

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: P966303

Luminaire Tested: **NAV-SB4B-830-U-T2-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966303
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-830-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15178.2 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

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

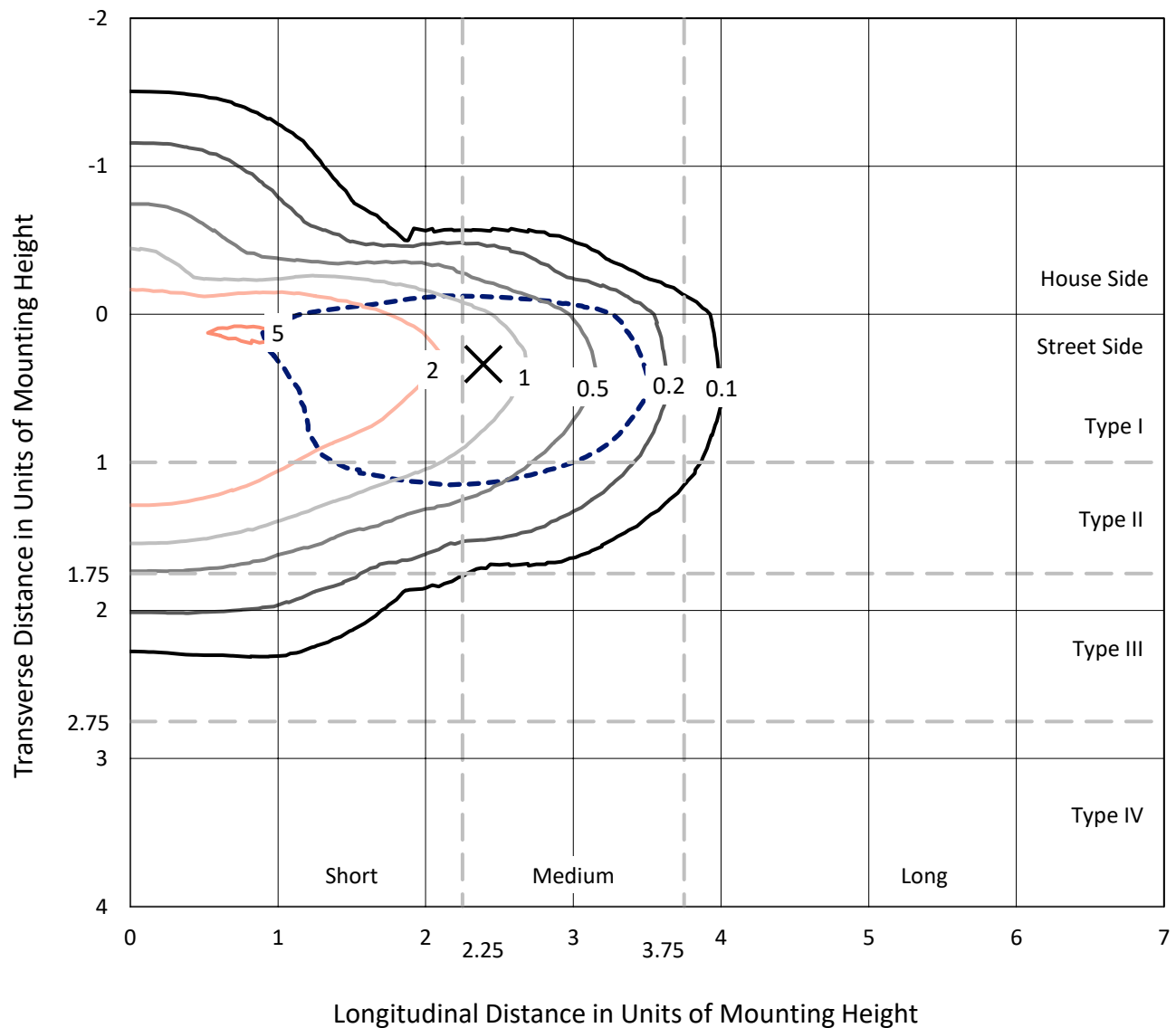


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Iso-Footcandle Lines of Horizontal Illumination

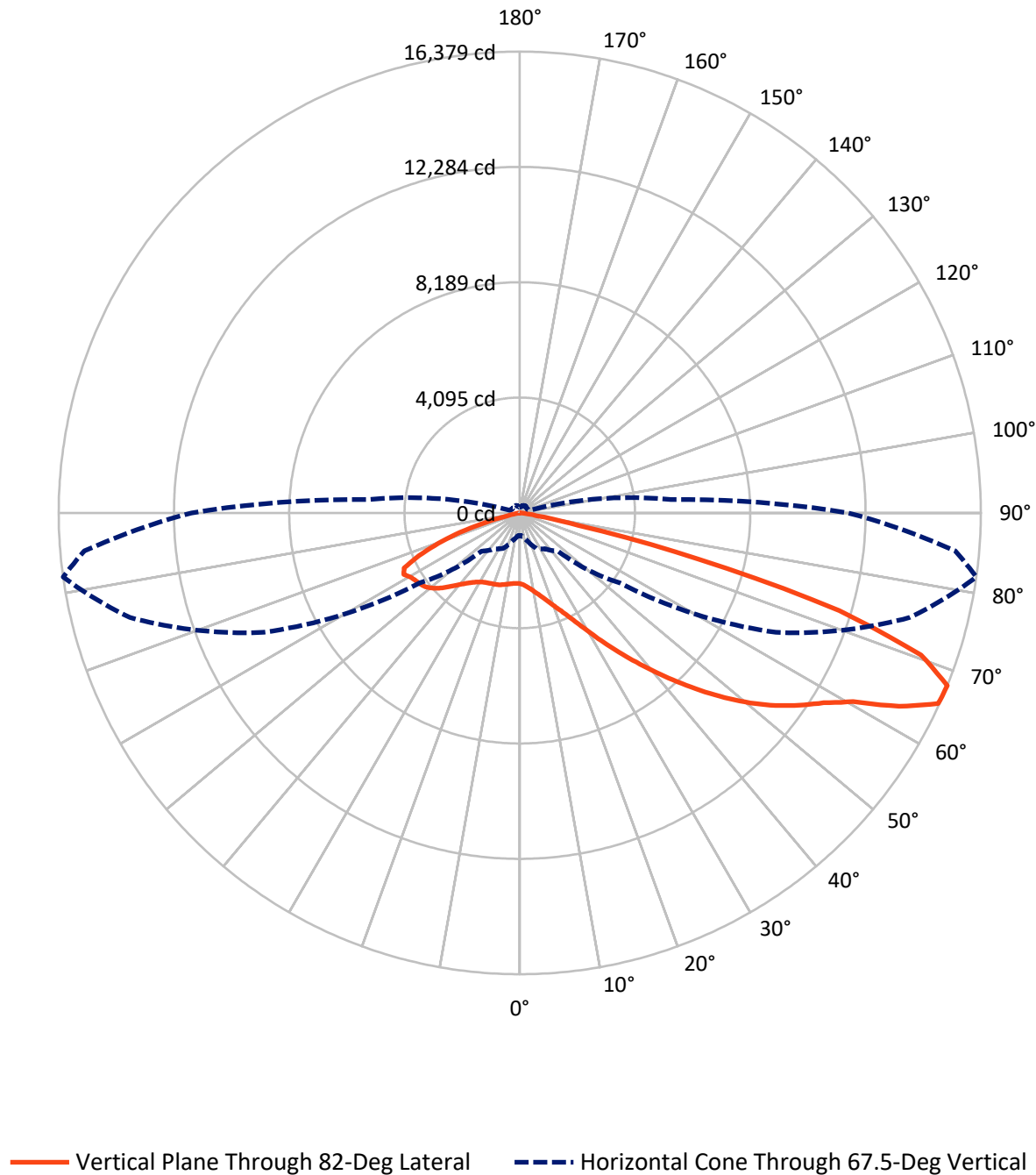
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.3 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2749.4	0.0	2749.4
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	12428.8	0.0	12428.8
	% Fixture	81.9	0.0	81.9
Total	Lumens	15178.2	0.0	15178.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.0	1.5
10°-20°	582.2	3.8
20°-30°	932.4	6.1
30°-40°	1648.8	10.9
40°-50°	2888.9	19.0
50°-60°	3852.9	25.4
60°-70°	3586.9	23.6
70°-80°	1376.6	9.1
80°-90°	85.5	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°	15178.2	100.0
0°-180°	15178.2	100.0

Coefficient of Utilization



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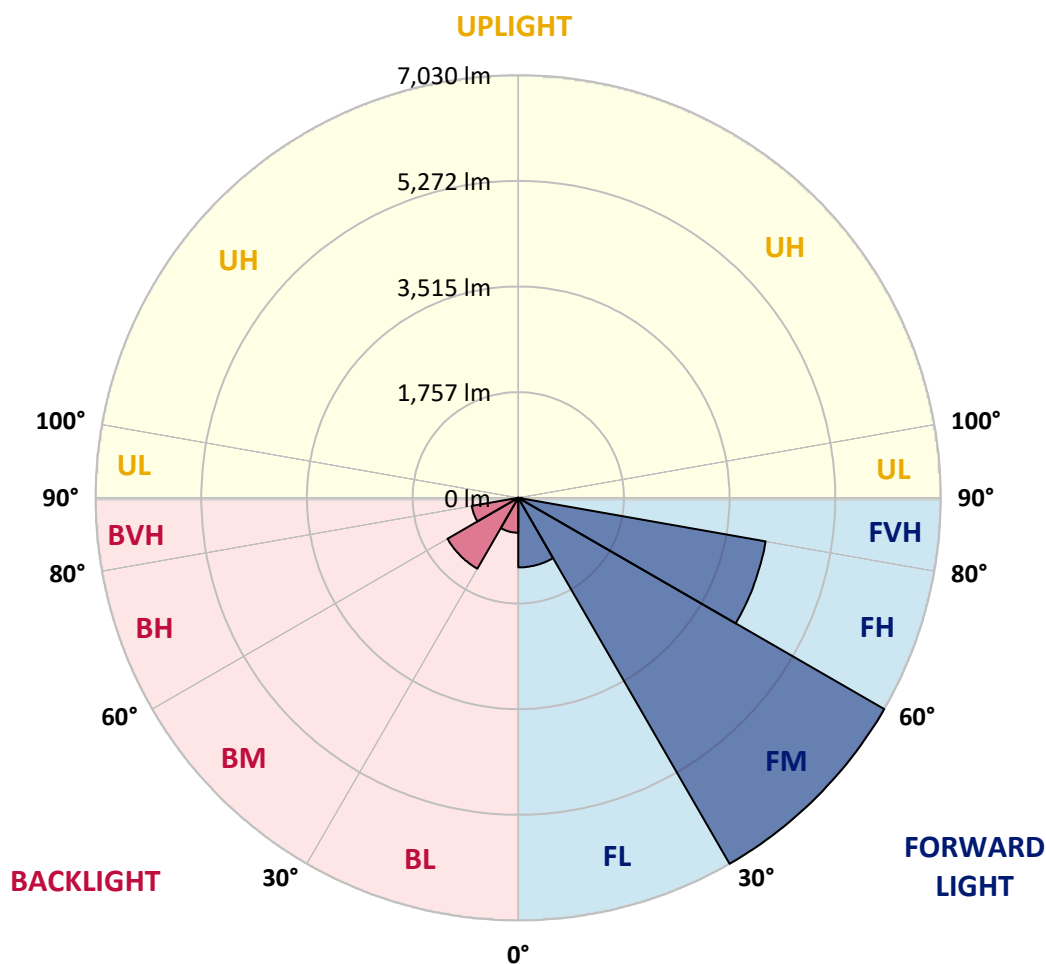
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1157.9	7.6			
FM	(30°-60°)	7029.9	46.3			
FH	(60°-80°)	4178.8	27.5			G2/5000
FVH	(80°-90°)	62.2	0.4			G1/100
BL	(0°-30°)	580.7	3.8	B2/1000		
BM	(30°-60°)	1360.7	9.0	B2/2500		
BH	(60°-80°)	784.7	5.2	B2/1000		G2/1000
BVH	(80°-90°)	23.3	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5
2.5°	2657.6	2673.0	2664.2	2659.9	2652.2	2641.3	2632.5	2605.2	2576.8	2558.2	2551.6
5°	2711.2	2726.5	2725.4	2729.8	2735.2	2738.5	2736.3	2705.8	2665.3	2633.6	2615.1
7.5°	2665.3	2682.8	2697.0	2718.9	2757.1	2797.5	2817.2	2810.7	2769.1	2725.4	2702.5
10°	2535.2	2553.9	2587.7	2639.1	2719.9	2807.4	2880.6	2914.5	2888.2	2840.2	2808.5
12.5°	2297.0	2315.6	2382.3	2493.7	2629.2	2781.1	2921.0	3011.8	3018.3	2970.2	2933.0
15°	2029.3	2047.8	2118.9	2258.8	2465.3	2709.1	2942.9	3114.5	3172.4	3130.9	3086.1
17.5°	1863.2	1879.6	1933.2	2045.7	2260.9	2564.8	2935.2	3223.7	3356.0	3323.2	3269.6
20°	1812.9	1827.2	1852.3	1931.0	2110.2	2415.1	2885.0	3326.4	3553.8	3535.2	3475.1
22.5°	1866.5	1879.6	1887.2	1922.2	2034.7	2316.7	2821.6	3431.4	3783.3	3785.4	3712.2
25°	1989.9	2003.1	1994.3	2016.2	2065.4	2286.2	2797.5	3554.8	4071.7	4095.8	4012.8
27.5°	2193.2	2194.3	2173.5	2172.5	2180.1	2332.0	2822.6	3687.1	4435.7	4480.5	4377.8
30°	2600.8	2584.4	2504.7	2418.4	2379.0	2469.7	2892.7	3843.3	4865.1	4944.9	4816.0
32.5°	3229.2	3205.2	3058.7	2852.2	2644.6	2691.5	3018.3	4021.5	5332.9	5477.1	5319.7
35°	3911.1	3904.5	3751.6	3444.5	3081.7	3007.4	3222.6	4255.3	5843.1	6072.6	5885.8
37.5°	4545.0	4541.7	4454.2	4092.5	3651.0	3447.8	3550.5	4561.4	6389.5	6721.7	6501.1
40°	5124.1	5133.9	5046.5	4723.1	4278.2	4012.8	3996.4	4939.4	6997.2	7428.8	7166.5
42.5°	5624.6	5635.6	5547.0	5307.7	4897.9	4637.8	4543.8	5402.8	7590.5	8188.3	7877.9
45°	5964.5	6032.2	6019.1	5827.8	5533.9	5264.0	5201.7	5984.2	8266.9	8993.7	8629.8
47.5°	6060.6	6122.9	6221.2	6247.5	6068.3	5802.7	5877.0	6684.6	8951.0	9800.1	9386.0
50°	5823.5	5881.4	6085.7	6357.9	6482.4	6400.5	6533.8	7435.4	9651.5	10604.4	10128.0
52.5°	5355.7	5414.8	5672.7	6103.3	6611.4	6869.2	7192.7	8175.2	10330.2	11366.1	10830.7
55°	4679.3	4741.6	5072.7	5560.1	6365.6	7062.8	7742.4	8913.9	10951.9	12051.3	11464.5
57.5°	3759.2	3805.1	4149.3	4831.2	5747.0	6870.4	8147.8	9720.4	11537.7	12724.5	12092.8
60°	2450.1	2490.4	2890.4	3651.0	4722.0	6227.8	8228.7	10619.7	12315.8	13599.8	12939.7
62.5°	1629.3	1656.7	1893.8	2452.2	3325.4	4994.1	7755.6	11337.7	13456.6	15123.2	14392.0
65°	1118.0	1145.2	1382.4	1771.4	2148.4	3303.5	6395.0	11242.6	14490.4	16332.9	15468.5
67.5°	797.8	820.7	1021.7	1389.0	1555.0	1918.9	4335.1	10027.5	14341.8	16378.8	15526.4
70°	571.5	584.7	750.7	1081.9	1235.9	1152.9	2410.7	7669.3	12557.3	15124.3	14344.0
72.5°	400.0	404.4	521.2	824.0	995.6	841.4	1147.4	5113.2	9497.4	11871.0	11120.2
75°	271.0	276.4	350.8	604.3	798.8	642.6	607.6	2741.8	5575.4	6571.0	5890.2
77.5°	166.2	168.3	226.2	413.1	597.8	489.5	391.2	1161.6	2157.2	2117.9	1805.3
80°	94.0	94.0	144.2	256.8	407.6	315.8	274.3	493.9	683.0	599.9	528.9
82.5°	52.5	53.5	104.9	159.6	269.9	186.9	150.8	228.4	295.1	261.2	227.3
85°	21.8	24.1	64.5	75.4	128.9	92.9	61.2	96.1	109.3	97.3	71.0
87.5°	2.2	3.3	19.7	14.2	15.3	18.6	8.7	18.6	15.3	15.3	11.0
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°	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5	2514.5
2.5°	2530.9	2514.5	2473.0	2424.9	2361.5	2331.0	2289.4	2260.9	2237.0	2239.1	2217.3
5°	2580.1	2538.5	2445.6	2329.8	2185.6	2082.9	1973.5	1898.2	1837.0	1823.9	1794.4
7.5°	2647.9	2582.3	2419.4	2210.7	1967.0	1782.4	1617.3	1511.4	1435.9	1411.9	1387.8
10°	2735.2	2640.2	2385.6	2061.0	1710.2	1475.3	1298.3	1215.1	1163.8	1146.4	1133.2
12.5°	2836.9	2706.8	2340.8	1878.5	1445.8	1219.5	1107.0	1065.5	1049.1	1043.7	1040.4
15°	2964.7	2789.9	2273.0	1662.1	1221.7	1063.3	1015.2	1009.7	1011.9	1009.7	1008.6
17.5°	3116.6	2880.6	2162.6	1439.2	1070.9	983.5	966.1	970.4	975.9	974.8	972.6
20°	3282.8	2970.2	2021.7	1241.4	968.2	926.7	916.9	921.3	925.6	923.4	922.3
22.5°	3471.8	3066.4	1865.4	1087.3	899.3	874.2	863.3	864.4	864.4	860.1	857.8
25°	3698.0	3172.4	1701.5	978.1	847.0	827.3	814.2	809.7	803.2	790.1	787.9
27.5°	3967.9	3284.9	1544.2	901.6	805.3	786.8	771.5	760.6	744.2	722.3	720.2
30°	4271.7	3421.6	1410.8	853.5	772.6	754.0	736.6	720.2	696.1	668.8	666.6
32.5°	4629.1	3567.9	1313.5	821.7	743.1	723.4	702.6	683.0	656.7	629.5	630.6
35°	5055.3	3745.0	1256.8	799.9	720.2	693.9	671.0	649.1	629.5	605.4	603.2
37.5°	5517.5	3932.9	1239.2	789.0	704.9	664.4	638.2	622.9	620.7	606.5	605.4
40°	6023.5	4155.9	1252.3	782.5	688.5	636.0	607.6	604.3	609.8	584.7	585.8
42.5°	6559.0	4420.3	1274.2	774.8	665.5	607.6	580.3	580.3	575.9	540.9	540.9
45°	7138.1	4725.2	1296.0	756.2	638.2	579.2	558.4	550.7	532.2	498.4	497.2
47.5°	7721.6	5035.6	1312.4	722.3	605.4	555.1	536.6	519.1	491.8	461.1	460.0
50°	8275.7	5314.2	1295.0	672.1	568.3	532.2	512.5	488.5	459.0	438.2	434.9
52.5°	8770.7	5555.7	1220.7	613.1	528.9	508.2	490.7	465.6	441.5	419.6	417.5
55°	9201.3	5751.4	1089.5	557.3	493.9	487.4	469.9	438.2	405.4	386.8	384.7
57.5°	9614.4	5900.0	925.6	511.5	462.3	464.4	438.2	409.8	379.2	359.6	357.3
60°	10164.1	6098.9	759.5	468.8	428.3	434.9	406.5	385.7	347.5	322.4	319.1
62.5°	11042.6	6408.1	603.2	416.4	389.0	391.2	379.2	354.0	308.2	278.7	276.4
65°	11739.8	6294.5	475.4	359.6	344.2	347.5	347.5	320.2	271.0	237.2	233.9
67.5°	11661.2	5389.7	379.2	303.8	301.7	303.8	311.4	288.5	240.5	213.1	208.7
70°	10742.1	4287.1	303.8	252.5	262.3	256.8	278.7	263.3	216.4	189.0	185.7
72.5°	8765.3	3088.2	231.6	208.7	201.1	209.8	251.3	237.2	180.3	149.8	146.5
75°	5121.9	1647.9	172.6	165.0	145.3	174.9	222.9	202.1	137.7	110.4	107.1
77.5°	1667.6	574.8	126.8	121.3	108.1	140.9	190.1	170.5	112.5	87.4	84.2
80°	447.0	173.7	86.3	79.7	69.9	104.9	150.8	135.5	80.9	56.8	55.8
82.5°	179.2	73.2	50.2	44.8	38.2	72.2	119.1	109.3	60.1	36.1	36.1
85°	57.9	24.1	18.6	14.2	17.5	44.8	71.0	74.3	42.6	18.6	14.2
87.5°	7.7	3.3	3.3	4.4	3.3	7.7	21.8	20.8	12.0	2.2	0.0
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)