

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: P197008

Luminaire Tested: **NAV-AF-04-D-UNV-RW-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197008
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20344 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

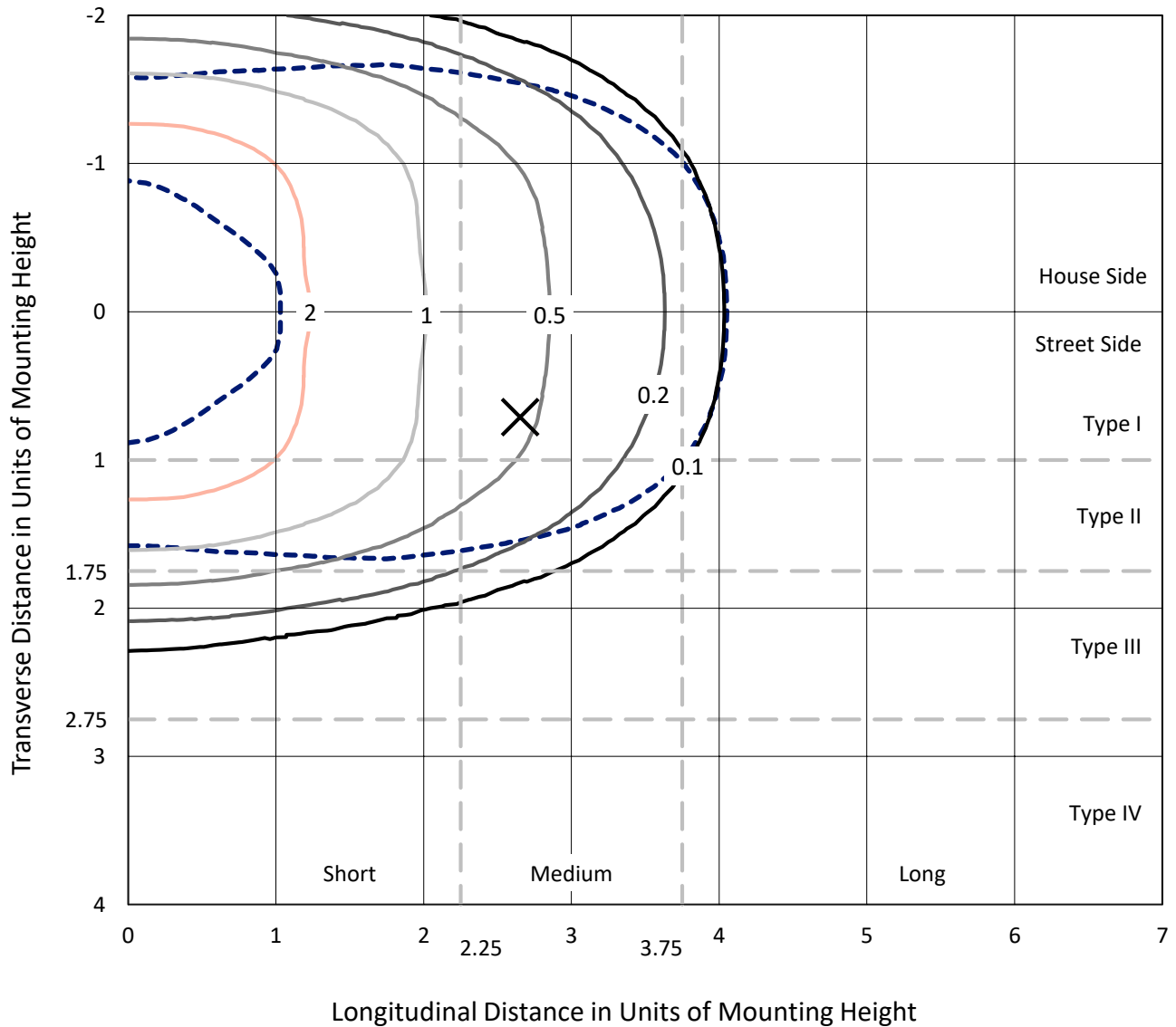
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

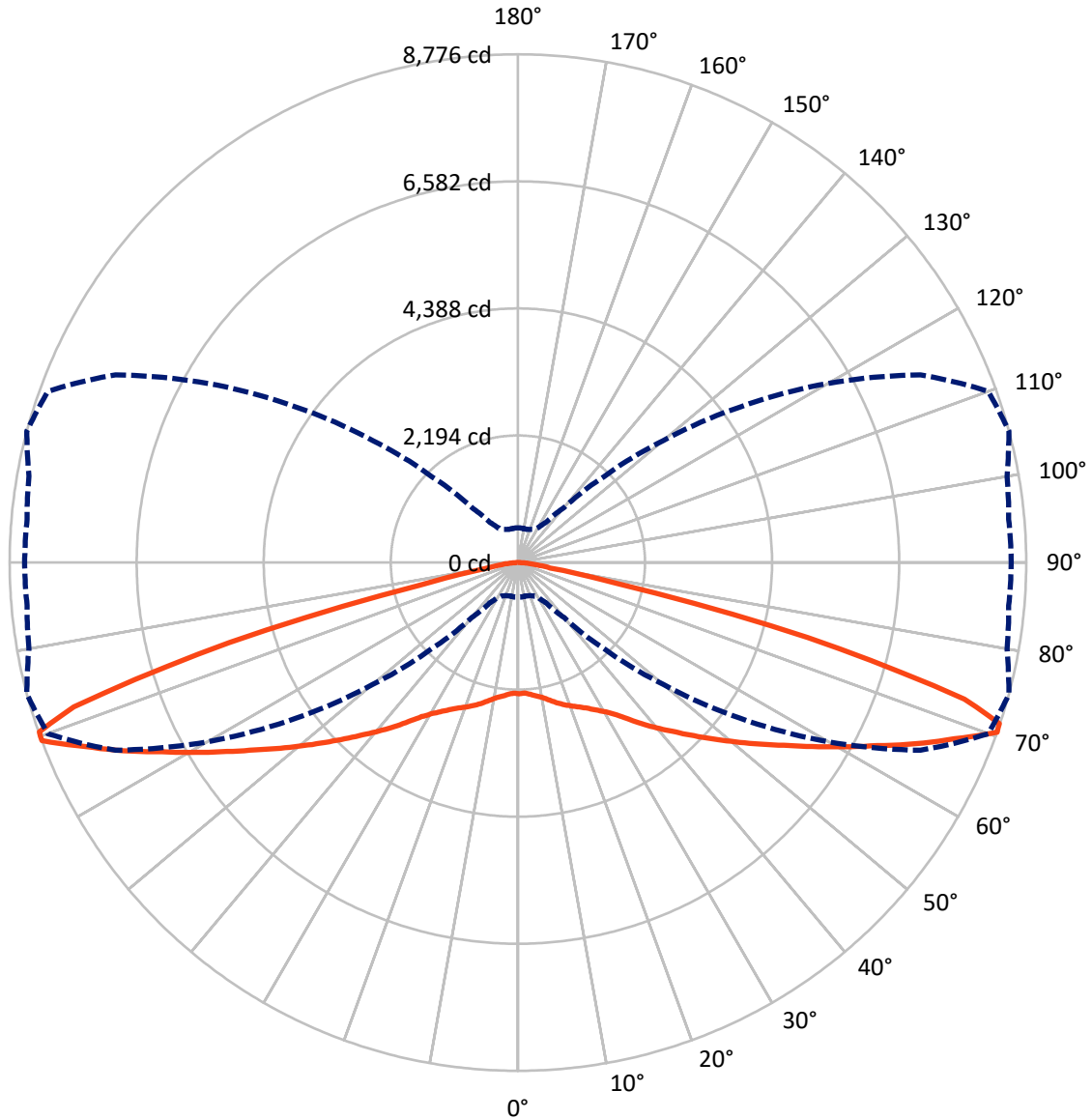
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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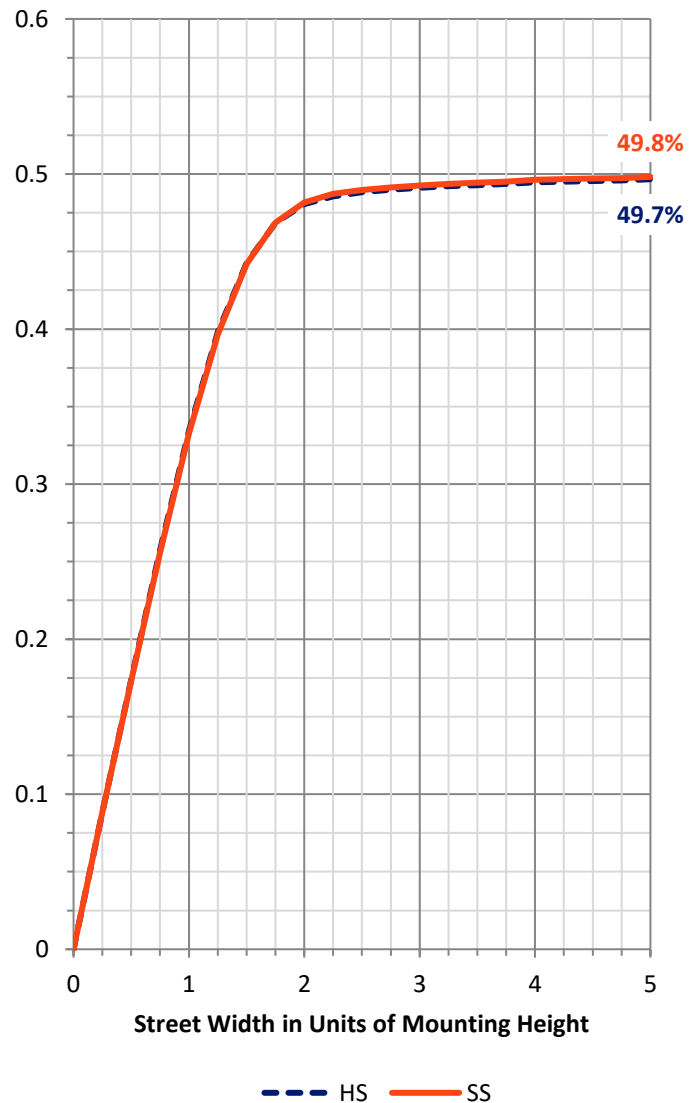
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10172.0	0.0	10172.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10172.0	0.0	10172.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	20344.0	0.0	20344.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.3	1.1
10°-20°	673.9	3.3
20°-30°	1265.8	6.2
30°-40°	2229.7	11.0
40°-50°	3695.3	18.2
50°-60°	5140.6	25.3
60°-70°	4852.9	23.9
70°-80°	2072.7	10.2
80°-90°	195.9	1.0
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°	20344.0	100.0
0°-180°	20344.0	100.0

Coefficient of Utilization



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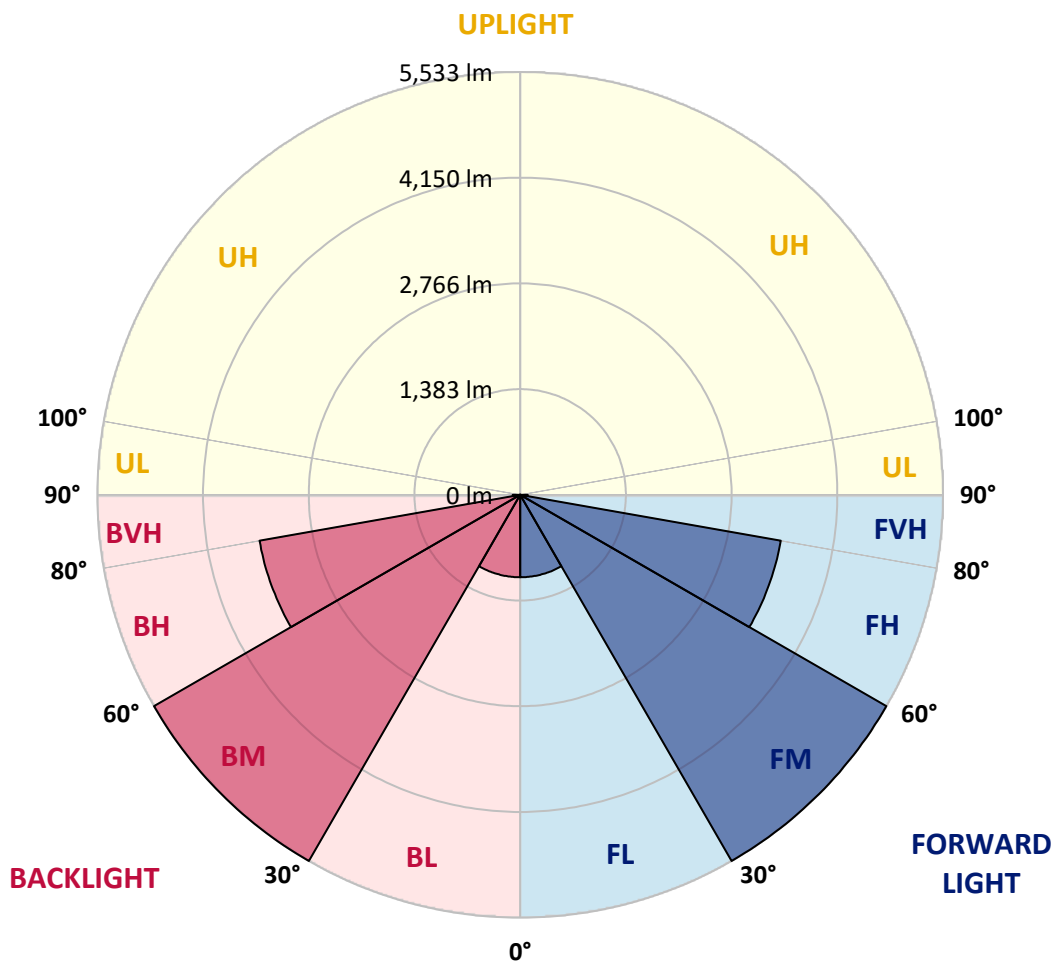
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1078.5	5.3			
FM	(30°-60°)	5532.8	27.2			
FH	(60°-80°)	3462.8	17.0			G2/5000
FVH	(80°-90°)	97.9	0.5			G1/100
BL	(0°-30°)	1078.5	5.3	B3/2500		
BM	(30°-60°)	5532.8	27.2	B4/8500		
BH	(60°-80°)	3462.8	17.0	B4/5000		G4/5000
BVH	(80°-90°)	97.9	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5
2.5°	2279.5	2278.3	2279.5	2275.7	2277.0	2275.7	2275.7	2270.6	2270.6	2268.1	2264.2
5°	2254.0	2256.6	2256.6	2256.6	2260.4	2260.4	2265.5	2266.8	2270.6	2274.4	2277.0
7.5°	2212.0	2213.2	2217.1	2219.6	2227.3	2237.5	2247.7	2259.1	2269.3	2282.1	2296.1
10°	2176.3	2178.8	2185.2	2191.6	2205.6	2218.3	2236.2	2254.0	2271.9	2293.6	2315.2
12.5°	2157.1	2161.0	2171.2	2181.4	2203.0	2219.6	2243.8	2271.9	2296.1	2316.5	2340.7
15°	2159.7	2161.0	2175.0	2189.0	2219.6	2242.6	2277.0	2310.1	2339.4	2362.4	2390.4
17.5°	2196.7	2199.2	2213.2	2233.6	2263.0	2292.3	2329.2	2363.7	2403.2	2430.0	2463.1
20°	2269.3	2273.2	2288.5	2310.1	2342.0	2372.6	2410.8	2446.5	2487.3	2519.2	2552.4
22.5°	2363.7	2370.0	2386.6	2413.4	2445.3	2482.2	2521.8	2558.7	2597.0	2628.9	2656.9
25°	2489.9	2497.5	2515.4	2542.2	2574.0	2613.6	2654.3	2692.6	2732.1	2756.3	2779.3
27.5°	2659.4	2672.2	2691.3	2713.0	2741.0	2783.1	2821.4	2853.2	2891.5	2918.3	2933.6
30°	2887.7	2905.5	2920.8	2943.8	2964.1	3008.8	3039.4	3064.9	3094.2	3109.5	3113.3
32.5°	3166.9	3183.4	3198.7	3215.3	3243.4	3284.2	3313.5	3327.5	3342.8	3340.2	3326.2
35°	3481.8	3494.5	3503.4	3532.8	3578.7	3605.4	3627.1	3632.2	3634.7	3608.0	3581.2
37.5°	3813.2	3828.5	3836.2	3882.1	3925.4	3956.0	3966.2	3977.7	3970.0	3925.4	3877.0
40°	4171.5	4188.1	4211.0	4250.5	4301.5	4330.8	4343.6	4342.3	4335.9	4283.7	4204.6
42.5°	4523.4	4543.8	4562.9	4631.7	4673.8	4723.5	4729.9	4728.6	4714.6	4654.7	4562.9
45°	4821.7	4845.9	4885.4	4961.9	5029.5	5089.4	5113.6	5122.6	5108.5	5044.8	4940.2
47.5°	5067.7	5084.3	5134.0	5227.1	5313.8	5401.8	5450.2	5484.6	5483.4	5437.5	5326.5
50°	5236.0	5255.2	5316.3	5420.9	5529.3	5632.5	5728.1	5805.9	5842.9	5809.7	5706.5
52.5°	5284.5	5308.7	5389.0	5514.0	5640.2	5779.1	5921.9	6059.6	6142.5	6162.9	6082.6
55°	5080.5	5107.3	5224.6	5397.9	5605.7	5811.0	6027.7	6224.1	6394.9	6474.0	6442.1
57.5°	4486.4	4505.5	4654.7	4879.1	5176.1	5536.9	5901.5	6261.0	6554.3	6759.5	6795.2
60°	3548.1	3572.3	3735.5	3972.6	4310.4	4766.9	5276.8	5865.8	6440.8	6911.2	7144.6
62.5°	2394.3	2410.8	2567.7	2784.4	3154.1	3594.0	4162.6	4908.4	5728.1	6568.3	7226.2
65°	1257.1	1257.1	1362.9	1514.6	1809.1	2203.0	2785.7	3550.6	4525.9	5575.2	6675.4
67.5°	729.2	728.0	752.2	786.6	879.7	1039.0	1360.3	1922.6	2845.6	4066.9	5318.9
70°	601.8	597.9	594.1	594.1	608.1	632.4	693.5	847.8	1240.5	2097.2	3272.7
71°	575.0	572.4	562.2	558.4	564.8	577.5	604.3	675.7	881.0	1430.4	2444.0
72.5°	543.1	536.7	521.4	515.1	516.3	521.4	529.1	557.1	619.6	813.4	1393.5
75°	494.7	479.4	460.2	451.3	447.5	446.2	446.2	453.9	467.9	490.8	571.2
77.5°	438.6	416.9	396.5	387.6	381.2	377.4	374.8	369.7	367.2	377.4	406.7
80°	371.0	348.0	331.5	326.4	322.6	314.9	304.7	294.5	288.1	293.2	311.1
82.5°	286.9	263.9	266.5	267.7	261.4	248.6	238.4	226.9	215.5	212.9	221.8
85°	228.2	216.7	209.1	225.7	211.6	196.3	182.3	163.2	136.4	112.2	122.4
87.5°	98.2	99.4	142.8	215.5	188.7	151.7	126.2	102.0	65.0	48.4	49.7
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°	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5	2265.5
2.5°	2263.0	2263.0	2259.1	2256.6	2256.6	2256.6	2254.0	2255.3
5°	2278.3	2280.8	2283.4	2282.1	2285.9	2289.7	2288.5	2287.2
7.5°	2303.7	2311.4	2319.0	2322.9	2328.0	2333.1	2334.3	2330.5
10°	2329.2	2344.5	2356.0	2366.2	2372.6	2377.7	2381.5	2380.2
12.5°	2361.1	2382.8	2403.2	2423.6	2437.6	2445.3	2452.9	2450.4
15°	2413.4	2437.6	2463.1	2489.9	2511.6	2523.0	2534.5	2532.0
17.5°	2484.8	2506.5	2526.9	2553.6	2580.4	2593.2	2605.9	2604.6
20°	2574.0	2590.6	2602.1	2617.4	2642.9	2656.9	2668.4	2664.5
22.5°	2676.0	2681.1	2682.4	2687.5	2707.9	2724.5	2739.8	2743.6
25°	2786.9	2783.1	2775.5	2771.6	2785.7	2803.5	2822.6	2827.7
27.5°	2924.6	2911.9	2892.8	2877.5	2881.3	2904.2	2925.9	2931.0
30°	3098.0	3068.7	3027.9	2998.6	2993.5	3017.7	3040.6	3048.3
32.5°	3295.6	3256.1	3200.0	3155.4	3136.3	3157.9	3178.3	3189.8
35°	3530.2	3486.9	3419.3	3361.9	3331.3	3345.3	3381.0	3393.8
37.5°	3808.1	3748.2	3673.0	3600.3	3549.3	3551.9	3590.1	3605.4
40°	4115.4	4028.7	3933.1	3842.6	3768.6	3763.5	3797.9	3809.4
42.5°	4435.4	4324.5	4212.3	4093.7	4001.9	3985.3	4030.0	4031.2
45°	4779.6	4636.8	4497.9	4360.2	4264.6	4235.2	4278.6	4283.7
47.5°	5146.8	4968.3	4803.8	4654.7	4551.4	4505.5	4547.6	4555.2
50°	5529.3	5344.4	5153.2	4987.4	4866.3	4810.2	4859.9	4865.0
52.5°	5907.9	5733.2	5543.3	5353.3	5206.7	5143.0	5201.6	5219.5
55°	6289.1	6120.8	5942.3	5752.4	5567.5	5511.4	5575.2	5594.3
57.5°	6685.6	6523.7	6361.8	6170.5	5990.8	5905.4	5974.2	6001.0
60°	7122.9	6980.1	6827.1	6634.6	6457.4	6357.9	6416.6	6447.2
62.5°	7552.5	7523.2	7384.2	7184.1	6959.7	6860.3	6910.0	6931.6
65°	7588.2	8063.8	8057.4	7858.5	7544.9	7377.9	7391.9	7402.1
67.5°	6623.1	7714.4	8411.8	8474.3	8125.0	7863.6	7833.0	7839.4
70°	4689.1	6187.1	7667.3	8638.7	8776.4	8573.7	8507.4	8517.6
71°	3757.1	5308.7	6938.0	8244.8	8766.2	8707.6	8670.6	8697.4
72.5°	2398.1	3911.4	5497.4	7060.4	8061.2	8348.1	8390.1	8406.7
75°	870.8	1682.9	2848.1	4081.0	5172.3	5923.2	6336.3	6369.4
77.5°	467.9	603.0	932.0	1392.2	1749.2	1940.4	1963.4	1972.3
80°	344.2	399.0	456.4	521.4	562.2	569.9	555.9	526.5
82.5°	243.5	275.4	298.3	321.3	337.8	323.8	269.0	205.3
85°	141.5	155.5	168.3	179.8	182.3	172.1	113.5	93.1
87.5°	56.1	61.2	59.9	67.6	65.0	59.9	44.6	38.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)