

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: P270652

Luminaire Tested: **NAV-AF-06-D-UNV-5WQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270652
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-5WQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35717.1 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 382
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

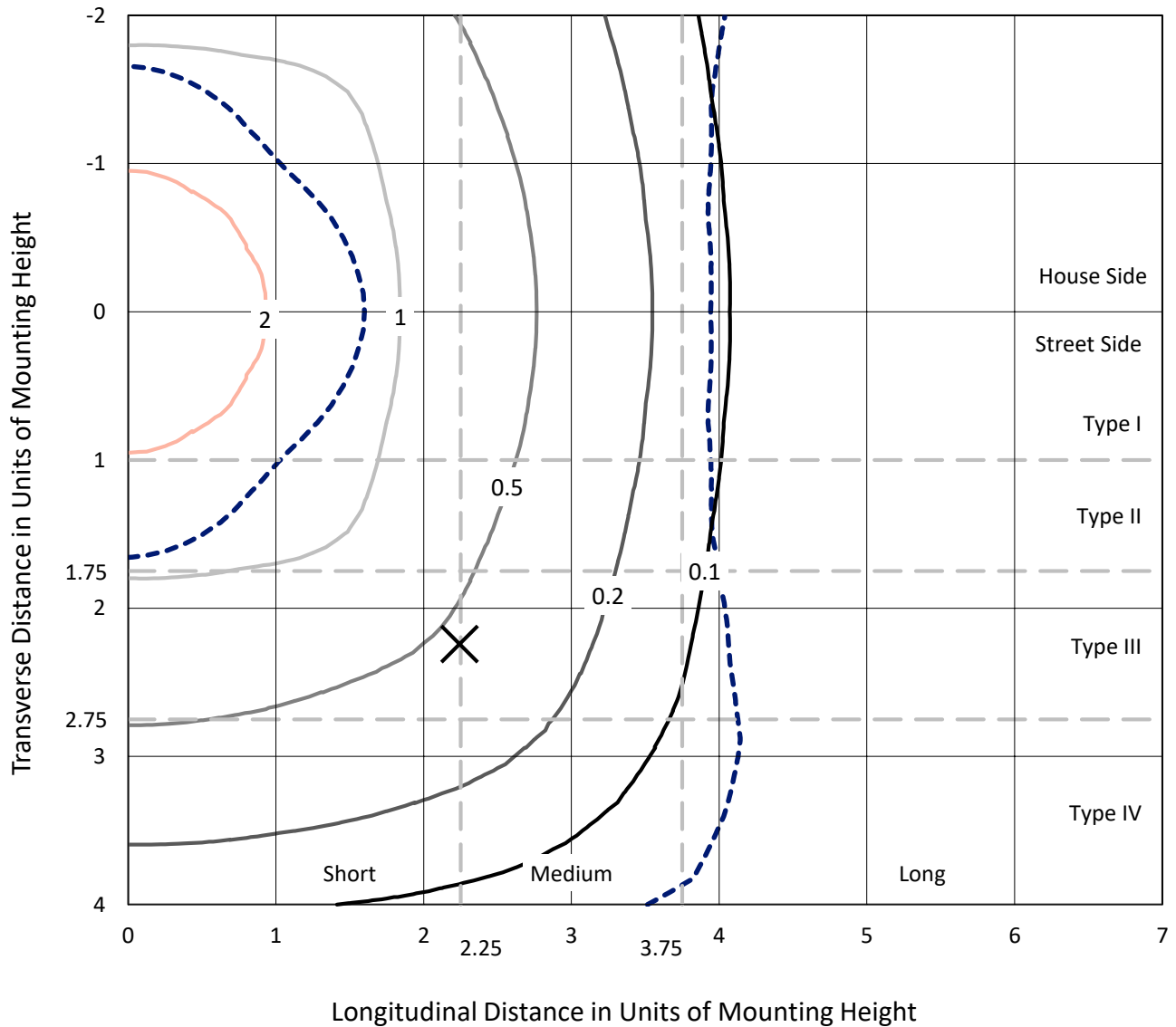


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

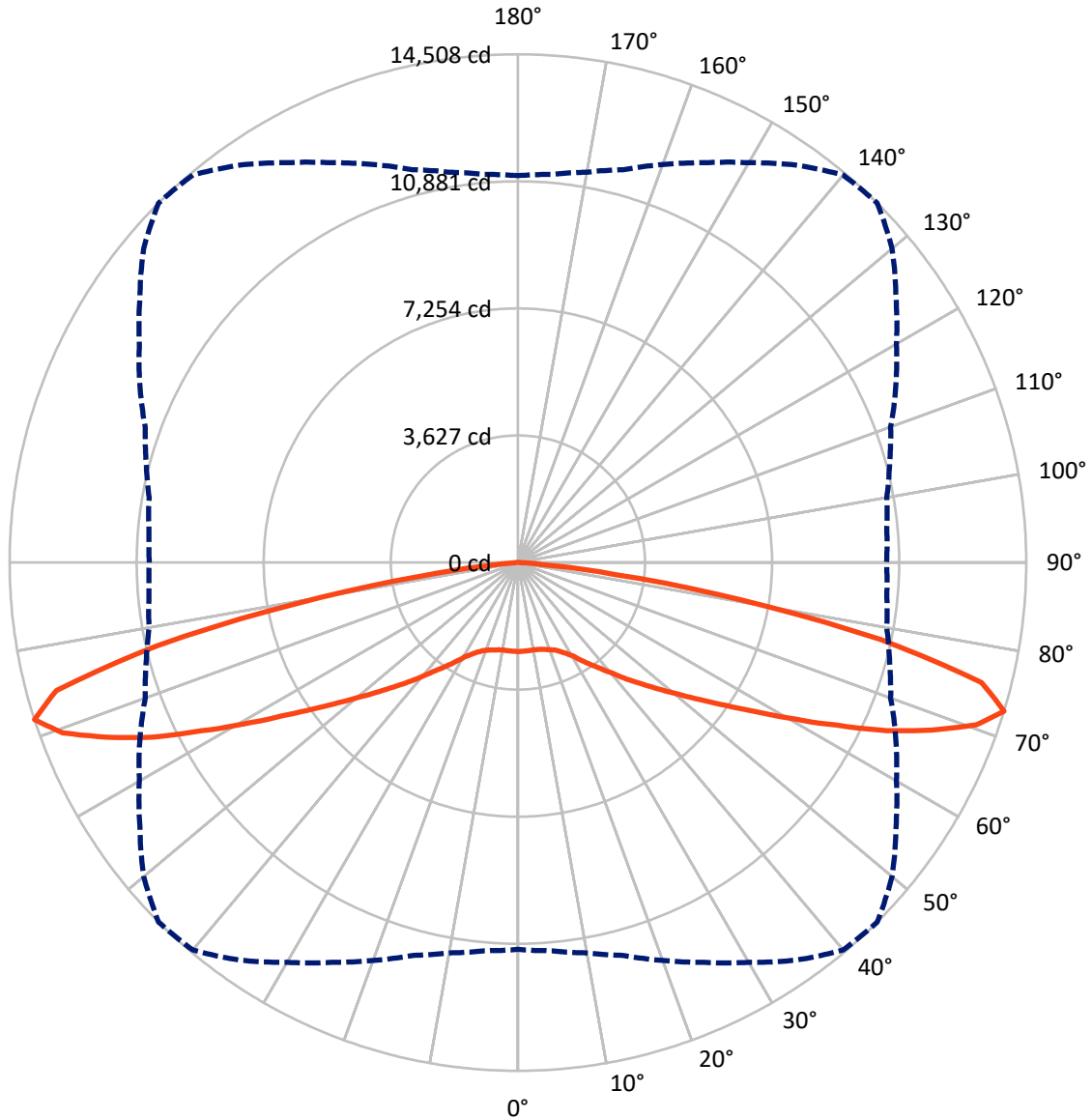


Based on 30 foot mounting height. Maximum calculated value = 2.8 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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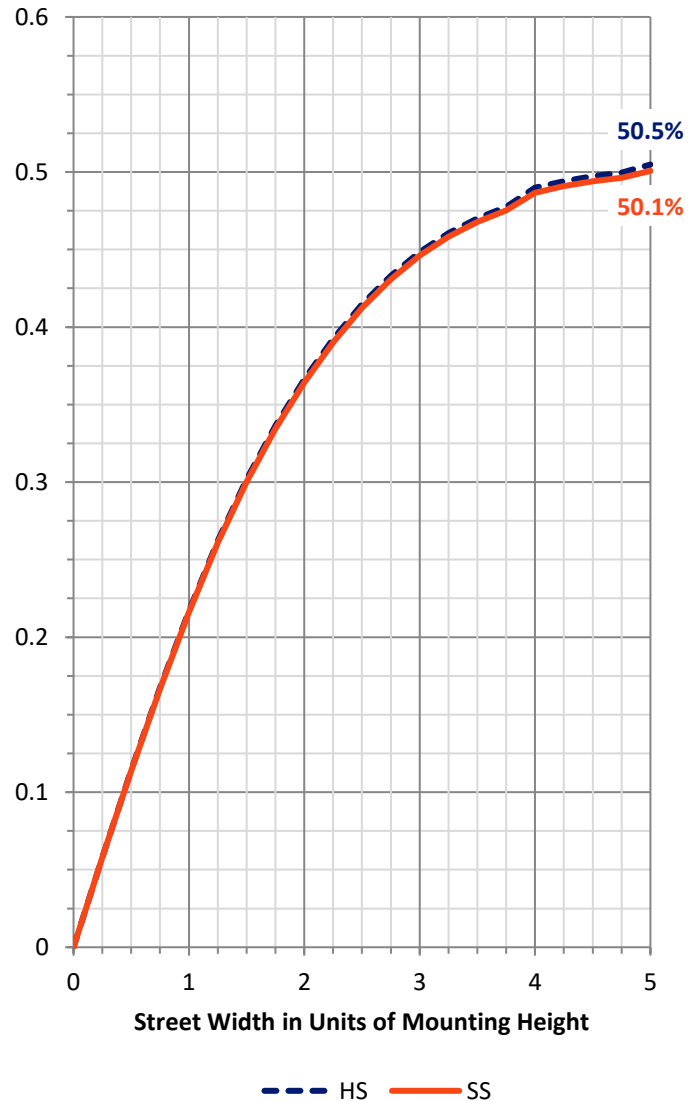
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	17858.6	0.0	17858.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	17858.6	0.0	17858.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	35717.1	0.0	35717.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.4	0.7
10°-20°	733.5	2.1
20°-30°	1324.2	3.7
30°-40°	2258.7	6.3
40°-50°	3845.4	10.8
50°-60°	6188.6	17.3
60°-70°	10291.9	28.8
70°-80°	9956.2	27.9
80°-90°	876.3	2.5
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°	35717.1	100.0
0°-180°	35717.1	100.0



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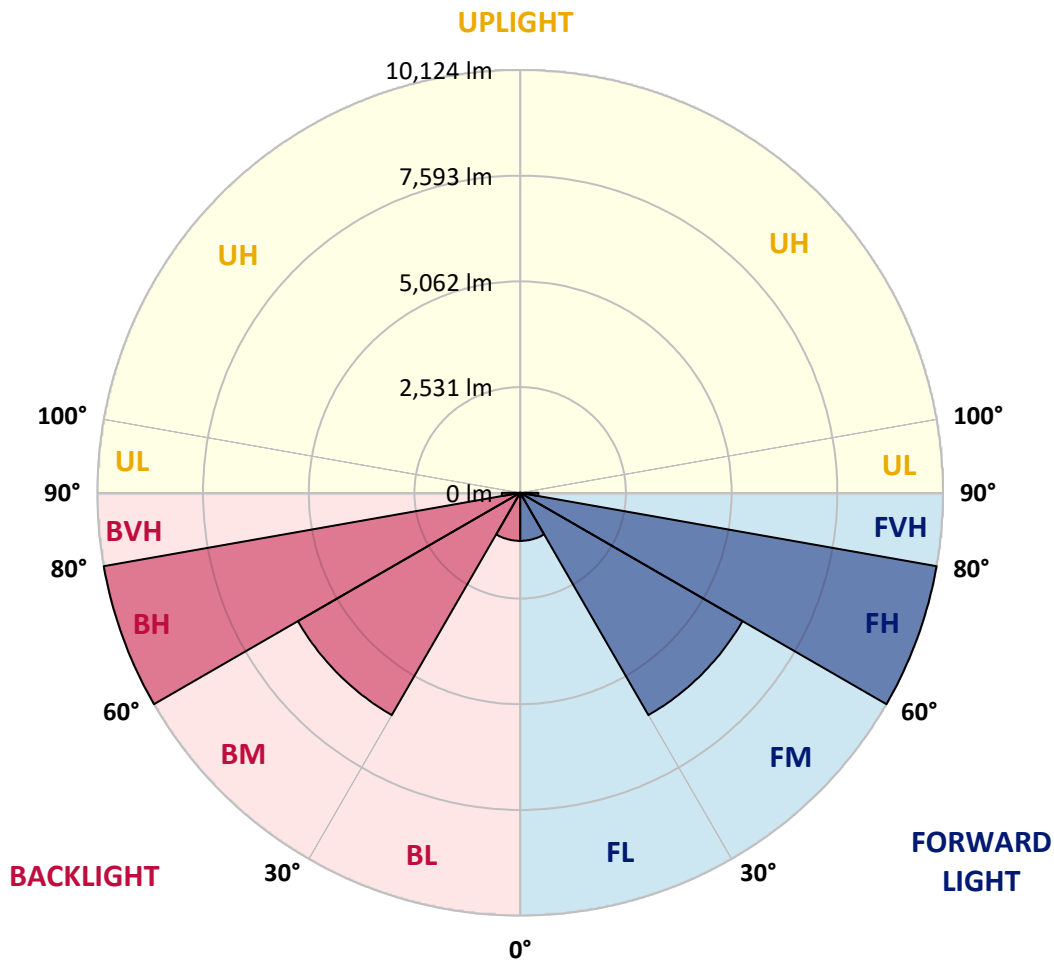
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1150.0	3.2			
FM	(30°-60°)	6146.4	17.2			
FH	(60°-80°)	10124.0	28.3			G4/12000
FVH	(80°-90°)	438.1	1.2			G3/500
BL	(0°-30°)	1150.0	3.2	B3/2500		
BM	(30°-60°)	6146.4	17.2	B4/8500		
BH	(60°-80°)	10124.0	28.3	B5		G4/12000
BVH	(80°-90°)	438.1	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1
2.5°	2559.0	2559.0	2561.2	2559.0	2554.6	2552.4	2545.7	2541.5	2537.1	2534.7	2530.4
5°	2561.2	2561.2	2563.5	2561.2	2556.8	2552.4	2548.0	2541.5	2537.1	2532.6	2530.4
7.5°	2570.1	2572.1	2574.5	2572.1	2563.5	2559.0	2552.4	2545.7	2537.1	2532.6	2528.2
10°	2587.6	2587.6	2587.6	2585.4	2578.8	2570.1	2561.2	2554.6	2543.6	2532.6	2526.0
12.5°	2600.8	2603.0	2603.0	2598.5	2589.8	2578.8	2570.1	2563.5	2554.6	2545.7	2539.1
15°	2620.5	2620.5	2618.4	2609.5	2596.5	2587.6	2583.2	2581.0	2578.8	2574.5	2567.7
17.5°	2660.2	2657.9	2651.3	2638.1	2622.7	2616.1	2611.7	2611.7	2611.7	2609.5	2605.2
20°	2717.4	2717.4	2708.5	2686.6	2673.4	2666.7	2660.2	2660.2	2660.2	2653.6	2646.9
22.5°	2809.5	2811.9	2798.6	2772.3	2754.7	2741.4	2732.6	2726.0	2719.4	2715.0	2704.1
25°	2934.9	2932.7	2917.3	2884.4	2871.3	2858.0	2840.4	2829.4	2820.6	2814.0	2800.8
27.5°	3066.9	3064.7	3047.1	3018.5	3009.7	2989.9	2976.8	2961.4	2950.4	2939.3	2926.1
30°	3236.1	3225.2	3211.9	3189.9	3185.6	3170.2	3152.6	3130.7	3113.0	3095.4	3080.1
32.5°	3387.8	3387.8	3368.0	3357.1	3365.8	3359.2	3361.5	3348.3	3337.3	3330.6	3315.3
35°	3598.9	3598.9	3590.0	3577.0	3579.0	3563.7	3561.5	3563.7	3572.5	3572.5	3555.0
37.5°	3880.3	3884.7	3856.1	3851.8	3840.8	3818.8	3807.7	3812.1	3831.9	3842.9	3818.8
40°	4229.8	4238.7	4229.8	4201.3	4188.1	4150.7	4128.7	4128.7	4144.2	4155.1	4146.2
42.5°	4575.0	4590.3	4575.0	4553.0	4542.0	4513.4	4502.5	4511.3	4531.1	4544.2	4531.1
45°	4959.7	4970.7	4950.9	4924.6	4911.4	4895.9	4889.4	4895.9	4918.0	4931.2	4926.8
47.5°	5337.9	5353.2	5329.0	5318.1	5318.1	5302.6	5320.2	5337.9	5357.6	5388.5	5375.2
50°	5707.2	5727.0	5711.7	5713.8	5731.4	5759.9	5792.9	5828.2	5863.2	5896.2	5900.6
52.5°	6037.0	6067.7	6069.9	6109.6	6164.4	6208.5	6300.8	6377.7	6461.2	6489.9	6476.7
55°	6384.3	6426.0	6481.0	6542.6	6630.5	6720.7	6876.7	7015.3	7125.1	7193.4	7182.4
57.5°	6881.1	6923.0	6980.1	7081.2	7213.1	7336.3	7549.4	7764.9	7932.0	8035.3	7984.9
60°	7525.3	7569.3	7644.0	7751.7	7923.2	8090.3	8382.8	8692.7	8952.1	9070.8	8978.5
62.5°	8378.3	8420.2	8468.4	8611.3	8802.6	9018.1	9385.2	9783.1	10112.8	10227.3	10097.5
65°	9594.1	9644.7	9660.1	9776.6	9963.5	10163.5	10559.1	11007.7	11383.6	11570.4	11311.1
67.5°	10963.8	10983.4	11045.0	11181.4	11372.6	11552.9	11865.1	12289.4	12649.9	12753.2	12476.2
70°	11766.1	11805.7	11913.4	12102.5	12331.2	12614.8	12955.4	13412.9	13821.7	13870.1	13518.4
72.5°	11040.7	11121.9	11313.3	11607.9	12087.1	12590.6	13177.5	13852.5	14439.4	14507.5	13942.7
75°	8855.4	8947.7	9176.4	9499.5	10066.8	10814.2	11662.9	12676.3	13555.7	13667.8	12920.3
77.5°	4720.1	4834.4	5166.4	5601.7	6410.8	7400.0	8422.2	9578.6	10326.1	10579.0	10040.4
80°	1189.4	1250.9	1411.3	1666.4	2213.9	3011.8	3893.4	5137.8	6065.5	6459.1	6065.5
82.5°	461.6	507.8	551.7	582.6	635.3	745.2	1028.9	1677.5	2260.0	2783.3	2409.6
85°	178.0	189.1	272.6	309.9	309.9	340.7	391.3	461.6	571.6	624.3	523.3
87.5°	70.3	77.0	94.5	145.0	149.5	132.0	140.8	158.3	120.9	101.1	114.4
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°	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1	2539.1
2.5°	2528.2	2526.0	2521.6	2523.8	2521.6	2521.6	2521.6	2521.6
5°	2526.0	2526.0	2521.6	2521.6	2521.6	2523.8	2521.6	2521.6
7.5°	2523.8	2521.6	2517.2	2515.1	2515.1	2512.7	2512.7	2512.7
10°	2519.4	2515.1	2510.7	2508.4	2508.4	2504.0	2504.0	2504.0
12.5°	2530.4	2523.8	2519.4	2517.2	2517.2	2517.2	2519.4	2519.4
15°	2561.2	2548.0	2541.5	2539.1	2541.5	2545.7	2548.0	2550.2
17.5°	2594.1	2581.0	2570.1	2565.6	2567.7	2574.5	2581.0	2585.4
20°	2635.9	2624.9	2611.7	2607.4	2607.4	2616.1	2620.5	2627.2
22.5°	2695.4	2686.6	2675.5	2669.0	2664.6	2675.5	2682.1	2686.6
25°	2789.9	2781.1	2772.3	2765.6	2763.5	2774.4	2778.8	2781.1
27.5°	2915.2	2906.3	2902.0	2899.8	2893.3	2897.6	2904.2	2902.0
30°	3077.9	3084.4	3077.9	3077.9	3066.9	3071.2	3066.9	3062.4
32.5°	3295.5	3288.9	3269.1	3255.8	3240.5	3240.5	3233.9	3227.3
35°	3513.1	3491.2	3480.2	3486.7	3480.2	3484.5	3473.6	3462.5
37.5°	3770.4	3757.3	3754.9	3774.8	3770.4	3774.8	3774.8	3759.3
40°	4111.2	4102.3	4117.7	4150.7	4163.9	4161.7	4166.1	4146.2
42.5°	4502.5	4487.0	4493.6	4522.2	4537.6	4542.0	4539.9	4522.2
45°	4893.7	4898.2	4898.2	4928.9	4944.4	4953.2	4937.8	4931.2
47.5°	5335.7	5342.2	5326.9	5346.6	5351.1	5366.5	5353.2	5342.2
50°	5845.7	5821.6	5786.3	5792.9	5792.9	5788.6	5773.1	5759.9
52.5°	6415.1	6360.1	6294.2	6272.1	6248.0	6223.8	6193.1	6168.9
55°	7063.6	6969.1	6850.4	6795.4	6749.2	6694.3	6623.9	6599.8
57.5°	7815.6	7652.8	7494.5	7395.6	7276.9	7204.3	7114.1	7109.8
60°	8708.1	8488.3	8209.0	8061.7	7943.1	7857.3	7789.2	7762.8
62.5°	9739.2	9361.1	9059.9	8901.6	8763.1	8710.2	8624.5	8635.5
65°	10796.5	10411.9	10119.4	9991.9	9862.3	9827.1	9748.0	9776.6
67.5°	11942.0	11625.4	11304.5	11185.8	11066.9	11031.8	10950.5	10974.8
70°	12968.7	12566.4	12201.4	11968.4	11766.1	11603.4	11500.1	11458.4
72.5°	13173.1	12476.2	11902.5	11319.8	10983.4	10688.9	10568.0	10521.8
75°	11836.4	10754.9	9937.1	9253.4	8875.2	8446.5	8400.3	8336.5
77.5°	9207.2	7976.1	6986.7	6107.2	5599.4	5076.2	4895.9	4759.7
80°	5491.8	4221.0	3271.3	2293.1	1870.9	1506.0	1415.8	1321.2
82.5°	1965.4	1259.8	848.5	661.7	591.4	545.2	510.1	463.9
85°	474.8	400.1	378.1	343.0	338.7	287.9	204.5	182.4
87.5°	151.8	138.5	140.8	134.0	140.8	105.6	85.8	77.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)