

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: P966135

Luminaire Tested: **NAV-SB4B-735-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966135
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-SB4B-735-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23525.8 lumens
Efficiency: N/A
Efficacy: 160.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - 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

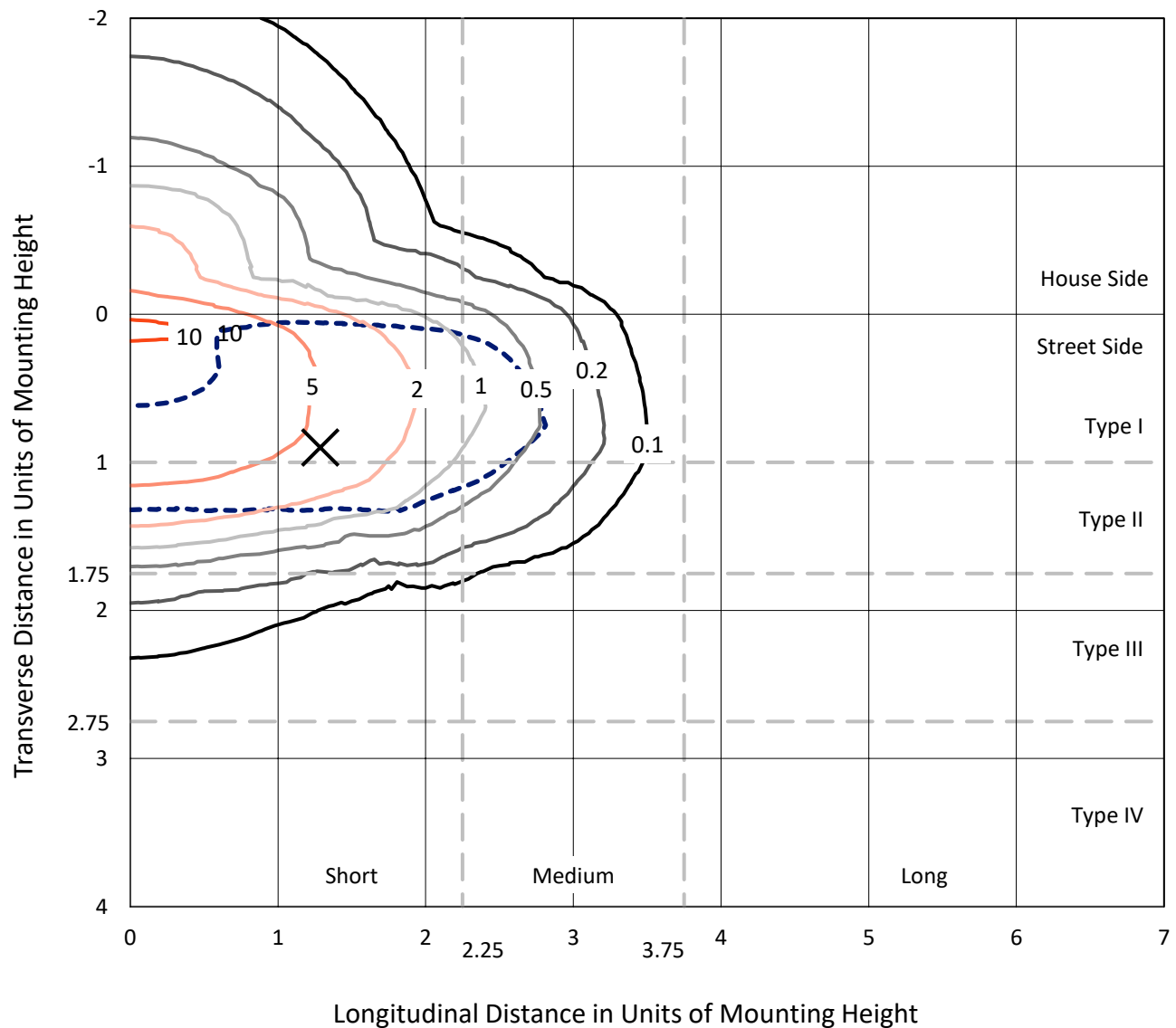


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Iso-Footcandle Lines of Horizontal Illumination

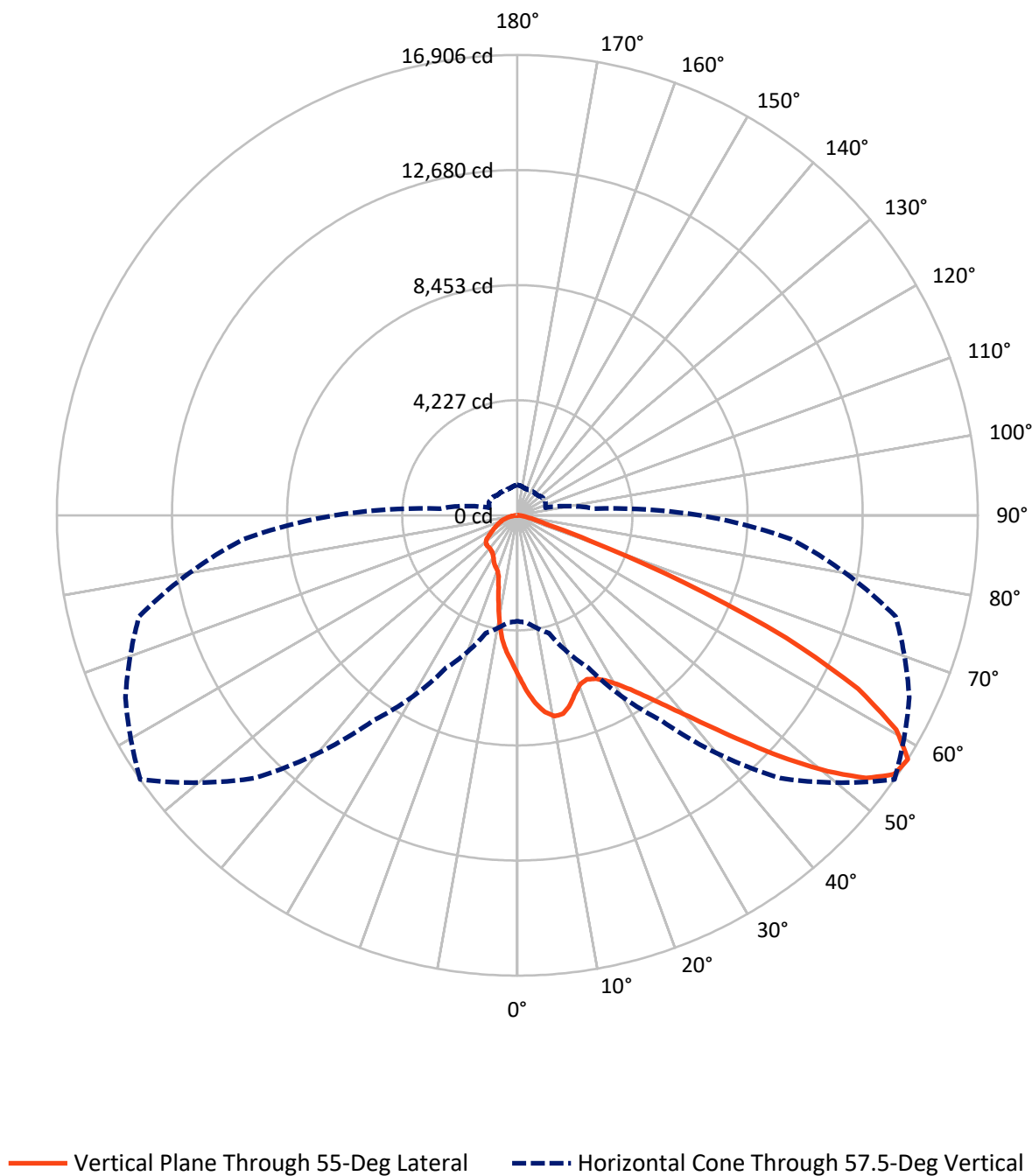
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.4 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	4256.9	0.0	4256.9
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	19268.9	0.0	19268.9
	% Fixture	81.9	0.0	81.9
Total	Lumens	23525.8	0.0	23525.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	547.0	2.3
10°-20°	1380.7	5.9
20°-30°	2203.1	9.4
30°-40°	3488.1	14.8
40°-50°	5338.9	22.7
50°-60°	5718.5	24.3
60°-70°	3597.5	15.3
70°-80°	1063.9	4.5
80°-90°	188.1	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°	23525.8	100.0
0°-180°	23525.8	100.0

Coefficient of Utilization



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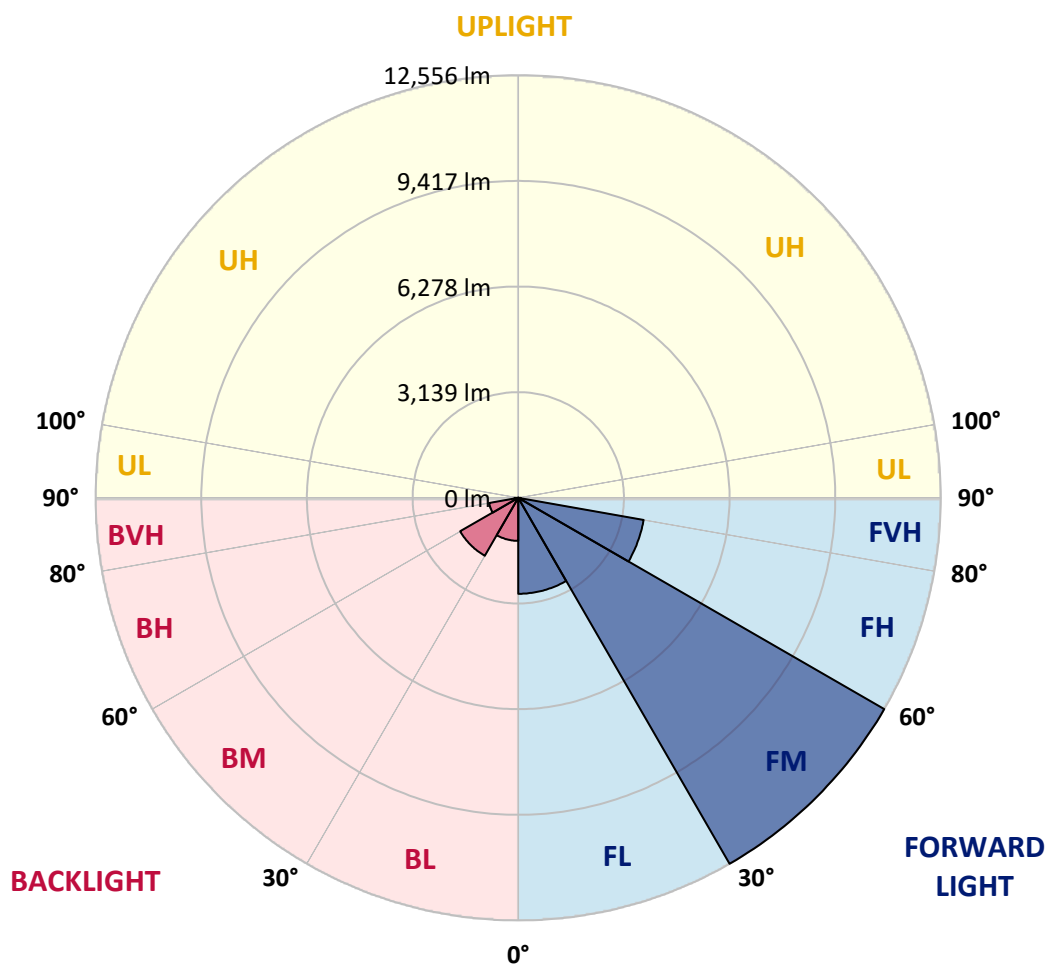
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2851.3	12.1			
FM	(30°-60°)	12555.9	53.4			
FH	(60°-80°)	3782.2	16.1			G2/5000
FVH	(80°-90°)	79.5	0.3			G1/100
BL	(0°-30°)	1279.5	5.4	B3/2500		
BM	(30°-60°)	1989.6	8.5	B2/2500		
BH	(60°-80°)	879.1	3.7	B2/1000		G2/1000
BVH	(80°-90°)	108.6	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-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8
2.5°	6763.2	6758.3	6785.1	6693.9	6631.9	6547.9	6437.2	6296.2	6144.2	5983.5	5914.2
5°	7372.4	7329.9	7357.9	7289.8	7221.6	7095.2	6930.9	6701.1	6420.2	6100.3	5930.0
7.5°	7276.4	7247.2	7318.9	7379.8	7430.8	7415.1	7294.6	7053.8	6691.4	6226.8	5980.0
10°	6501.7	6468.9	6569.7	6780.2	7089.1	7357.9	7503.8	7354.2	6968.7	6365.5	6028.5
12.5°	5818.2	5802.4	5869.3	6039.5	6382.5	6898.1	7477.1	7616.9	7256.9	6529.7	6094.2
15°	5526.3	5506.8	5549.5	5635.8	5854.7	6335.0	7233.8	7796.9	7540.3	6719.4	6198.9
17.5°	5461.8	5440.0	5458.2	5503.2	5644.3	6010.3	6866.5	7885.6	7835.8	6930.9	6286.4
20°	5581.0	5562.8	5565.2	5562.8	5661.3	5952.0	6611.1	7851.6	8093.6	7125.6	6371.5
22.5°	5869.3	5838.8	5840.0	5775.6	5829.2	6054.2	6544.2	7760.4	8323.5	7295.8	6436.0
25°	6338.7	6284.0	6294.9	6130.7	6116.2	6282.7	6648.9	7689.9	8552.2	7432.1	6448.2
27.5°	6980.9	6918.9	6886.0	6641.5	6524.7	6607.5	6861.7	7714.2	8768.7	7550.0	6417.7
30°	7783.5	7708.1	7641.3	7294.6	7083.0	7052.6	7192.4	7874.8	9024.0	7674.1	6365.5
32.5°	8767.4	8679.8	8558.2	8098.5	7800.6	7641.3	7620.6	8160.5	9323.2	7832.1	6338.7
35°	9938.6	9824.2	9651.6	9056.9	8679.8	8354.0	8184.8	8572.8	9733.1	8070.5	6369.1
37.5°	11145.0	11016.1	10858.0	10150.2	9686.9	9206.4	8873.2	9132.2	10279.1	8394.0	6449.4
40°	12257.9	12113.1	11966.0	11336.0	10838.6	10259.6	9716.0	9840.1	10946.8	8780.8	6585.6
42.5°	12914.6	12807.6	12751.6	12411.1	12026.7	11439.3	10764.3	10679.3	11697.2	9225.9	6741.2
45°	12885.4	12841.6	13014.3	13155.4	13064.1	12738.2	11992.7	11607.2	12450.0	9611.4	6884.7
47.5°	12197.0	12226.2	12611.7	13404.6	13753.8	13924.0	13391.3	12518.1	13104.3	9899.7	6949.2
50°	10324.1	10348.4	11241.1	12951.1	13931.3	14890.9	14779.0	13407.1	13611.4	10076.1	6934.6
52.5°	8841.5	8857.4	9240.5	11606.0	13345.1	15377.4	16029.2	14245.0	13982.3	10124.6	6853.2
55°	6659.7	6714.5	7143.8	9105.5	11820.0	14991.8	16790.5	15108.5	14217.1	10129.6	6768.0
57.5°	3890.6	3950.1	4480.4	6180.6	9187.0	13647.9	16906.0	15874.7	14376.4	10090.6	6716.9
60°	1905.8	1931.3	2162.3	3248.4	5665.0	11058.7	15976.9	16245.6	14465.2	10069.9	6714.5
62.5°	1284.3	1280.6	1290.4	1602.9	2791.1	7104.9	14040.8	15596.2	14417.8	9990.9	6690.2
65°	1104.3	1090.9	1054.4	1124.9	1446.1	3249.7	10848.3	13657.6	14056.5	9792.6	6523.6
67.5°	954.7	955.9	957.1	935.2	1032.5	1499.6	6629.4	10758.3	12760.1	8853.7	5881.4
70°	790.5	801.4	806.4	806.4	841.6	983.9	2830.0	7373.6	10065.1	6941.9	4737.0
72.5°	720.0	696.9	699.3	687.2	687.2	749.2	1139.6	4180.0	6341.2	3905.1	2890.8
75°	587.4	602.0	604.4	595.9	568.0	571.6	676.2	1753.8	2713.3	1619.9	1429.1
77.5°	507.2	507.2	512.0	505.9	484.0	428.1	451.2	679.9	923.1	664.0	713.9
80°	407.4	406.2	426.9	439.0	405.0	316.2	288.2	375.8	409.9	291.9	370.9
82.5°	198.2	210.4	293.0	334.5	307.7	228.7	176.3	233.5	218.9	128.9	166.7
85°	115.5	109.5	131.3	186.0	176.3	126.5	85.2	121.7	114.3	65.7	66.9
87.5°	36.5	34.0	26.8	63.2	51.0	35.3	23.1	35.3	31.6	14.6	14.6
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°	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8	5894.8
2.5°	5827.9	5684.4	5542.1	5412.0	5333.0	5281.8	5230.8	5173.6	5151.8	5118.8
5°	5769.5	5492.3	5245.3	5032.5	4839.1	4687.1	4533.9	4409.9	4353.9	4391.6
7.5°	5735.5	5334.1	4953.5	4563.1	4187.3	3886.9	3625.4	3441.7	3359.0	3379.7
10°	5705.0	5155.3	4575.3	3958.7	3418.7	3046.5	2779.0	2639.1	2586.8	2597.8
12.5°	5677.1	4954.7	4119.2	3308.0	2734.0	2488.3	2411.7	2412.8	2422.6	2430.0
15°	5672.2	4712.6	3609.6	2738.8	2364.3	2348.5	2431.1	2483.5	2511.4	2520.0
17.5°	5665.0	4423.2	3090.3	2350.8	2274.3	2381.3	2457.8	2492.0	2513.8	2515.0
20°	5635.8	4055.9	2611.1	2166.0	2254.8	2347.2	2394.6	2421.4	2439.6	2445.8
22.5°	5545.8	3647.4	2237.8	2083.3	2177.0	2251.1	2307.1	2337.5	2348.5	2355.8
25°	5384.0	3190.0	1979.9	2004.3	2068.8	2162.3	2207.3	2213.5	2209.8	2220.8
27.5°	5172.4	2700.0	1819.4	1897.3	1979.9	2060.2	2084.5	2080.9	2073.6	2085.8
30°	4917.0	2259.6	1717.3	1776.8	1889.9	1962.9	1984.8	1976.3	1961.6	1975.1
32.5°	4647.0	1899.6	1633.3	1692.9	1815.8	1887.5	1909.4	1900.9	1889.9	1900.9
35°	4395.3	1647.9	1555.4	1636.9	1757.4	1827.9	1855.9	1857.1	1857.1	1870.5
37.5°	4164.2	1500.8	1491.1	1601.7	1717.3	1780.5	1820.6	1823.1	1770.8	1774.4
40°	3950.1	1438.7	1461.9	1578.6	1678.3	1739.1	1741.6	1605.4	1509.3	1506.9
42.5°	3775.0	1426.6	1470.4	1576.1	1650.4	1652.8	1481.3	1375.4	1348.7	1349.9
45°	3610.9	1422.9	1489.8	1576.1	1609.0	1427.8	1312.2	1284.3	1286.7	1296.4
47.5°	3427.2	1408.4	1493.4	1554.3	1489.8	1269.7	1235.6	1223.4	1218.6	1221.1
50°	3226.5	1356.1	1447.2	1510.4	1285.5	1201.6	1159.0	1155.4	1161.4	1165.1
52.5°	3014.9	1270.9	1368.2	1431.4	1191.9	1142.0	1094.6	1103.1	1129.9	1138.4
55°	2876.3	1171.2	1263.6	1273.4	1126.2	1086.1	1045.9	1065.4	1115.2	1131.1
57.5°	2839.8	1065.4	1144.4	1133.4	1042.2	1037.4	1013.1	1030.1	1093.4	1116.4
60°	2828.8	970.5	1027.7	1019.2	960.7	983.9	977.8	986.4	1008.2	1015.5
62.5°	2743.7	895.1	923.1	910.9	887.9	927.9	942.5	924.2	941.4	949.9
65°	2527.2	834.2	820.9	812.4	822.2	858.6	887.9	851.4	867.2	891.4
67.5°	2169.6	751.6	715.1	724.9	755.2	774.7	812.4	771.0	784.4	825.7
70°	1754.9	647.0	614.2	642.2	671.4	711.5	717.5	689.6	721.2	767.4
72.5°	1241.7	541.2	518.1	575.2	585.0	637.2	623.9	610.5	654.3	670.1
75°	861.1	436.6	423.2	467.0	502.2	547.2	537.5	553.4	645.8	653.1
77.5°	544.9	339.3	330.8	358.7	407.4	457.3	473.1	653.1	1103.1	1146.9
80°	316.2	253.0	243.2	265.2	307.7	353.9	456.0	801.4	727.2	718.7
82.5°	176.3	173.9	161.7	167.8	205.5	255.4	644.6	564.3	458.5	473.1
85°	82.7	102.2	87.5	83.9	115.5	299.2	430.5	322.3	214.0	209.2
87.5°	21.9	19.5	19.5	21.9	48.7	257.8	171.5	137.5	81.5	79.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)