

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: P966314

Luminaire Tested: **NAV-SB4B-830-U-T4FT**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966314
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-830-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20544.1 lumens
Efficiency: N/A
Efficacy: 139.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

Input Watts (W): 147
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: 24 FT



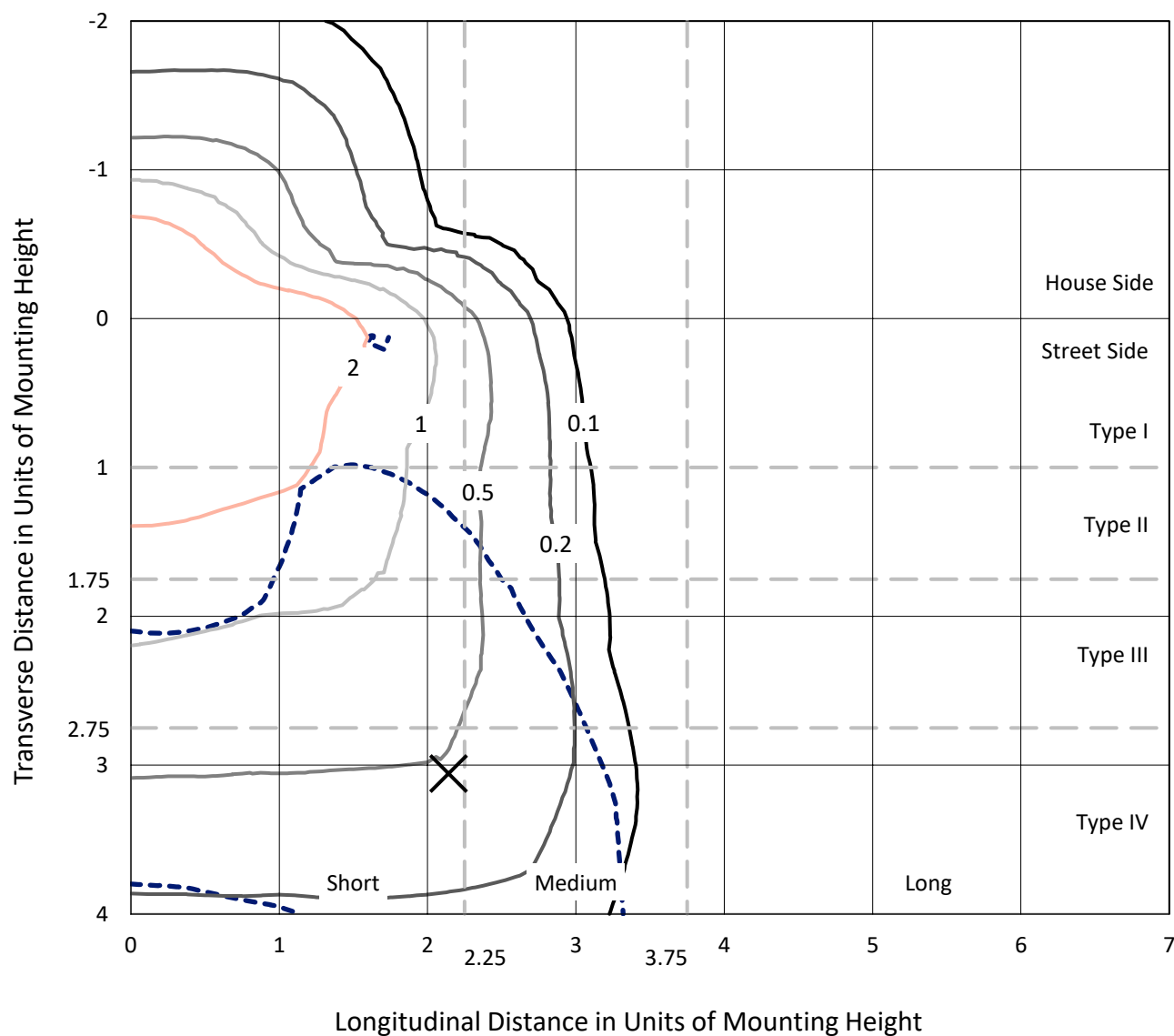
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

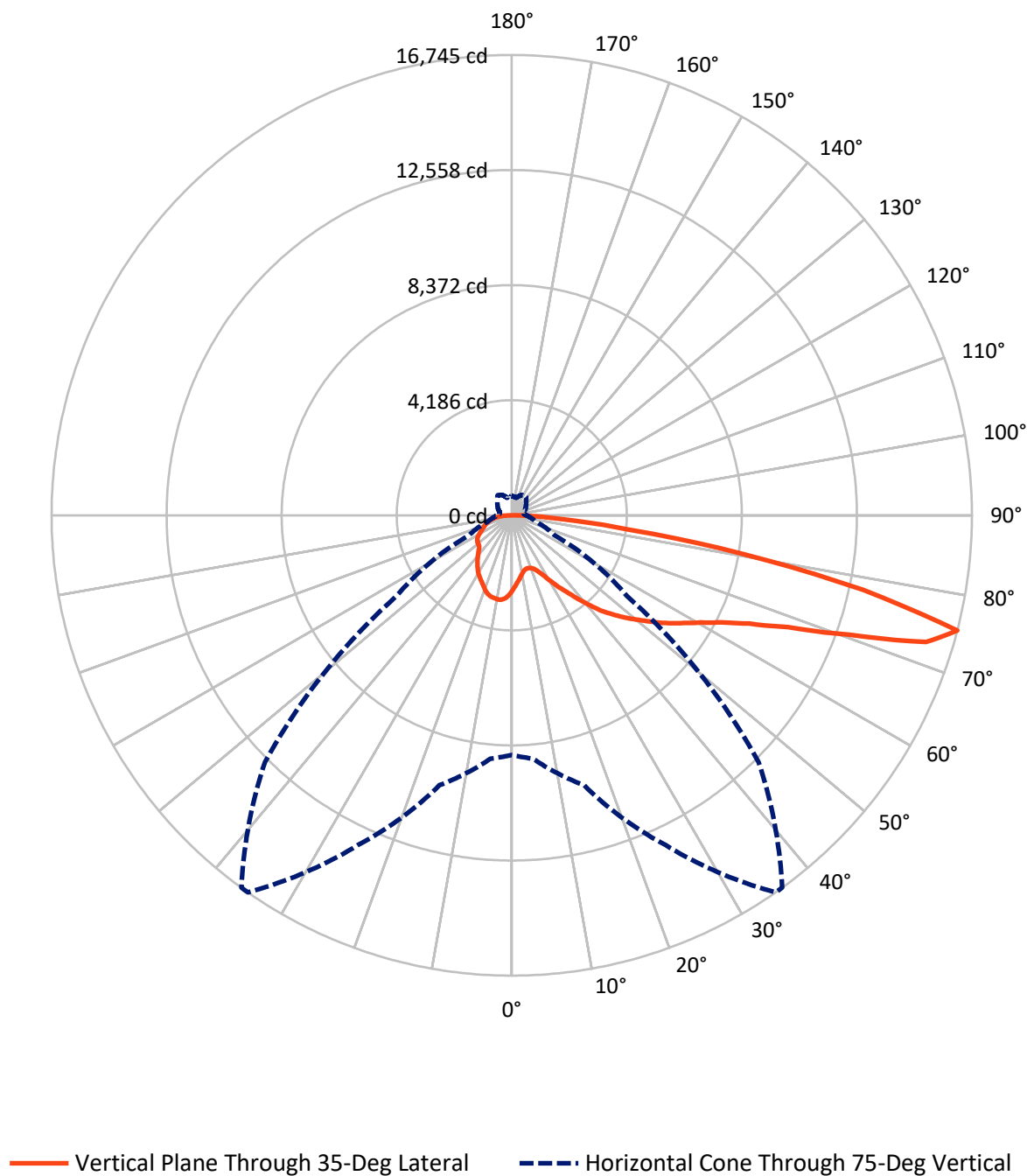


Based on 25 foot mounting height. Maximum calculated value = 4.8 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4889.0	0.0	4889.0
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	15655.1	0.0	15655.1
	% Fixture	76.2	0.0	76.2
Total	Lumens	20544.1	0.0	20544.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.2	1.3
10°-20°	747.6	3.6
20°-30°	1255.5	6.1
30°-40°	1951.2	9.5
40°-50°	2896.1	14.1
50°-60°	3998.3	19.5
60°-70°	4850.8	23.6
70°-80°	4008.8	19.5
80°-90°	576.6	2.8
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°	20544.1	100.0
0°-180°	20544.1	100.0

Coefficient of Utilization



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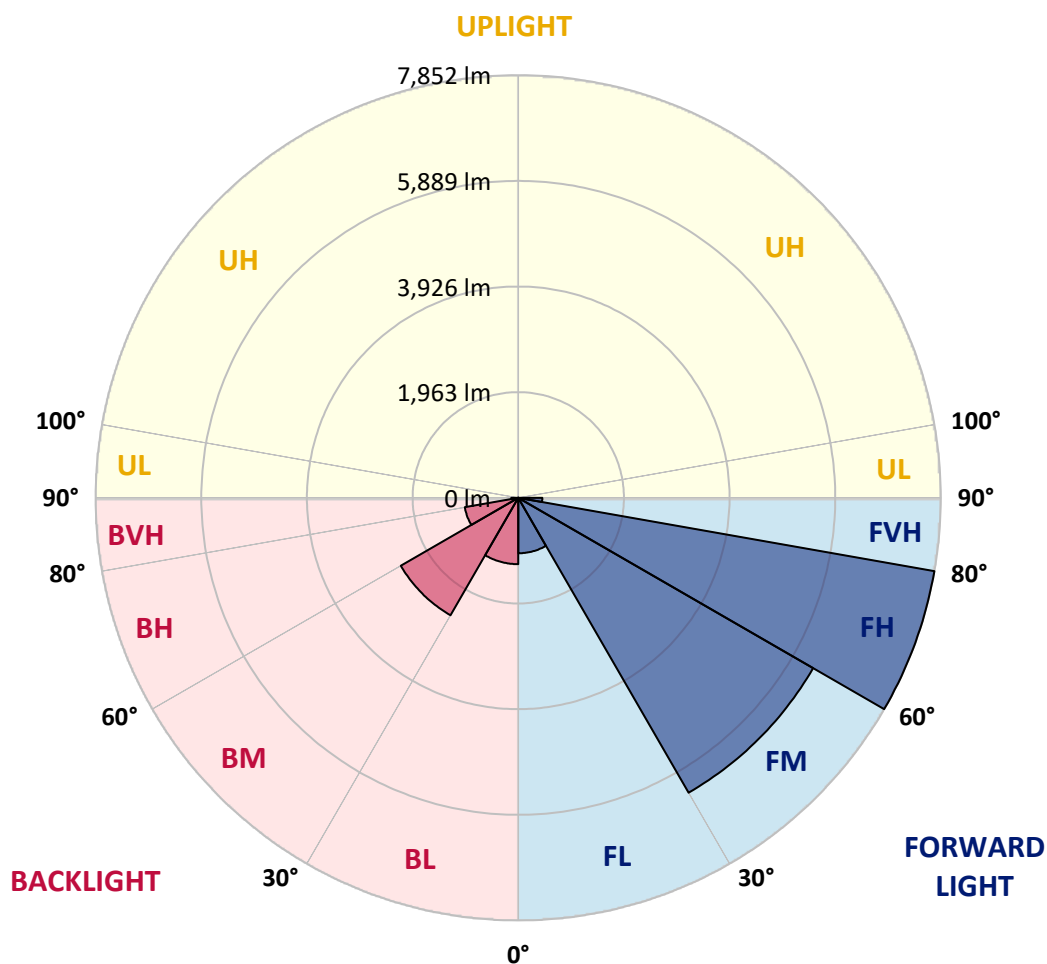
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1030.2	5.0			
FM	(30°-60°)	6326.5	30.8			
FH	(60°-80°)	7851.6	38.2			G4/12000
FVH	(80°-90°)	446.8	2.2			G3/500
BL	(0°-30°)	1232.1	6.0	B3/2500		
BM	(30°-60°)	2519.1	12.3	B3/5000		
BH	(60°-80°)	1007.9	4.9	B3/2500		G3/2500
BVH	(80°-90°)	129.8	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7
2.5°	2524.4	2540.0	2546.6	2543.3	2559.9	2557.7	2581.1	2610.0	2649.9	2688.8	2745.4
5°	2330.0	2346.7	2361.2	2374.5	2406.7	2416.6	2453.3	2508.9	2582.2	2656.6	2749.9
7.5°	2149.0	2163.5	2185.7	2210.1	2264.5	2274.5	2335.6	2422.2	2524.4	2633.2	2762.1
10°	2001.3	2015.8	2039.0	2066.8	2134.6	2146.8	2224.6	2340.1	2473.3	2611.0	2775.4
12.5°	1938.0	1942.5	1955.8	1983.6	2042.4	2050.2	2135.7	2267.8	2423.3	2594.4	2795.4
15°	1934.7	1943.6	1944.6	1959.1	2008.0	2011.3	2090.2	2221.2	2392.2	2591.0	2825.4
17.5°	1968.0	1974.7	1964.6	1973.5	2014.6	2020.2	2082.4	2199.0	2382.2	2605.4	2876.5
20°	2056.9	2062.4	2032.4	2020.2	2050.2	2054.6	2115.7	2213.4	2392.2	2635.5	2946.5
22.5°	2245.7	2249.0	2175.7	2125.6	2127.9	2130.2	2183.5	2272.3	2431.1	2689.9	3035.2
25°	2540.0	2537.7	2421.2	2324.5	2268.9	2256.7	2292.3	2367.9	2496.6	2762.1	3149.6
27.5°	2884.2	2867.5	2751.0	2606.6	2485.5	2467.8	2460.0	2492.2	2590.0	2857.6	3289.6
30°	3272.9	3257.4	3131.9	2943.1	2775.4	2746.5	2673.2	2656.6	2728.8	2987.6	3484.0
32.5°	3699.4	3689.4	3539.5	3310.7	3086.4	3053.1	2929.8	2885.4	2942.0	3184.1	3755.0
35°	4057.1	4048.1	3923.8	3688.4	3414.0	3372.9	3247.4	3197.4	3226.3	3436.2	4109.2
37.5°	4380.2	4375.8	4269.1	4083.7	3800.5	3750.5	3609.4	3592.8	3587.3	3768.3	4539.0
40°	4680.0	4669.0	4557.9	4460.2	4250.3	4204.8	4080.3	4065.9	4023.7	4177.0	5025.5
42.5°	5012.1	4983.2	4822.2	4776.7	4720.0	4682.3	4607.9	4610.1	4516.9	4637.9	5540.8
45°	5283.2	5266.4	5101.0	5074.4	5135.5	5119.9	5184.2	5201.0	5019.9	5121.0	6076.1
47.5°	5574.2	5558.6	5418.7	5399.8	5565.2	5569.6	5797.4	5802.9	5510.8	5622.9	6612.6
50°	5932.8	5910.7	5771.8	5795.1	5980.6	5997.3	6413.7	6376.0	5962.8	6132.8	7144.6
52.5°	6169.4	6182.7	6152.8	6190.5	6443.8	6459.2	7020.1	6923.5	6410.5	6635.8	7666.5
55°	6343.7	6370.4	6463.8	6550.4	6932.4	6948.0	7592.1	7444.4	6781.3	7102.3	8157.4
57.5°	6568.1	6530.4	6704.7	6873.5	7396.6	7437.7	8148.5	7946.4	7110.1	7504.3	8493.9
60°	6890.2	6863.5	6999.0	7248.9	7916.4	7981.9	8737.1	8398.3	7351.1	7823.1	8559.5
62.5°	7543.2	7476.6	7497.7	7718.7	8571.7	8658.3	9401.3	8792.7	7471.0	7947.4	8208.5
65°	8519.4	8405.0	8298.4	8451.7	9494.6	9580.1	10150.9	9102.5	7426.6	7706.5	7276.7
67.5°	9748.9	9635.6	9504.5	9648.9	10853.9	10921.7	11076.0	9276.9	7076.8	6778.0	5629.6
70°	10762.8	10720.7	10877.2	11471.4	13025.2	13027.3	12262.2	9132.4	6118.3	4805.6	3257.4
72.5°	10628.4	10602.9	11428.1	13265.0	15761.6	15702.8	13385.0	8039.7	4121.4	2167.9	1220.6
75°	8719.4	8884.8	10163.1	13232.9	16744.6	16736.8	12697.5	5111.0	1704.8	898.5	630.8
77.5°	4675.6	4937.7	6598.1	9770.0	13071.8	13268.4	8927.0	1788.1	731.8	575.3	436.4
80°	1524.9	1753.7	2629.9	4974.4	8493.9	8457.3	3826.0	701.9	500.9	407.6	302.1
82.5°	647.5	674.1	1175.1	2348.9	4359.1	4291.4	1218.3	403.1	352.1	278.8	186.5
85°	253.2	283.2	518.6	1086.2	1888.0	1846.9	439.8	199.9	225.5	182.1	111.1
87.5°	83.3	101.1	185.4	372.1	587.5	566.4	107.7	68.9	97.7	83.3	40.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7	2737.7
2.5°	2760.9	2778.8	2799.8	2830.9	2857.6	2879.8	2903.1	2917.6	2923.1	2939.8	2938.7
5°	2780.9	2819.8	2872.0	2923.1	2973.1	3003.0	3029.7	3043.0	3055.3	3064.1	3066.4
7.5°	2814.2	2864.3	2946.5	3013.1	3055.3	3079.7	3097.4	3093.0	3097.4	3099.7	3103.0
10°	2843.1	2913.2	3010.8	3074.2	3106.4	3107.5	3103.0	3087.5	3079.7	3080.8	3083.0
12.5°	2877.6	2955.3	3060.9	3114.2	3123.0	3098.6	3079.7	3053.1	3043.0	3038.6	3036.4
15°	2924.2	3013.1	3115.3	3135.3	3113.0	3082.0	3049.7	3006.4	2984.2	2966.5	2972.0
17.5°	2980.9	3078.6	3157.4	3143.0	3095.3	3044.1	2992.0	2926.5	2880.9	2862.0	2863.1
20°	3059.7	3147.5	3189.7	3126.4	3054.2	2976.4	2887.5	2807.6	2765.4	2746.5	2744.3
22.5°	3155.3	3239.6	3220.8	3097.4	2995.3	2870.9	2759.8	2701.0	2679.9	2666.5	2668.8
25°	3269.6	3341.8	3243.0	3055.3	2898.7	2731.0	2645.4	2626.6	2616.6	2606.6	2606.6
27.5°	3418.5	3457.3	3259.6	2993.1	2747.6	2582.2	2551.0	2554.4	2551.0	2534.4	2537.7
30°	3615.0	3607.3	3275.2	2892.0	2574.4	2447.8	2450.0	2464.4	2466.7	2455.6	2461.1
32.5°	3873.8	3795.0	3283.0	2760.9	2408.9	2330.0	2332.3	2347.9	2358.9	2340.1	2348.9
35°	4187.0	4013.7	3270.8	2596.6	2281.1	2217.9	2201.2	2205.7	2209.0	2191.2	2203.4
37.5°	4552.3	4259.2	3216.3	2414.5	2175.7	2107.9	2072.3	2042.4	2024.6	2008.0	2019.0
40°	4953.3	4526.8	3116.3	2236.8	2058.0	1991.3	1938.0	1881.4	1821.4	1799.2	1809.1
42.5°	5373.0	4802.2	2995.3	2066.8	1922.5	1868.1	1811.4	1729.2	1639.3	1593.7	1599.3
45°	5808.5	5084.3	2876.5	1899.1	1783.6	1760.3	1694.7	1595.9	1498.2	1440.4	1436.0
47.5°	6235.0	5350.9	2702.1	1730.3	1653.7	1679.3	1628.1	1537.1	1428.2	1337.2	1327.2
50°	6642.5	5600.8	2416.6	1559.3	1548.2	1654.8	1606.0	1474.9	1350.5	1233.9	1223.8
52.5°	7046.8	5802.9	2051.3	1403.8	1491.6	1648.1	1577.1	1432.6	1280.5	1158.4	1145.0
55°	7389.9	5907.3	1699.2	1270.5	1409.4	1591.5	1542.6	1382.7	1181.7	1051.8	1040.7
57.5°	7585.4	5822.9	1406.0	1139.5	1296.1	1498.2	1483.8	1276.1	1063.9	964.0	950.7
60°	7501.1	5480.8	1166.1	1025.1	1188.4	1397.2	1381.6	1170.6	974.0	879.6	866.2
62.5°	7035.7	4828.9	976.2	925.2	1090.6	1293.9	1279.4	1089.5	905.2	814.1	799.6
65°	6098.3	3928.2	828.5	841.8	991.8	1169.4	1190.5	1021.7	850.7	761.9	747.4
67.5°	4651.2	2845.4	713.0	769.7	895.1	1047.3	1108.3	972.9	805.1	720.8	707.5
70°	2651.1	1615.9	615.3	699.7	809.6	934.0	1045.1	934.0	756.3	686.3	677.4
72.5°	1005.1	741.9	532.0	629.8	727.4	838.6	975.1	872.9	699.7	647.5	638.6
75°	536.4	452.0	447.6	547.6	633.0	745.2	887.3	812.9	657.4	684.1	706.3
77.5°	365.4	319.9	374.2	468.6	529.7	642.0	794.1	721.9	569.7	567.5	523.1
80°	253.2	226.5	304.3	377.6	409.8	539.8	693.0	619.7	464.2	433.2	414.3
82.5°	152.1	147.7	227.7	282.1	289.9	416.5	574.2	519.8	379.9	331.0	333.2
85°	83.3	87.7	145.4	165.4	168.8	291.0	449.8	402.0	292.1	245.5	247.6
87.5°	23.4	30.0	53.3	65.5	81.1	151.1	267.6	238.8	146.6	102.2	102.2
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)