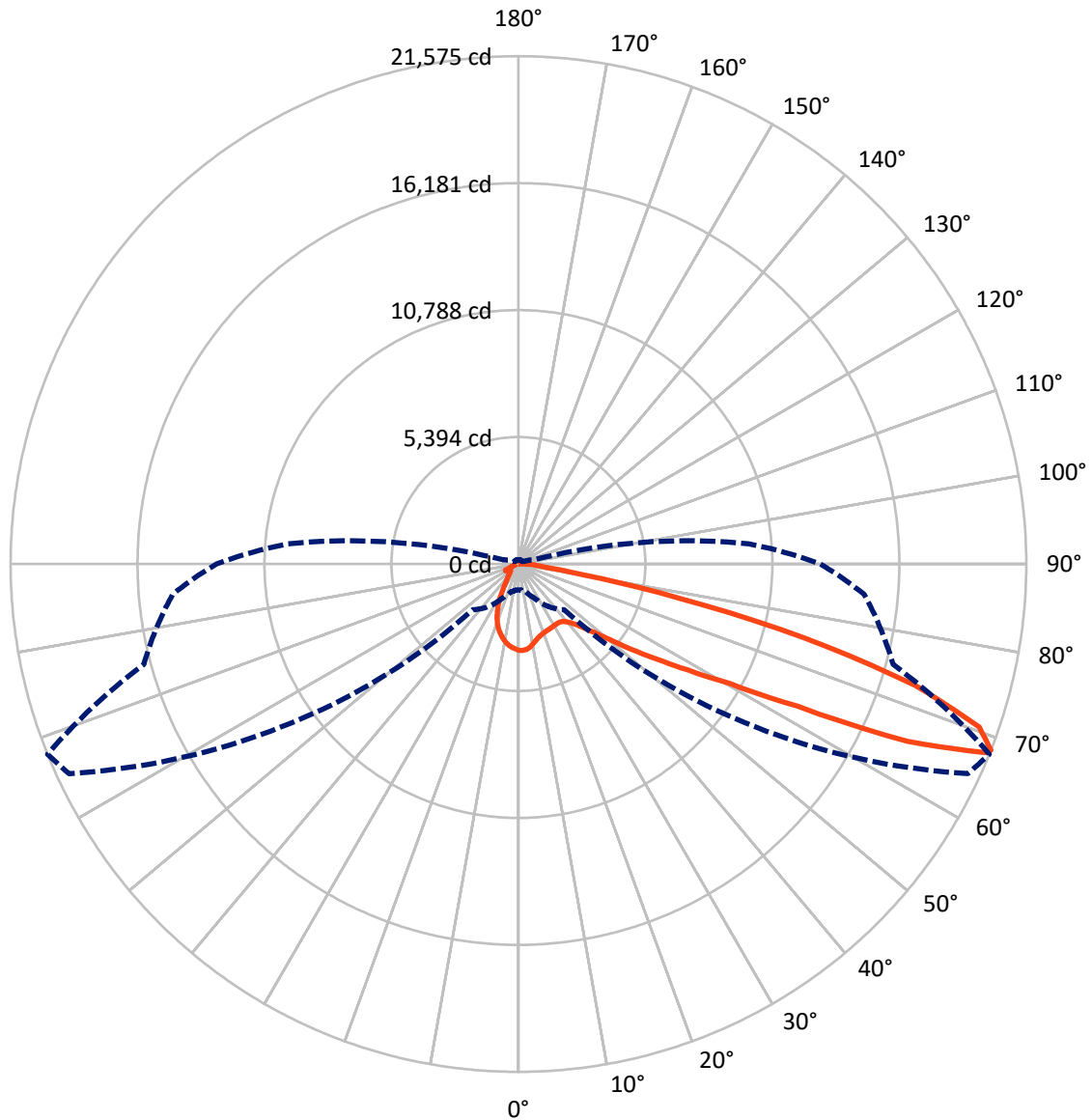
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.9 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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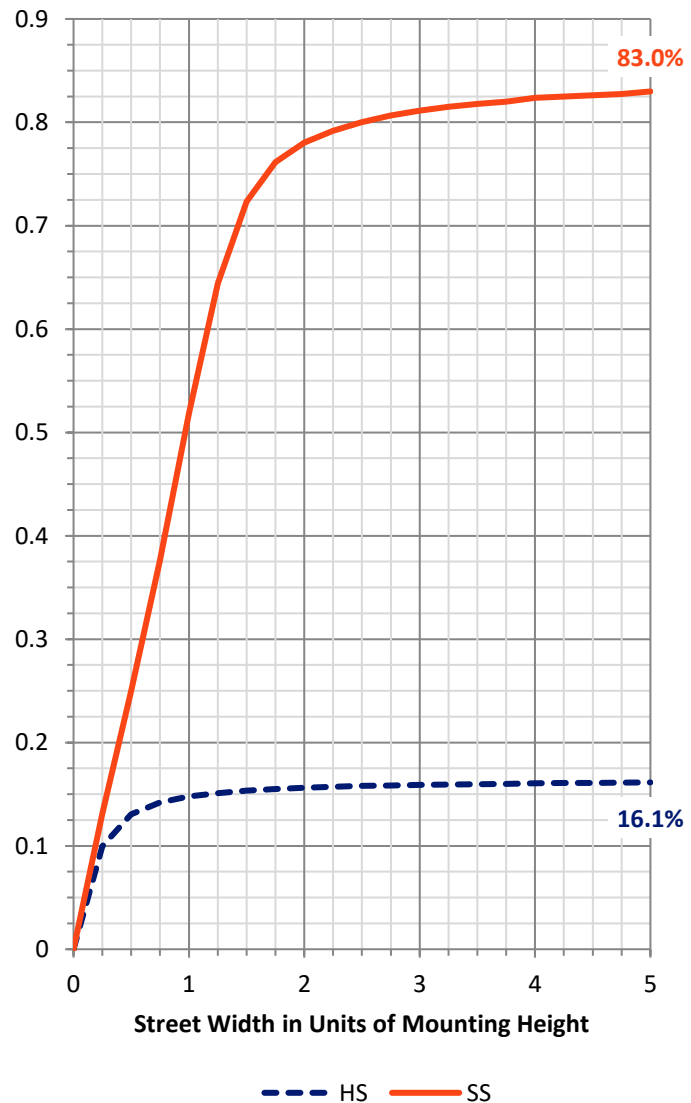
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2760.7	0.0	2760.7
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	14113.9	0.0	14113.9
	% Fixture	83.6	0.0	83.6
Total	Lumens	16874.6	0.0	16874.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.6	1.9
10°-20°	729.7	4.3
20°-30°	986.9	5.8
30°-40°	1391.5	8.2
40°-50°	2288.1	13.6
50°-60°	3546.7	21.0
60°-70°	4598.6	27.3
70°-80°	2638.9	15.6
80°-90°	379.7	2.3
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°	16874.6	100.0
0°-180°	16874.6	100.0

Coefficient of Utilization



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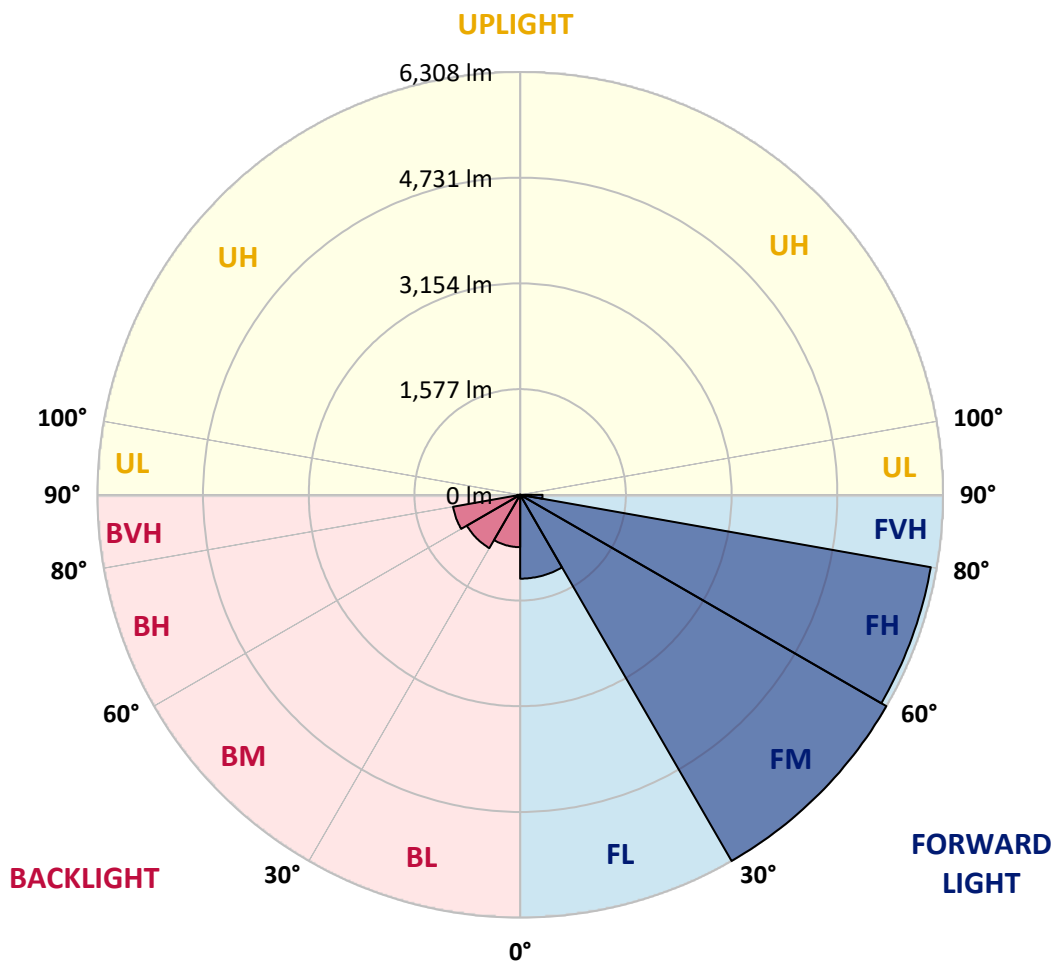
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1250.7	7.4			
FM (30°-60°)	6308.0	37.4			
FH (60°-80°)	6220.7	36.9			G3/7500
FVH (80°-90°)	334.4	2.0			G3/500
BL (0°-30°)	780.5	4.6	B2/1000		
BM (30°-60°)	918.2	5.4	B1/1000		
BH (60°-80°)	1016.7	6.0	B3/2500		G3/2500
BVH (80°-90°)	45.3	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7
2.5°	3573.6	3602.4	3602.4	3623.3	3642.0	3657.4	3670.7	3670.7	3670.7	3661.9	3654.1
5°	3197.7	3236.4	3241.9	3294.8	3364.2	3449.1	3544.0	3627.6	3644.2	3675.1	3687.3
7.5°	2936.5	2948.6	2969.5	3006.0	3076.5	3181.3	3330.0	3517.5	3562.7	3659.7	3710.4
10°	2751.4	2761.3	2778.8	2815.3	2879.2	2974.0	3120.6	3364.2	3439.3	3611.1	3711.4
12.5°	2615.8	2623.5	2639.9	2673.0	2738.2	2823.1	2972.9	3226.4	3319.1	3562.7	3726.9
15°	2510.0	2523.2	2536.5	2568.3	2634.5	2716.0	2868.2	3126.1	3226.4	3524.1	3755.5
17.5°	2468.1	2474.7	2476.8	2493.4	2553.0	2635.5	2787.7	3055.6	3159.2	3493.1	3777.6
20°	2494.6	2495.6	2473.6	2462.6	2496.7	2572.7	2720.4	3002.7	3108.4	3465.7	3786.4
22.5°	2610.3	2610.3	2553.0	2504.5	2481.3	2528.6	2675.3	2966.4	3080.9	3444.7	3786.4
25°	2830.6	2820.8	2731.4	2635.5	2533.1	2513.3	2646.6	2943.1	3059.9	3433.7	3772.1
27.5°	3120.6	3111.8	2998.3	2856.2	2670.9	2546.3	2636.7	2924.4	3039.1	3417.2	3741.3
30°	3473.3	3465.7	3336.7	3150.4	2877.0	2651.1	2659.8	2911.1	3022.4	3389.6	3689.3
32.5°	3825.1	3820.6	3718.1	3527.4	3161.3	2828.6	2720.4	2909.0	3013.8	3356.4	3626.5
35°	4178.8	4178.8	4116.0	3955.1	3544.0	3095.3	2847.3	2949.8	3030.3	3338.9	3572.6
37.5°	4701.3	4680.3	4563.5	4397.1	4025.7	3441.3	3052.4	3035.7	3094.1	3368.6	3555.0
40°	5510.5	5449.7	5157.7	4877.6	4551.4	3884.5	3352.0	3202.2	3237.4	3470.1	3596.9
42.5°	6356.9	6261.0	5874.1	5426.7	5094.8	4431.2	3745.7	3472.3	3471.1	3666.3	3730.2
45°	7083.3	7033.8	6614.8	6047.2	5715.5	5046.3	4242.8	3873.5	3833.7	3970.5	3986.9
47.5°	7505.6	7472.6	7220.0	6704.2	6451.7	5772.8	4873.2	4430.1	4355.3	4436.8	4411.3
50°	7388.6	7420.7	7348.0	7084.6	7243.3	6793.5	5676.8	5192.9	5050.7	5132.2	5070.7
52.5°	6773.6	6859.5	6924.7	6975.3	7698.5	8159.2	6686.5	6145.3	6027.4	6013.1	5953.5
55°	5665.8	5802.5	6007.5	6380.1	7576.1	9256.0	8450.3	7297.2	7125.3	7034.8	7058.1
57.5°	3855.9	4063.0	4505.1	5213.9	6940.0	9723.4	11058.2	8785.3	8494.4	8172.5	8247.3
60°	2124.1	2297.1	2823.1	3537.3	5488.4	9653.9	13369.8	11203.8	10287.7	9434.5	9588.9
62.5°	1374.5	1412.0	1803.3	2416.3	3368.6	8522.9	14654.1	15245.9	13304.7	11099.1	11316.2
65°	1104.5	1131.0	1322.8	1948.9	2346.8	5482.9	14711.4	19439.1	18159.2	13361.0	13367.6
67.5°	1079.1	1091.4	1202.7	1639.0	2201.2	2985.1	12716.1	21092.6	21389.1	16030.8	14740.0
68°	1094.6	1108.9	1221.3	1588.5	2200.2	2751.4	11752.7	21067.2	21575.3	16477.3	14740.0
70°	965.6	983.3	1245.6	1643.4	2106.4	2365.5	8047.8	19948.3	20766.3	17503.5	13986.0
72.5°	504.8	490.6	616.1	1297.4	2371.0	2464.7	4251.6	16665.6	17620.3	16210.5	12083.5
75°	393.5	358.2	344.9	512.6	2085.5	2556.2	2469.1	11845.3	12566.2	11685.5	8076.5
77.5°	370.5	327.4	302.0	303.2	918.2	2659.8	1997.4	6970.9	6970.9	5574.3	2577.1
80°	297.6	258.0	241.5	275.6	443.1	2451.6	2084.4	3176.9	2709.5	1440.7	709.9
82.5°	196.2	175.3	176.3	223.8	336.1	1636.9	2414.0	1568.6	1178.3	638.2	417.8
85°	124.5	106.9	119.0	156.6	251.3	729.8	2389.9	1090.2	780.4	358.2	208.3
87.5°	62.8	48.5	59.5	81.6	153.3	209.5	1967.6	973.4	578.7	148.8	113.5
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°	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7	3671.7
2.5°	3654.1	3630.0	3617.7	3597.9	3573.6	3549.5	3532.9	3525.2	3520.7	3523.0	3521.9
5°	3680.5	3648.6	3596.9	3523.0	3446.8	3366.4	3304.8	3257.3	3227.5	3218.6	3216.6
7.5°	3700.4	3654.1	3557.1	3422.6	3292.6	3151.4	3031.3	2935.4	2870.4	2840.6	2839.5
10°	3697.2	3637.5	3484.3	3286.0	3095.3	2888.1	2699.5	2538.6	2421.7	2365.5	2363.4
12.5°	3700.4	3618.8	3395.1	3126.1	2852.7	2556.2	2276.2	2026.0	1851.9	1769.2	1765.9
15°	3713.7	3599.0	3303.5	2947.6	2569.4	2150.6	1750.4	1436.3	1277.6	1223.5	1223.5
17.5°	3712.5	3565.9	3197.7	2740.3	2233.2	1672.1	1194.8	1000.9	985.5	1035.0	1042.8
20°	3690.4	3513.0	3061.1	2494.6	1838.7	1157.5	810.2	782.7	906.1	1042.8	1058.3
22.5°	3656.3	3444.7	2903.4	2209.0	1379.0	753.9	625.0	666.9	834.4	1004.1	1028.5
25°	3608.9	3362.0	2722.8	1877.2	917.1	542.3	521.3	573.2	691.2	804.7	822.3
27.5°	3539.5	3257.3	2525.3	1517.9	585.3	446.5	454.2	490.6	541.1	589.7	599.7
30°	3452.4	3134.9	2310.4	1119.9	444.2	399.0	412.2	434.3	456.3	487.2	493.8
32.5°	3364.2	3010.4	2086.7	769.4	388.0	373.6	386.9	399.0	417.8	438.7	443.1
35°	3284.8	2894.7	1856.3	536.7	363.8	357.2	363.8	371.4	390.3	411.2	413.4
37.5°	3227.5	2799.8	1616.1	424.4	349.4	342.9	346.1	349.4	371.4	402.4	405.7
40°	3219.9	2737.0	1372.4	381.4	338.4	329.6	327.4	329.6	358.2	393.5	396.8
42.5°	3294.8	2740.3	1134.3	363.8	329.6	319.6	310.9	315.2	340.5	368.1	370.5
45°	3472.3	2817.4	928.0	356.1	321.9	314.1	300.9	303.2	315.2	329.6	331.8
47.5°	3785.3	2986.1	770.4	351.6	315.2	308.7	292.0	285.5	286.6	294.4	294.4
50°	4285.8	3268.4	674.5	347.3	309.7	297.6	278.8	265.7	262.3	266.7	267.9
52.5°	5031.9	3752.2	628.4	338.4	299.9	283.2	262.3	249.1	243.6	248.0	248.0
55°	6040.7	4524.9	606.3	326.3	287.6	265.7	246.9	235.9	231.6	234.7	234.7
57.5°	7190.4	5529.2	643.7	309.7	272.2	246.9	233.6	226.0	222.7	226.0	227.1
60°	8556.0	6843.1	901.7	288.9	255.7	230.3	222.7	218.3	216.0	219.4	219.4
62.5°	10371.6	8591.3	1395.4	272.2	238.1	215.0	212.8	210.6	208.3	211.6	211.6
65°	12331.5	10182.0	1436.3	262.3	222.7	201.7	202.8	202.8	200.6	203.9	203.9
67.5°	12955.4	10044.2	802.5	250.2	203.9	188.5	192.9	192.9	191.8	195.1	194.0
68°	12823.0	9825.9	698.8	246.9	200.6	185.2	189.6	190.7	189.6	192.9	191.8
70°	11837.7	8626.7	459.7	228.2	186.3	174.1	180.7	181.8	180.7	185.2	184.2
72.5°	9771.9	6470.5	339.5	199.6	168.6	159.8	166.5	167.5	168.6	173.1	171.9
75°	6205.9	3573.6	267.9	169.8	151.1	143.3	149.8	153.3	155.4	162.1	158.7
77.5°	1699.8	1084.7	217.2	144.4	130.1	126.8	131.2	135.6	137.8	145.4	140.0
80°	595.2	479.4	180.7	122.3	108.1	106.9	111.3	115.7	117.9	124.5	117.9
82.5°	361.6	313.1	144.4	95.8	84.9	83.8	89.3	93.8	95.8	95.8	91.4
85°	188.5	165.4	105.8	67.3	58.4	55.2	65.0	70.5	71.7	70.5	67.3
87.5°	105.8	93.8	56.2	32.0	26.5	27.6	34.1	42.0	45.2	44.0	42.0
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)