

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: P967344

Luminaire Tested: **NAV-SB4D-830-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967344
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-14)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-830-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 38201.7 lumens
Efficiency: N/A
Efficacy: 130.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

Input Watts (W): 293.6
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

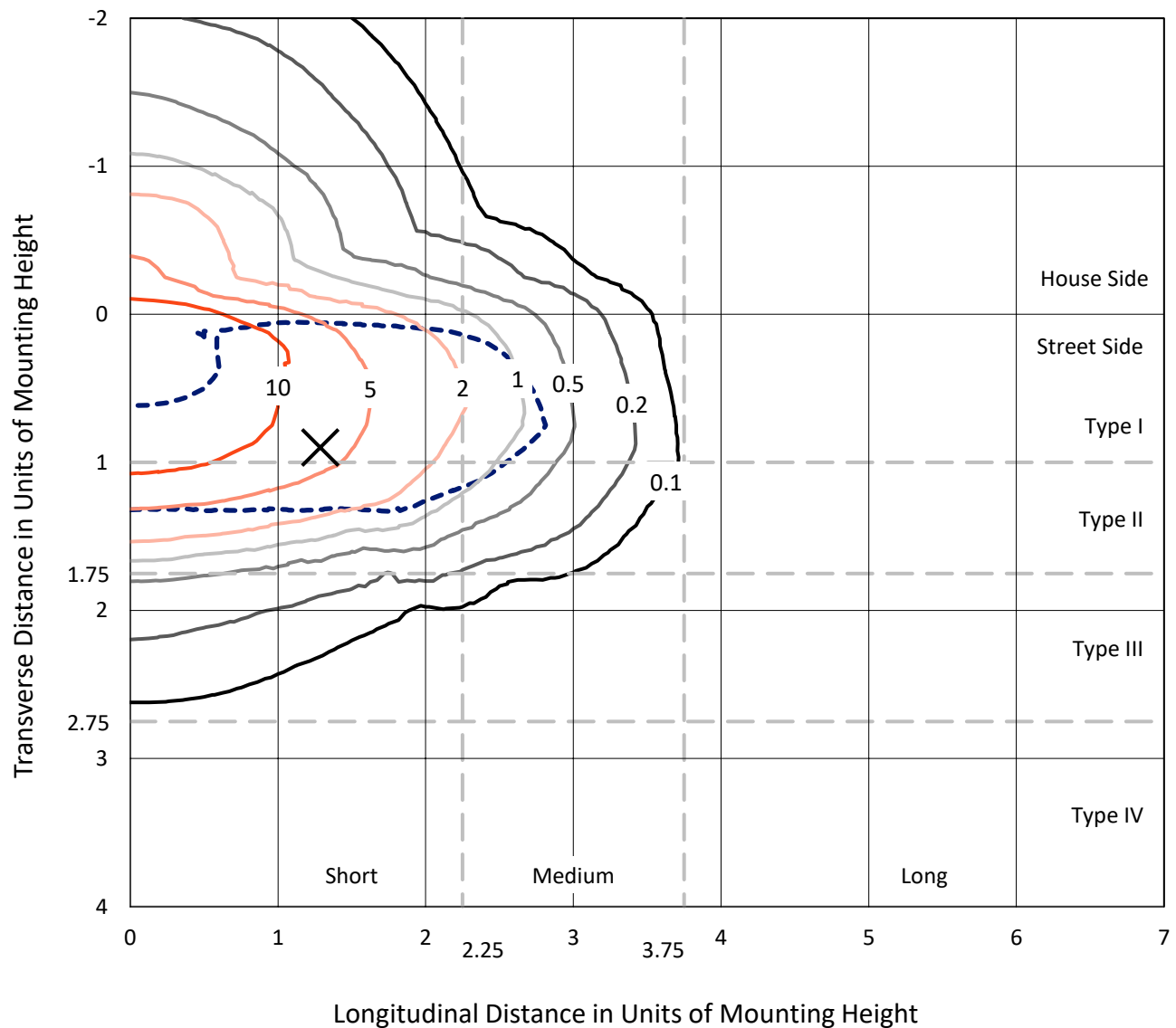


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

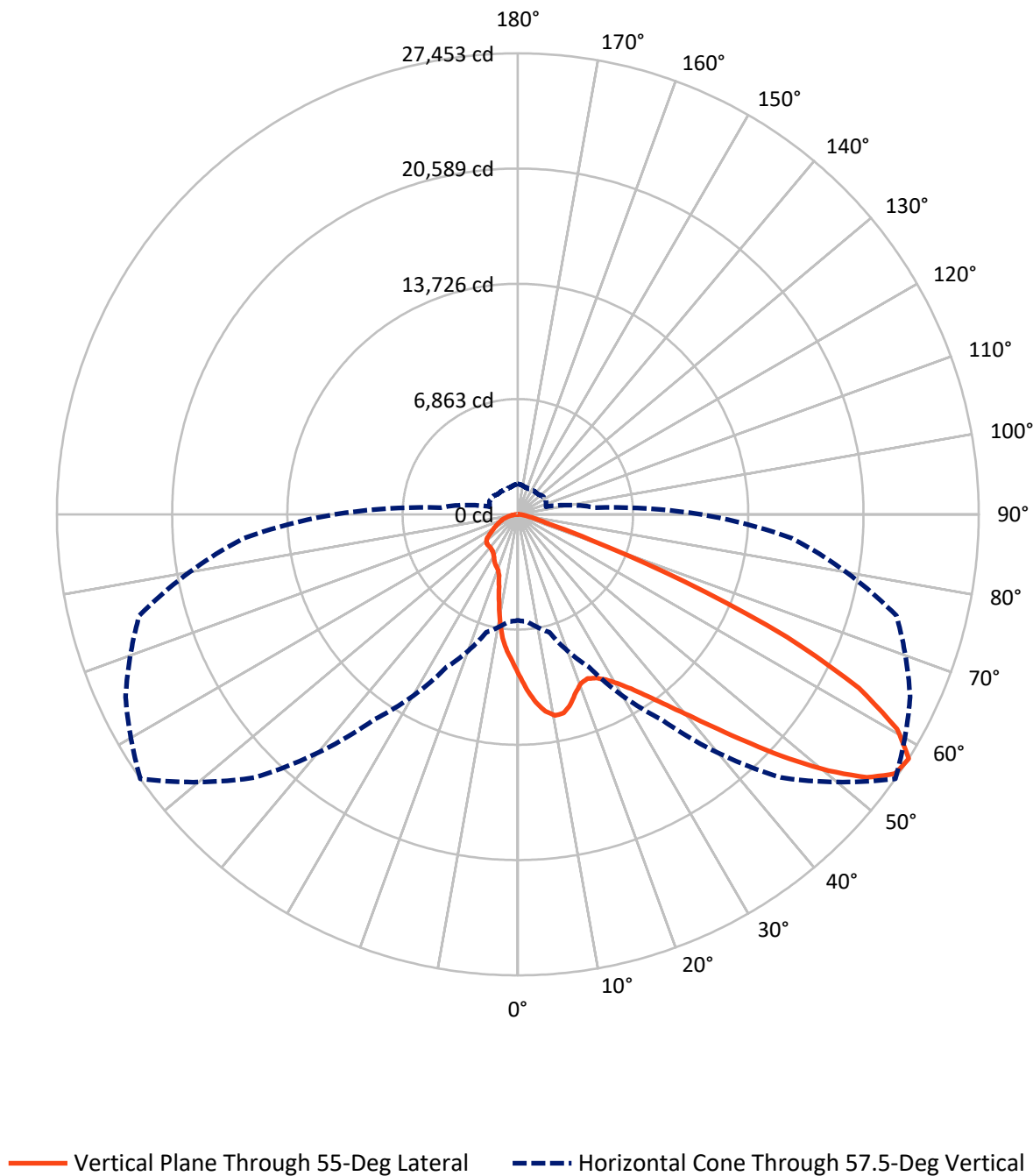


Based on 25 foot mounting height. Maximum calculated value = 18.5 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6912.4	0.0	6912.4
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	31289.3	0.0	31289.3
	% Fixture	81.9	0.0	81.9
Total	Lumens	38201.7	0.0	38201.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	888.2	2.3
10°-20°	2241.9	5.9
20°-30°	3577.5	9.4
30°-40°	5664.1	14.8
40°-50°	8669.5	22.7
50°-60°	9285.8	24.3
60°-70°	5841.7	15.3
70°-80°	1727.5	4.5
80°-90°	305.4	0.8
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°	38201.7	100.0
0°-180°	38201.7	100.0

Coefficient of Utilization



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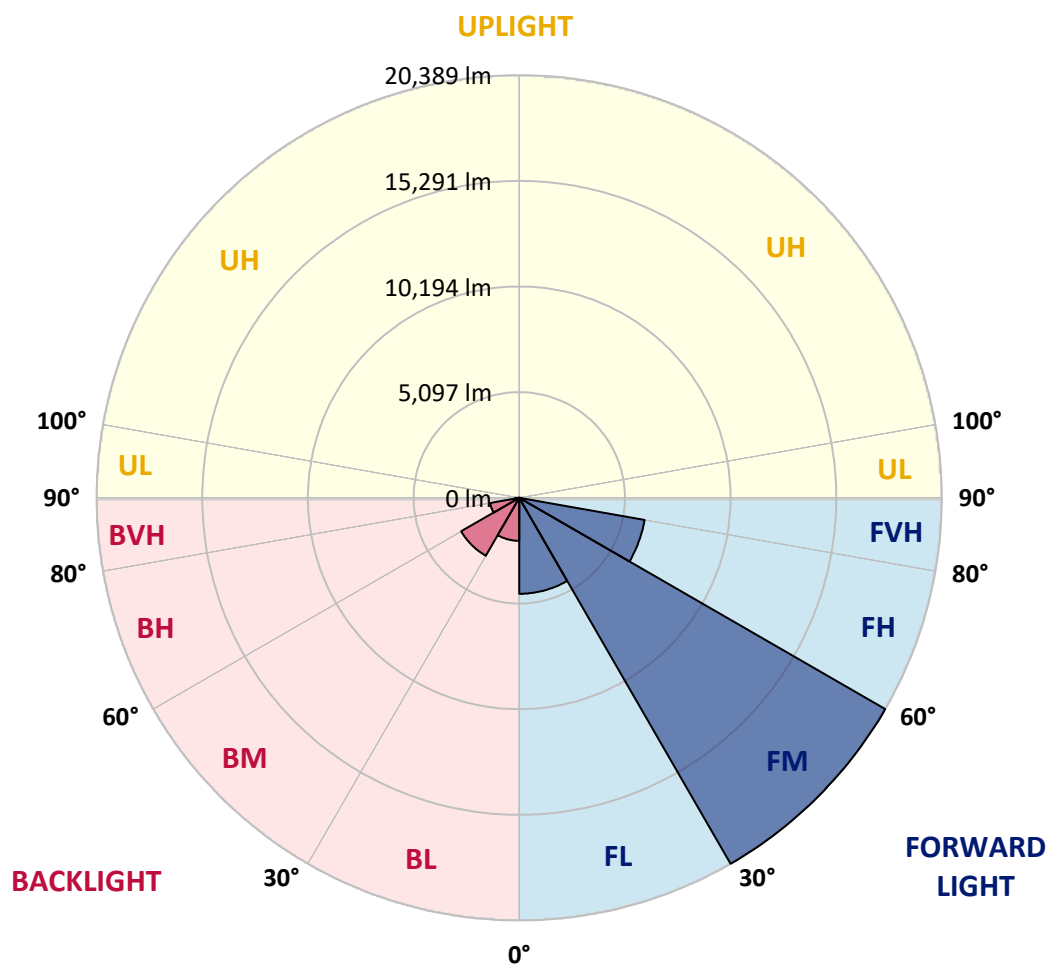
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4630.0	12.1			
FM	(30°-60°)	20388.6	53.4			
FH	(60°-80°)	6141.7	16.1			G3/7500
FVH	(80°-90°)	129.1	0.3			G2/225
BL	(0°-30°)	2077.6	5.4	B3/2500		
BM	(30°-60°)	3230.8	8.5	B3/5000		
BH	(60°-80°)	1427.6	3.7	B3/2500		G3/2500
BVH	(80°-90°)	176.4	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2
2.5°	10982.2	10974.3	11017.7	10869.6	10768.9	10632.6	10452.9	10223.9	9976.9	9716.3	9603.7
5°	11971.6	11902.4	11947.9	11837.3	11726.7	11521.3	11254.7	10881.4	10425.3	9905.9	9629.4
7.5°	11815.6	11768.1	11884.7	11983.4	12066.4	12040.7	11845.2	11454.2	10865.6	10111.2	9710.3
10°	10557.6	10504.2	10668.2	11009.8	11511.5	11947.9	12184.9	11942.0	11315.9	10336.4	9789.4
12.5°	9447.7	9422.0	9530.7	9807.1	10364.1	11201.4	12141.4	12368.5	11783.9	10603.0	9896.0
15°	8973.8	8942.1	9011.3	9151.5	9507.0	10287.0	11746.4	12660.8	12244.1	10911.0	10065.8
17.5°	8869.1	8833.6	8863.2	8936.3	9165.3	9759.7	11150.1	12804.9	12723.9	11254.7	10208.0
20°	9062.6	9033.0	9036.9	9033.0	9192.9	9664.9	10735.3	12749.7	13142.7	11570.7	10346.2
22.5°	9530.7	9481.2	9483.3	9378.5	9465.5	9830.8	10626.7	12601.6	13515.9	11847.2	10450.9
25°	10292.9	10204.1	10221.8	9955.2	9931.5	10202.1	10796.5	12487.0	13887.2	12068.3	10470.7
27.5°	11335.7	11234.9	11181.6	10784.6	10595.1	10729.4	11142.2	12526.5	14238.7	12259.9	10421.3
30°	12639.1	12516.6	12408.0	11845.2	11501.5	11452.2	11679.3	12787.2	14653.4	12461.3	10336.4
32.5°	14236.7	14094.6	13897.1	13150.5	12666.7	12408.0	12374.4	13251.3	15139.2	12718.1	10292.9
35°	16138.5	15952.9	15672.5	14706.7	14094.6	13565.3	13290.8	13920.7	15804.8	13105.1	10342.4
37.5°	18097.6	17888.2	17631.5	16482.1	15729.8	14949.6	14408.5	14829.2	16691.5	13630.4	10472.6
40°	19904.6	19669.5	19430.6	18407.7	17599.9	16659.8	15777.1	15978.5	17775.7	14258.5	10693.8
42.5°	20971.0	20797.1	20706.3	20153.3	19529.3	18575.5	17479.4	17341.2	18994.2	14981.2	10946.6
45°	20923.5	20852.5	21132.9	21362.0	21213.9	20684.6	19474.1	18848.0	20216.6	15607.3	11179.7
47.5°	19805.8	19853.2	20479.2	21766.8	22333.6	22610.1	21745.2	20327.2	21279.1	16075.3	11284.3
50°	16764.5	16804.1	18253.6	21030.2	22622.0	24180.2	23998.4	21770.8	22102.6	16361.7	11260.6
52.5°	14357.2	14382.9	15005.0	18846.1	21670.0	24970.0	26028.5	23131.5	22704.9	16440.7	11128.3
55°	10814.3	10903.1	11600.3	14785.7	19193.6	24344.1	27264.8	24533.6	23086.1	16448.6	10990.0
57.5°	6317.6	6414.3	7275.3	10036.2	14918.1	22161.8	27452.5	25777.7	23344.8	16385.3	10907.1
60°	3094.6	3136.1	3511.2	5274.9	9198.9	17957.4	25943.7	26380.1	23488.9	16351.8	10903.1
62.5°	2085.5	2079.5	2095.3	2602.9	4532.2	11537.1	22799.7	25325.5	23411.9	16223.4	10863.7
65°	1793.1	1771.4	1712.2	1826.8	2348.1	5276.8	17615.6	22177.6	22825.3	15901.5	10593.1
67.5°	1550.2	1552.3	1554.2	1518.6	1676.7	2435.0	10765.0	17469.6	20720.2	14377.0	9550.4
70°	1283.6	1301.4	1309.3	1309.3	1366.6	1597.7	4595.5	11973.5	16343.9	11272.4	7692.0
72.5°	1169.1	1131.6	1135.5	1115.8	1115.8	1216.5	1850.4	6787.6	10296.8	6341.3	4694.2
75°	953.9	977.5	981.5	967.7	922.3	928.1	1098.0	2847.8	4405.9	2630.5	2320.5
77.5°	823.5	823.5	831.4	821.5	786.0	695.2	732.7	1103.9	1499.0	1078.3	1159.3
80°	661.5	659.6	693.2	712.9	657.6	513.4	468.0	610.2	665.5	474.0	602.3
82.5°	321.8	341.6	475.9	543.0	499.7	371.3	286.4	379.1	355.5	209.3	270.6
85°	187.6	177.7	213.3	302.2	286.4	205.4	138.3	197.5	185.6	106.6	108.6
87.5°	59.2	55.2	43.5	102.7	82.9	57.3	37.5	57.3	51.4	23.7	23.7
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2	9572.2
2.5°	9463.5	9230.4	8999.4	8788.1	8659.7	8576.8	8493.9	8401.0	8365.4	8312.1
5°	9368.7	8918.4	8517.5	8171.9	7858.0	7611.1	7362.3	7160.9	7069.9	7131.2
7.5°	9313.5	8661.7	8043.6	7409.6	6799.4	6311.6	5887.1	5588.8	5454.5	5488.2
10°	9264.1	8371.4	7429.4	6428.2	5551.3	4947.1	4512.6	4285.4	4200.6	4218.3
12.5°	9218.6	8045.5	6688.8	5371.6	4439.5	4040.6	3916.1	3918.1	3934.0	3945.7
15°	9210.8	7652.5	5861.4	4447.4	3839.1	3813.4	3947.7	4032.7	4078.1	4091.9
17.5°	9198.9	7182.6	5018.1	3817.4	3693.0	3866.8	3991.1	4046.5	4082.1	4084.0
20°	9151.5	6586.1	4240.0	3517.2	3661.4	3811.5	3888.4	3931.9	3961.5	3971.5
22.5°	9005.3	5922.6	3633.7	3382.9	3535.0	3655.5	3746.3	3795.7	3813.4	3825.3
25°	8742.6	5180.0	3215.0	3254.6	3359.2	3511.2	3584.3	3594.3	3588.3	3606.1
27.5°	8399.1	4384.1	2954.4	3080.7	3215.0	3345.4	3384.9	3379.0	3367.1	3386.9
30°	7984.3	3669.3	2788.5	2885.3	3069.0	3187.4	3223.0	3209.2	3185.4	3207.1
32.5°	7545.9	3084.7	2652.2	2748.9	2948.4	3065.0	3100.5	3086.7	3069.0	3086.7
35°	7137.1	2676.0	2525.8	2658.1	2853.7	2968.2	3013.6	3015.7	3015.7	3037.3
37.5°	6761.9	2436.9	2421.2	2600.8	2788.5	2891.2	2956.4	2960.3	2875.4	2881.3
40°	6414.3	2336.3	2373.8	2563.3	2725.3	2824.1	2828.0	2606.8	2450.8	2446.9
42.5°	6129.9	2316.5	2387.6	2559.4	2679.9	2683.9	2405.4	2233.6	2190.1	2192.1
45°	5863.3	2310.6	2419.2	2559.4	2612.7	2318.4	2130.9	2085.5	2089.4	2105.1
47.5°	5565.1	2286.9	2425.1	2523.9	2419.2	2061.8	2006.4	1986.7	1978.8	1982.8
50°	5239.3	2202.0	2350.1	2452.7	2087.4	1951.2	1882.0	1876.2	1886.0	1891.9
52.5°	4895.7	2063.7	2221.7	2324.4	1935.4	1854.4	1777.4	1791.2	1834.6	1848.5
55°	4670.5	1901.8	2051.8	2067.6	1828.7	1763.5	1698.4	1730.0	1811.0	1836.6
57.5°	4611.3	1730.0	1858.3	1840.6	1692.5	1684.6	1645.0	1672.7	1775.4	1812.9
60°	4593.5	1575.9	1668.8	1655.0	1560.2	1597.7	1587.8	1601.6	1637.1	1649.0
62.5°	4455.3	1453.4	1499.0	1479.2	1441.7	1506.9	1530.5	1500.9	1528.6	1542.3
65°	4103.8	1354.7	1333.0	1319.2	1335.0	1394.2	1441.7	1382.4	1408.0	1447.6
67.5°	3523.1	1220.5	1161.2	1177.0	1226.4	1258.0	1319.2	1252.0	1273.8	1340.9
70°	2849.7	1050.6	997.3	1042.7	1090.1	1155.3	1165.1	1119.7	1171.1	1246.1
72.5°	2016.3	878.8	841.3	934.1	949.9	1034.8	1013.1	991.4	1062.5	1088.1
75°	1398.2	709.0	687.3	758.3	815.6	888.7	872.9	898.5	1048.7	1060.5
77.5°	884.8	550.9	537.2	582.6	661.5	742.5	768.2	1060.5	1791.2	1862.3
80°	513.4	410.8	394.9	430.5	499.7	574.7	740.6	1301.4	1181.0	1167.2
82.5°	286.4	282.4	262.6	272.5	333.7	414.7	1046.6	916.4	744.6	768.2
85°	134.3	165.8	142.2	136.2	187.6	485.8	699.0	523.4	347.6	339.7
87.5°	35.6	31.6	31.6	35.6	79.0	418.7	278.5	223.1	132.3	128.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)