

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: P270485

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270485  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-5NQ-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21789.9 lumens  
Efficiency: N/A  
Efficacy: 96.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

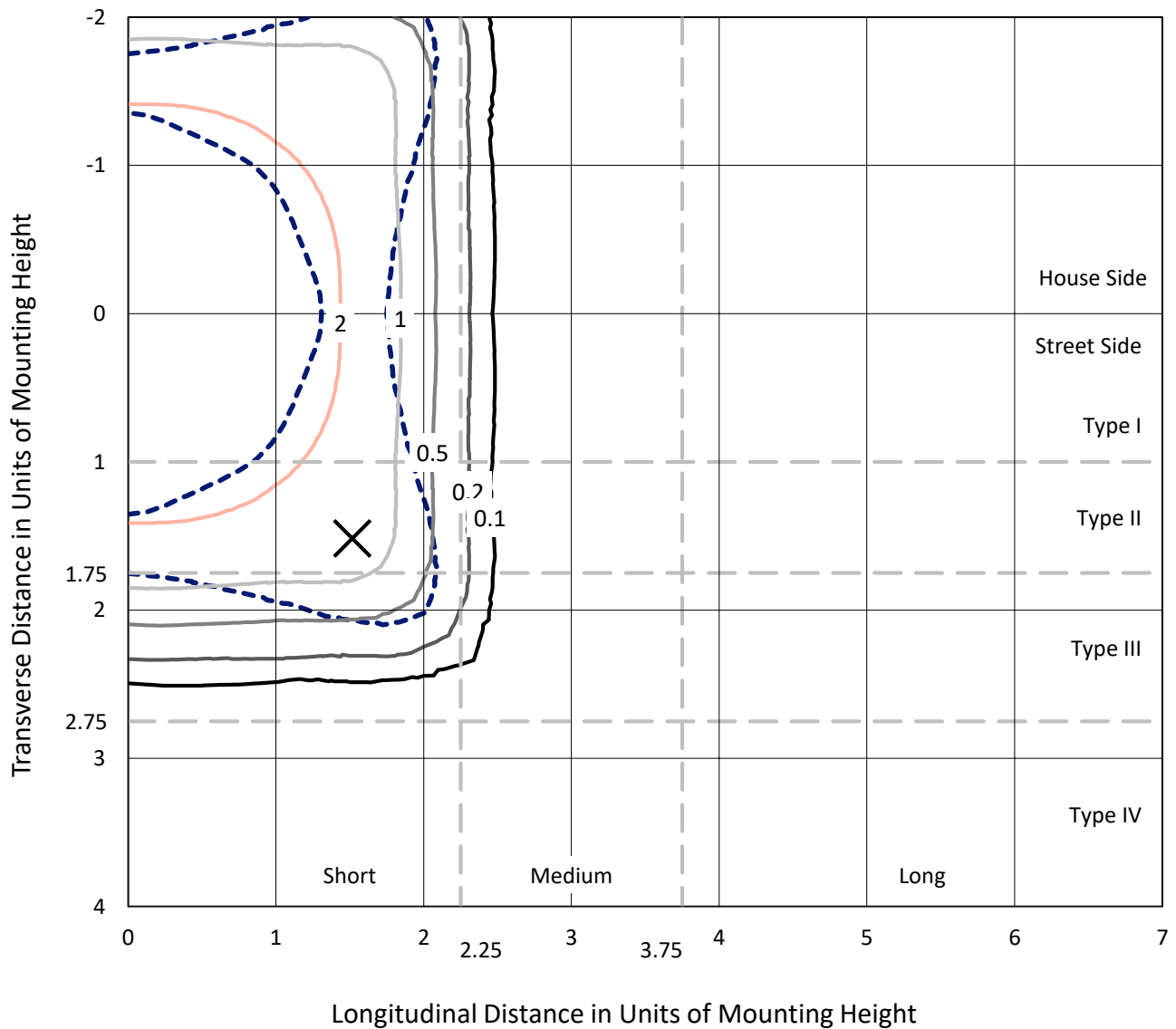
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

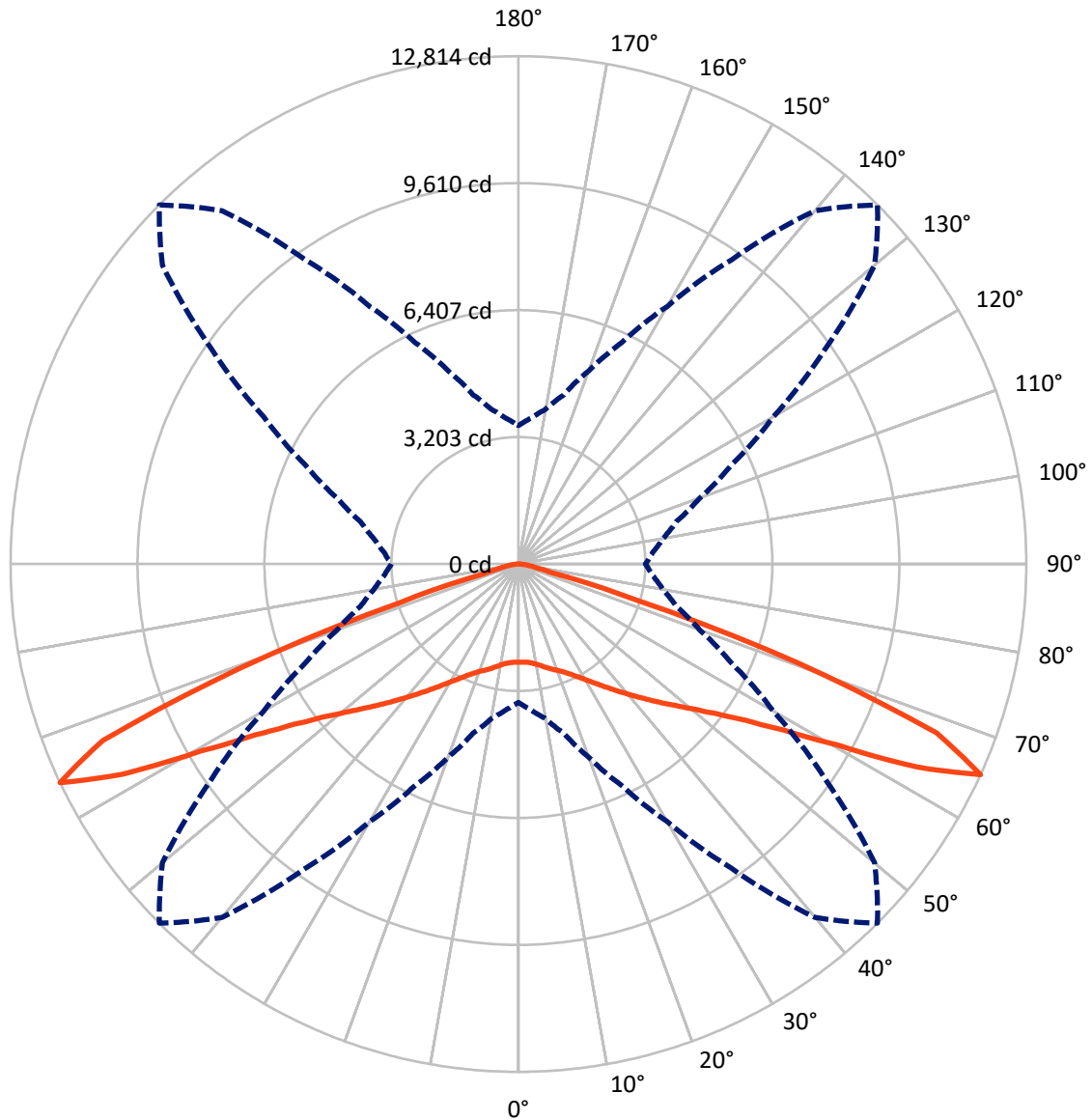
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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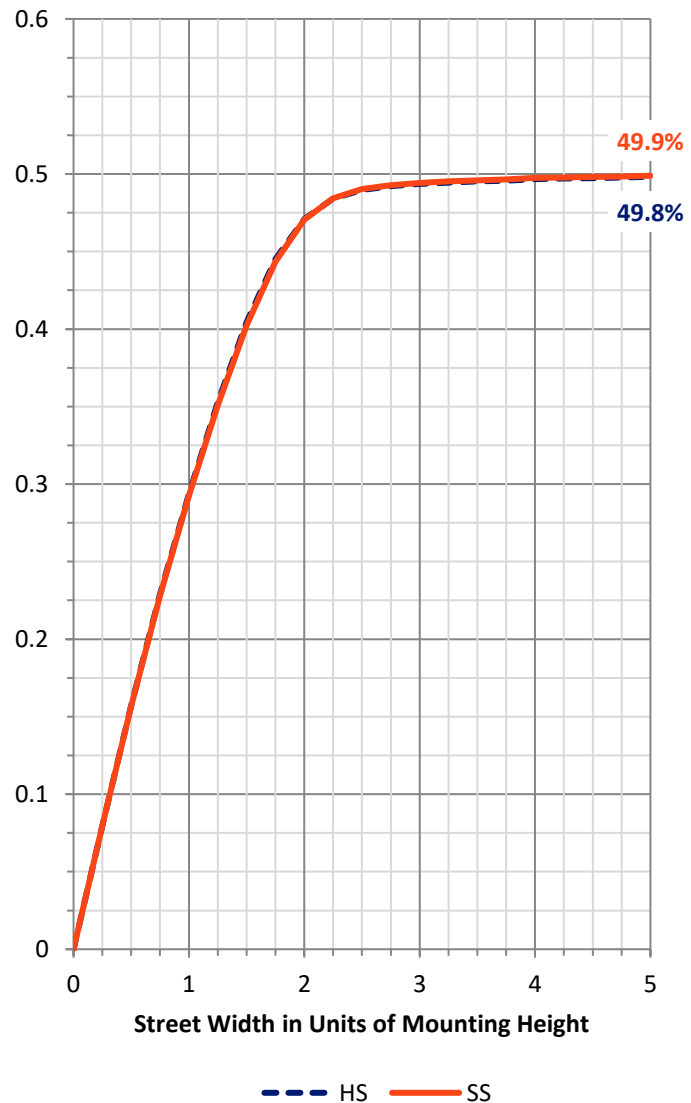
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10894.9	0.0	10894.9
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10894.9	0.0	10894.9
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	21789.9	0.0	21789.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	241.4	1.1
10°-20°	773.6	3.6
20°-30°	1443.1	6.6
30°-40°	2433.3	11.2
40°-50°	3952.4	18.1
50°-60°	6192.7	28.4
60°-70°	5845.6	26.8
70°-80°	787.8	3.6
80°-90°	120.0	0.6
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°	21789.9	100.0
0°-180°	21789.9	100.0



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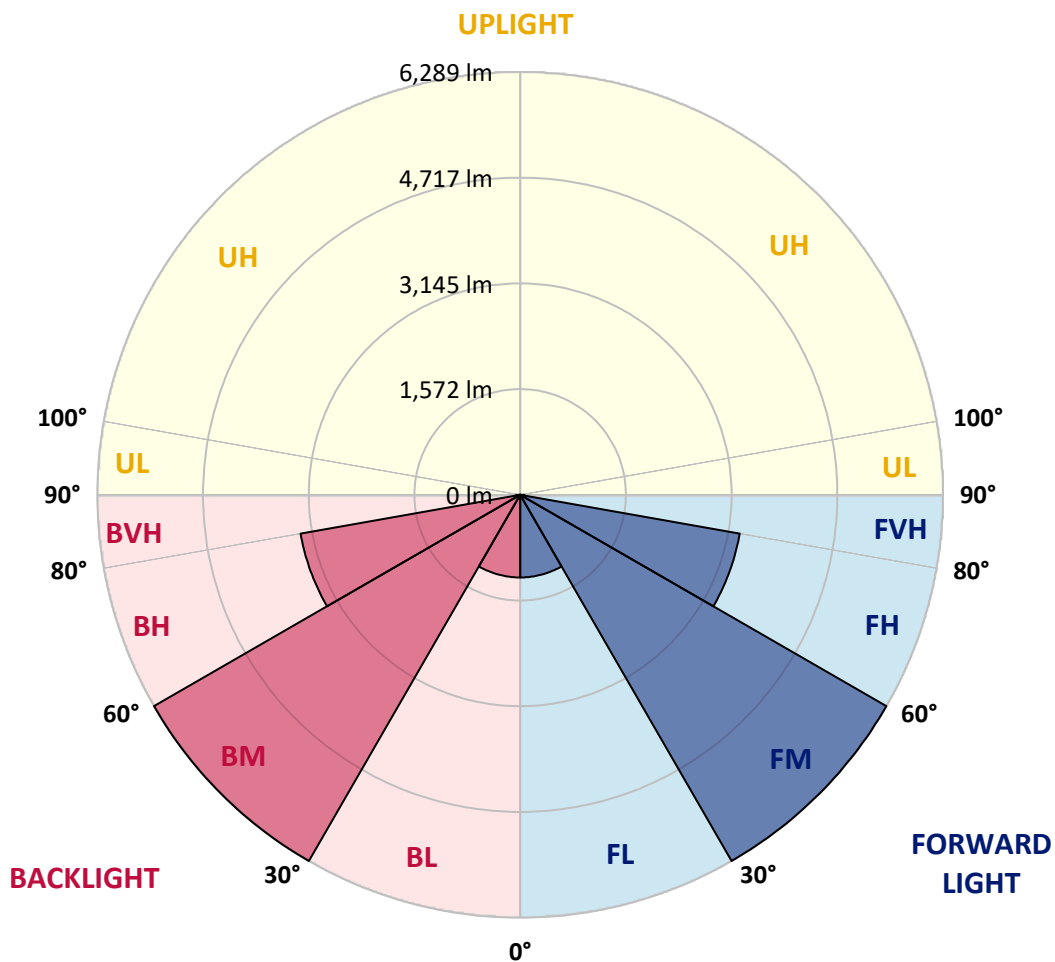
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1229.0	5.6			
FM	(30°-60°)	6289.2	28.9			
FH	(60°-80°)	3316.7	15.2			G2/5000
FVH	(80°-90°)	60.0	0.3			G1/100
BL	(0°-30°)	1229.0	5.6	B3/2500		
BM	(30°-60°)	6289.2	28.9	B4/8500		
BH	(60°-80°)	3316.7	15.2	B4/5000		G2/5000
BVH	(80°-90°)	60.0	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6
2.5°	2498.9	2498.9	2502.9	2501.6	2496.2	2492.2	2488.0	2482.6	2480.0	2477.3	2475.9
5°	2512.5	2512.5	2516.6	2515.3	2511.1	2505.7	2502.9	2498.9	2494.9	2492.2	2493.5
7.5°	2546.4	2547.9	2549.2	2547.9	2543.7	2539.7	2534.2	2533.0	2527.4	2523.3	2526.0
10°	2598.0	2598.0	2599.3	2600.8	2598.0	2588.6	2588.6	2585.9	2580.4	2574.9	2576.2
12.5°	2655.0	2655.0	2656.4	2656.4	2656.4	2651.0	2652.3	2651.0	2644.3	2641.5	2644.3
15°	2710.6	2712.1	2712.1	2714.8	2714.8	2716.1	2721.5	2721.5	2718.8	2717.5	2717.5
17.5°	2775.9	2778.5	2780.0	2783.9	2785.4	2788.1	2793.5	2794.8	2796.2	2792.1	2793.5
20°	2862.7	2864.1	2868.2	2869.5	2874.9	2874.9	2877.6	2876.4	2873.6	2868.2	2868.2
22.5°	2960.5	2963.1	2971.4	2971.4	2978.2	2974.0	2975.4	2971.4	2964.4	2961.8	2959.0
25°	3088.1	3092.1	3099.0	3096.2	3099.0	3092.1	3092.1	3092.1	3088.1	3084.1	3082.7
27.5°	3249.6	3242.8	3249.6	3244.0	3242.8	3237.3	3238.7	3236.0	3231.9	3230.6	3225.2
30°	3418.0	3409.7	3413.7	3415.1	3412.4	3411.1	3405.7	3401.6	3394.9	3396.1	3392.1
32.5°	3610.6	3602.6	3606.5	3608.0	3605.2	3608.0	3606.5	3597.1	3588.9	3594.4	3594.4
35°	3840.1	3834.5	3845.5	3849.5	3841.4	3837.3	3831.9	3821.0	3808.9	3817.0	3818.2
37.5°	4115.6	4108.8	4116.9	4127.8	4112.9	4104.7	4082.9	4066.6	4058.5	4062.7	4068.1
40°	4402.0	4403.3	4426.4	4429.2	4412.8	4403.3	4381.7	4357.1	4334.1	4334.1	4340.9
42.5°	4703.3	4707.4	4734.5	4743.9	4738.6	4721.0	4691.0	4661.2	4631.4	4636.8	4645.0
45°	5044.1	5038.7	5067.1	5090.2	5086.2	5080.6	5052.2	4997.9	4970.7	4969.3	4983.0
47.5°	5402.3	5413.2	5443.1	5482.4	5481.1	5467.5	5430.9	5380.7	5330.5	5334.4	5350.8
50°	5820.5	5835.4	5885.5	5925.0	5930.4	5926.3	5882.9	5824.5	5754.0	5758.0	5779.8
52.5°	6195.2	6216.8	6275.2	6356.5	6406.8	6429.9	6401.4	6347.2	6275.2	6279.2	6302.2
55°	6534.5	6568.3	6655.3	6766.6	6867.0	6960.6	7002.6	7001.4	6948.4	6960.6	6990.5
57.5°	6747.4	6795.0	6926.7	7105.9	7305.3	7494.1	7657.0	7810.4	7844.3	7908.0	7908.0
60°	6461.1	6572.4	6747.4	7054.3	7446.6	7870.1	8328.8	8775.5	9063.2	9289.9	9167.7
62.5°	5395.6	5559.8	5805.4	6210.1	6820.8	7576.8	8498.5	9536.9	10620.1	11282.5	10796.5
65°	3491.2	3697.6	3964.8	4419.7	5189.2	6162.6	7504.9	9371.4	11638.1	12813.7	11727.7
67.5°	1383.2	1522.9	1685.8	2008.9	2676.8	3632.3	5139.1	7441.1	10276.7	11385.7	10168.2
70°	661.1	684.1	715.3	784.6	951.6	1284.0	2064.6	3666.3	6302.2	7471.1	6151.7
72.5°	477.8	481.9	496.9	519.8	568.7	636.5	773.7	1121.2	2173.2	3160.0	2175.9
75°	362.5	367.9	376.0	388.2	413.9	446.5	498.2	597.3	743.8	857.8	742.4
77.5°	275.5	281.0	287.7	299.9	313.6	336.7	355.5	395.0	457.4	481.9	479.2
80°	201.0	210.5	221.3	232.1	241.6	252.5	253.9	272.8	308.1	331.1	324.4
82.5°	127.6	135.7	164.2	176.4	177.9	180.5	179.2	180.5	199.6	215.9	210.5
85°	81.4	86.9	101.8	115.4	112.6	118.0	118.0	115.4	107.3	92.3	110.0
87.5°	40.8	42.1	48.9	61.1	58.4	51.7	50.2	50.2	36.7	31.3	34.0
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6
2.5°	2471.7	2474.6	2470.3	2470.3	2469.1	2471.7	2467.7	2467.7
5°	2490.8	2494.9	2493.5	2493.5	2496.2	2498.9	2497.6	2496.2
7.5°	2524.7	2527.4	2530.2	2531.6	2534.2	2533.0	2535.6	2534.2
10°	2576.2	2573.6	2577.6	2573.6	2574.9	2572.2	2573.6	2573.6
12.5°	2641.5	2637.3	2634.6	2631.9	2631.9	2626.6	2626.6	2627.9
15°	2716.1	2709.3	2703.9	2701.2	2698.5	2698.5	2694.3	2697.2
17.5°	2789.3	2782.6	2773.1	2773.1	2769.0	2766.3	2763.6	2770.5
20°	2866.9	2860.1	2854.5	2853.1	2845.0	2842.3	2843.8	2851.8
22.5°	2956.3	2952.3	2952.3	2949.6	2944.1	2940.2	2940.2	2949.6
25°	3077.1	3069.0	3070.3	3071.8	3069.0	3069.0	3066.4	3073.1
27.5°	3225.2	3218.4	3222.4	3225.2	3222.4	3226.5	3222.4	3227.8
30°	3398.8	3394.9	3398.8	3403.0	3396.1	3396.1	3393.4	3397.5
32.5°	3606.5	3601.1	3603.8	3603.8	3594.4	3586.3	3575.3	3583.5
35°	3834.5	3827.8	3833.2	3837.3	3826.4	3818.2	3802.0	3808.9
37.5°	4085.8	4088.5	4095.3	4112.9	4110.1	4096.6	4084.4	4089.8
40°	4366.8	4380.2	4410.0	4422.4	4419.7	4406.0	4389.7	4392.5
42.5°	4684.3	4702.0	4733.2	4753.6	4743.9	4725.1	4704.7	4712.8
45°	5030.5	5057.5	5098.3	5118.7	5106.4	5086.2	5057.5	5072.5
47.5°	5396.9	5451.3	5505.5	5532.8	5528.6	5500.1	5463.4	5467.5
50°	5835.4	5907.3	5976.6	6003.7	5983.3	5940.0	5888.3	5887.0
52.5°	6381.0	6458.5	6515.3	6508.6	6458.5	6390.5	6332.2	6329.5
55°	7062.5	7088.3	7080.1	7021.7	6933.5	6827.6	6753.0	6740.7
57.5°	7886.4	7799.5	7672.0	7495.5	7297.2	7096.4	6960.6	6910.4
60°	8893.5	8501.3	8045.2	7564.6	7126.3	6797.7	6590.1	6463.8
62.5°	9725.6	8589.6	7570.0	6735.3	6052.5	5646.7	5363.1	5187.9
65°	9440.6	7420.8	5943.9	4867.6	4122.3	3703.0	3403.0	3203.4
67.5°	7293.2	4958.6	3450.5	2391.6	1813.5	1535.3	1341.1	1214.9
70°	3677.1	1901.7	1152.4	813.1	695.0	646.2	613.5	594.5
72.5°	1079.1	720.8	598.6	529.5	487.3	457.4	438.5	428.9
75°	597.3	487.3	430.3	390.9	363.8	343.4	331.1	323.1
77.5°	411.2	354.3	325.7	299.9	278.3	263.4	253.9	245.6
80°	287.7	259.3	247.0	233.5	217.2	205.0	191.3	185.9
82.5°	191.3	179.2	176.4	165.6	156.0	142.6	118.0	110.0
85°	112.6	111.3	111.3	107.3	100.4	88.3	70.5	70.5
87.5°	39.3	40.8	42.1	44.7	43.5	36.7	29.9	28.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)