

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: P966305

Luminaire Tested: **NAV-SB4B-830-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966305
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-830-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21171.4 lumens
Efficiency: N/A
Efficacy: 144.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

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

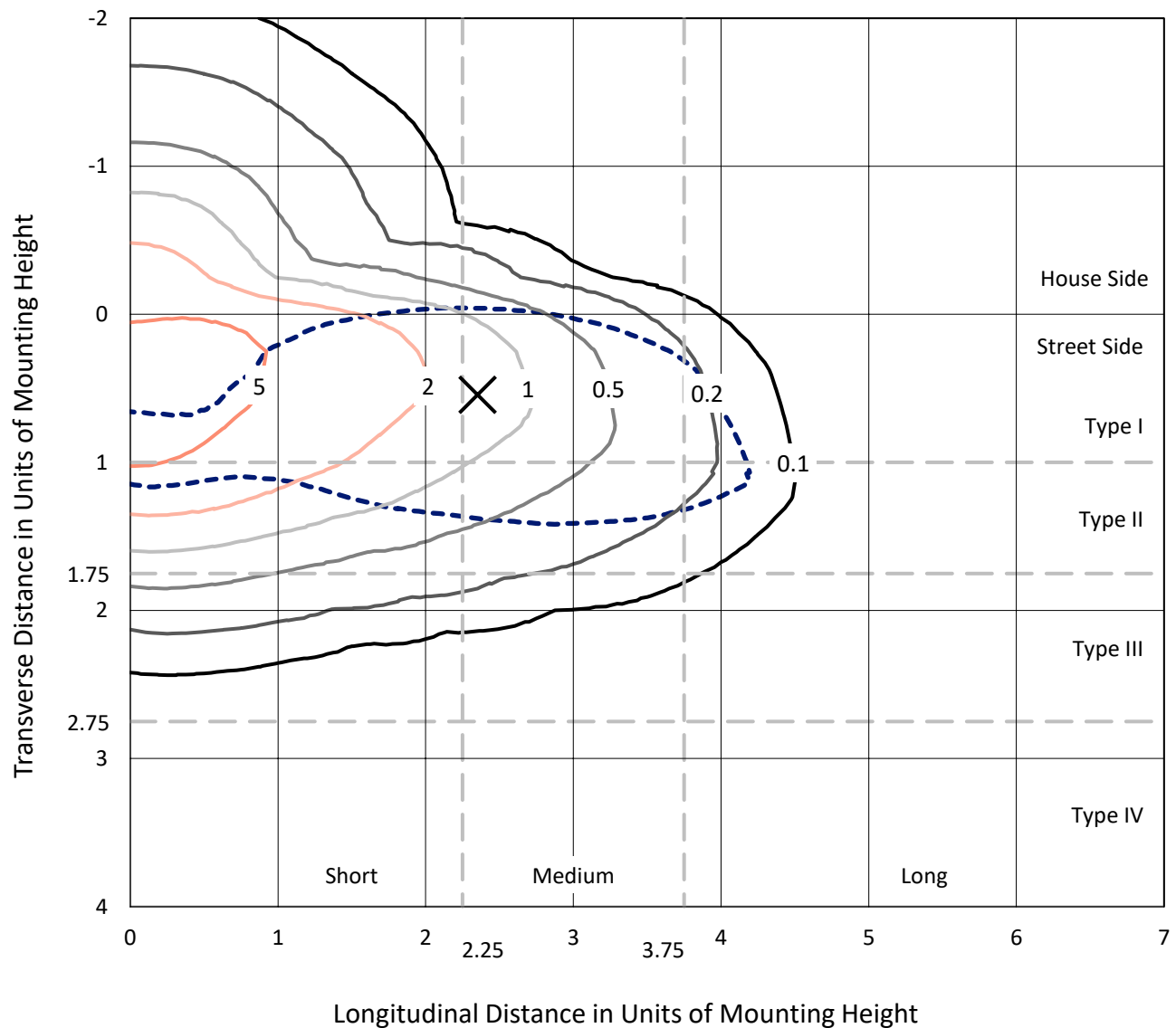


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Iso-Footcandle Lines of Horizontal Illumination

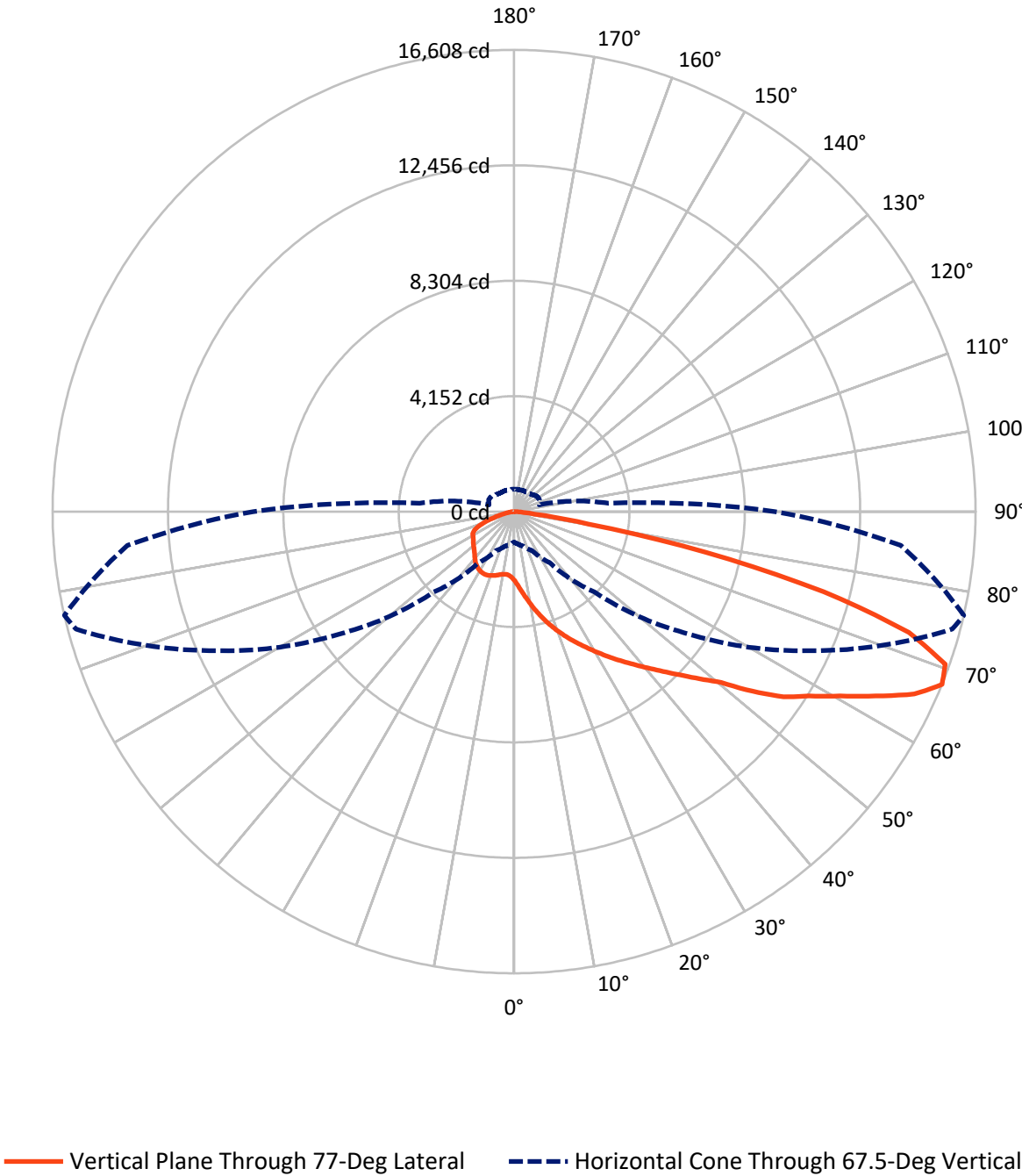
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 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	4004.8	0.0	4004.8
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	17166.6	0.0	17166.6
	% Fixture	81.1	0.0	81.1
Total	Lumens	21171.4	0.0	21171.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.3	1.3
10°-20°	956.6	4.5
20°-30°	1806.1	8.5
30°-40°	2909.5	13.7
40°-50°	3979.7	18.8
50°-60°	4489.2	21.2
60°-70°	4190.1	19.8
70°-80°	2296.9	10.8
80°-90°	277.1	1.3
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°	21171.4	100.0
0°-180°	21171.4	100.0

Coefficient of Utilization



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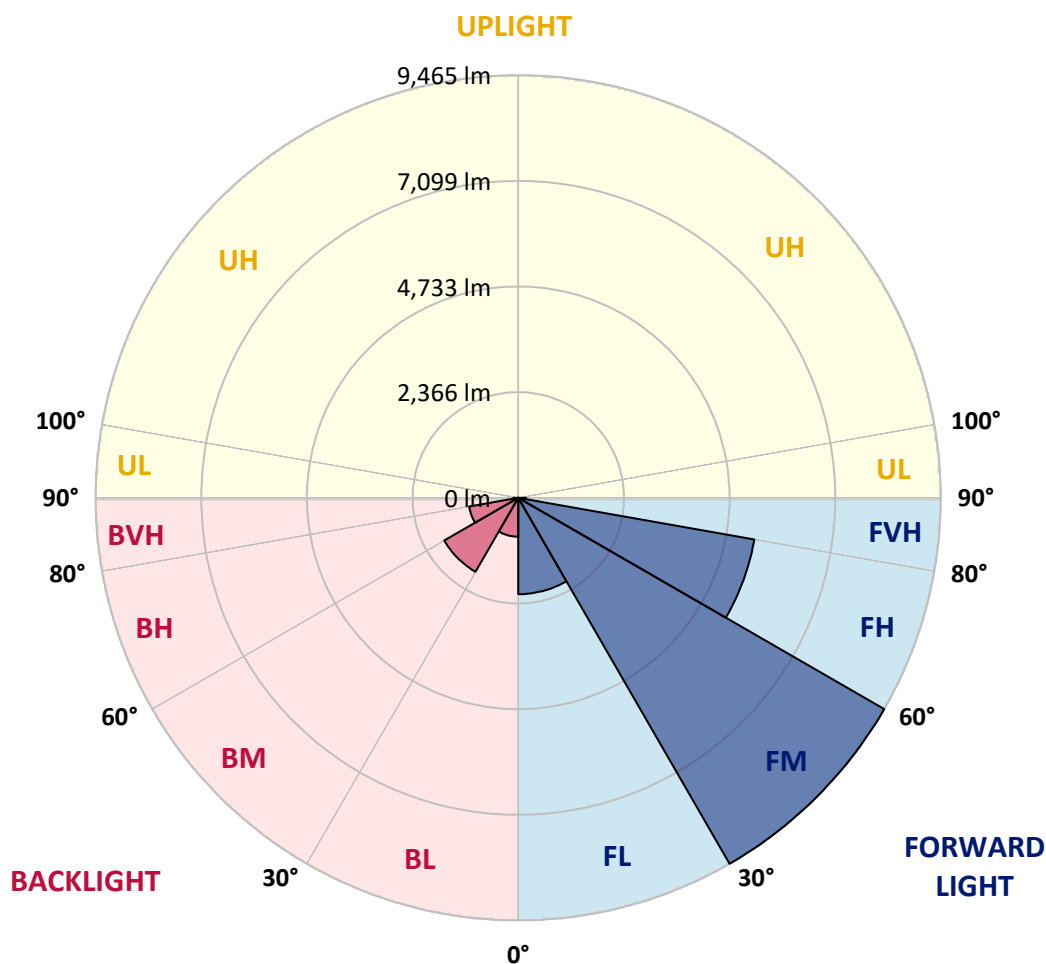
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2158.2	10.2			
FM	(30°-60°)	9465.5	44.7			
FH	(60°-80°)	5369.7	25.4			G3/7500
FVH	(80°-90°)	173.3	0.8			G2/225
BL	(0°-30°)	870.7	4.1	B2/1000		
BM	(30°-60°)	1913.0	9.0	B2/2500		
BH	(60°-80°)	1117.3	5.3	B3/2500		G3/2500
BVH	(80°-90°)	103.8	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 Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1
2.5°	3110.3	3132.1	3104.8	3104.8	3013.0	2964.9	2873.1	2803.2	2677.5	2655.7	2572.5
5°	3676.4	3703.7	3665.4	3649.0	3540.9	3441.4	3287.3	3135.4	2911.4	2888.4	2692.8
7.5°	4114.6	4149.6	4115.7	4098.3	4002.0	3890.6	3710.2	3498.2	3182.4	3137.6	2854.5
10°	4472.0	4477.4	4466.5	4473.1	4397.7	4305.8	4121.1	3874.2	3479.7	3418.5	3050.2
12.5°	4674.1	4699.3	4721.2	4760.5	4747.4	4690.5	4524.5	4229.4	3794.3	3715.7	3263.3
15°	4769.2	4812.9	4862.1	4952.8	5026.1	5040.2	4913.4	4610.8	4114.6	4019.5	3478.5
17.5°	4803.2	4844.7	4922.3	5053.4	5210.7	5316.8	5259.9	4981.2	4431.5	4322.2	3704.8
20°	4974.6	4986.7	5033.7	5158.3	5328.8	5504.8	5547.3	5337.5	4745.1	4621.7	3938.7
22.5°	5341.9	5317.8	5330.9	5387.8	5510.2	5680.7	5777.9	5652.3	5067.6	4925.5	4174.7
25°	5948.4	5878.5	5808.6	5743.0	5805.3	5901.4	6011.8	5967.0	5405.2	5224.9	4412.9
27.5°	6714.5	6629.3	6475.1	6259.9	6184.4	6218.4	6267.6	6258.8	5717.9	5535.3	4658.8
30°	7468.6	7369.1	7185.6	6874.1	6675.2	6585.5	6548.4	6523.2	6057.6	5863.2	4906.9
32.5°	8070.7	7992.0	7811.7	7463.1	7174.6	7021.6	6898.1	6808.5	6412.9	6218.4	5169.2
35°	8597.5	8524.3	8317.8	7937.4	7623.7	7460.9	7299.2	7108.0	6782.2	6585.5	5451.2
37.5°	9078.3	9005.1	8722.0	8326.5	8010.6	7898.0	7753.8	7429.2	7152.8	6966.9	5749.5
40°	9382.1	9365.7	9101.3	8653.3	8325.4	8269.6	8221.5	7801.9	7563.7	7391.0	6077.3
42.5°	9459.7	9495.8	9286.0	8917.7	8605.2	8560.3	8672.9	8223.8	8024.8	7859.8	6448.9
45°	9272.9	9376.7	9239.0	8988.7	8804.0	8780.0	9072.9	8684.9	8535.2	8384.4	6897.0
47.5°	8799.6	8975.6	8918.8	8883.8	8857.6	8961.4	9424.8	9174.6	9113.3	8982.2	7408.5
50°	7844.5	8177.9	8277.3	8498.1	8751.6	9102.4	9745.0	9708.9	9788.8	9656.4	8031.4
52.5°	6193.3	6652.2	7229.2	7782.2	8425.9	9055.4	10096.9	10476.1	10812.7	10740.6	9021.5
55°	5112.4	5318.9	5762.7	6776.8	7794.2	8857.6	10255.3	11095.7	11829.1	11764.5	9772.3
57.5°	4281.8	4466.5	4739.7	5586.7	6839.1	8408.4	10353.7	11473.8	12525.2	12518.6	10513.2
60°	3391.1	3586.8	3866.5	4466.5	5723.3	7632.5	10331.9	11904.5	13413.7	13468.4	11417.1
62.5°	2385.7	2601.0	2911.4	3471.0	4583.4	6627.0	9885.9	12215.9	14459.6	14608.2	12504.5
65°	1568.2	1710.3	1944.2	2427.2	3415.2	5334.2	9034.7	12256.3	15578.7	15830.0	13525.2
67.5°	1099.4	1154.0	1291.7	1554.0	2251.3	4090.6	7678.4	11837.8	16325.1	16608.1	13967.8
70°	857.9	885.2	955.2	1060.1	1414.2	2750.7	5883.9	10749.3	16165.5	16460.6	13505.5
72.5°	741.0	767.2	793.5	806.6	948.6	1698.3	3985.6	8987.6	14662.8	14862.8	11742.7
75°	672.1	678.7	700.5	696.2	723.4	1101.6	2300.5	6548.4	11569.0	11500.1	8668.5
77.5°	565.0	573.8	609.8	604.3	642.6	753.0	1194.5	4226.1	7500.2	7032.5	4825.0
80°	478.7	483.1	522.3	515.8	558.4	545.3	609.8	2154.0	3181.3	2694.9	1391.2
82.5°	166.2	205.4	398.9	410.9	426.2	330.0	351.9	878.6	971.6	744.3	291.8
85°	80.9	86.3	203.3	288.5	287.4	166.2	171.6	313.6	306.0	240.5	97.3
87.5°	13.1	16.4	24.1	112.5	89.6	43.7	59.0	61.2	63.3	54.6	21.8
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°	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1	2484.1
2.5°	2511.4	2456.7	2342.0	2235.9	2152.9	2073.2	2028.4	1990.1	1968.2	1963.9	1963.9
5°	2579.1	2466.6	2257.9	2081.9	1967.2	1881.9	1837.1	1808.7	1794.5	1785.8	1784.6
7.5°	2676.4	2511.4	2214.1	2014.1	1893.9	1832.7	1809.7	1805.4	1804.3	1805.4	1808.7
10°	2810.9	2584.6	2209.8	1997.7	1897.2	1863.3	1862.2	1863.3	1867.7	1868.8	1869.9
12.5°	2956.2	2660.0	2227.2	2012.0	1938.7	1920.1	1916.9	1915.7	1919.0	1921.3	1922.3
15°	3114.7	2759.5	2256.7	2042.5	1984.6	1964.9	1961.6	1955.1	1954.1	1952.9	1951.8
17.5°	3277.4	2857.8	2289.5	2075.3	2014.1	1986.9	1974.8	1959.5	1947.5	1944.2	1947.5
20°	3442.5	2955.1	2312.5	2091.7	2016.3	1978.0	1954.1	1927.8	1907.0	1895.0	1899.4
22.5°	3618.5	3056.8	2326.6	2087.3	1996.6	1944.2	1900.5	1869.9	1838.1	1817.4	1818.6
25°	3790.0	3145.2	2325.6	2064.5	1958.4	1891.7	1836.0	1796.6	1753.0	1731.1	1731.1
27.5°	3955.1	3225.1	2298.3	2024.0	1903.7	1829.4	1762.8	1715.7	1673.2	1652.4	1651.3
30°	4125.5	3291.7	2255.6	1964.9	1839.3	1757.4	1684.1	1643.7	1605.4	1585.8	1584.6
32.5°	4295.0	3352.9	2195.5	1891.7	1764.9	1686.2	1614.2	1577.0	1554.0	1554.0	1555.1
35°	4474.1	3395.5	2115.8	1806.5	1686.2	1610.9	1554.0	1532.2	1530.0	1516.9	1513.6
37.5°	4663.2	3422.8	2018.5	1719.0	1608.6	1537.6	1520.2	1493.9	1472.1	1443.7	1439.3
40°	4862.1	3450.2	1901.6	1628.3	1526.7	1487.4	1479.7	1444.7	1382.4	1312.5	1302.7
42.5°	5103.7	3468.7	1780.2	1537.6	1440.4	1427.3	1438.2	1378.1	1278.7	1226.2	1227.2
45°	5383.4	3499.4	1668.8	1448.0	1351.9	1351.9	1397.8	1319.1	1237.1	1204.4	1209.8
47.5°	5746.3	3570.4	1565.0	1349.7	1269.9	1291.7	1308.1	1248.0	1202.1	1161.7	1160.6
50°	6270.8	3740.8	1457.9	1250.2	1207.7	1251.3	1228.4	1193.4	1139.8	1107.1	1103.8
52.5°	6922.1	3841.4	1362.8	1160.6	1154.0	1197.8	1165.0	1132.2	1091.7	1048.1	1039.4
55°	7365.9	3859.9	1283.0	1095.0	1118.0	1113.7	1101.6	1072.0	1050.2	992.3	993.4
57.5°	7862.0	3897.2	1217.4	1055.6	1095.0	1046.9	1042.6	1017.4	989.0	949.7	936.5
60°	8455.4	3955.1	1160.6	1040.4	1075.3	1003.3	981.3	971.6	943.1	923.4	929.0
62.5°	9102.4	4007.5	1102.7	1042.6	1052.5	960.6	927.8	924.6	907.0	900.5	900.5
65°	9543.9	3864.4	1030.5	1040.4	1016.4	916.9	875.4	874.3	860.1	857.9	856.8
67.5°	9389.8	3410.8	933.3	1009.8	979.2	873.2	827.3	822.9	804.3	805.4	805.4
70°	8618.3	2763.8	798.9	934.4	933.3	833.8	777.1	762.8	737.7	742.0	746.4
72.5°	7171.3	2048.1	618.6	808.7	860.1	797.8	719.1	696.2	664.4	668.8	667.7
75°	5179.0	1392.3	450.3	615.3	748.6	755.1	662.3	622.9	584.7	591.2	593.4
77.5°	2650.1	789.0	331.2	424.0	587.9	686.3	610.9	558.4	549.7	610.9	602.2
80°	864.5	395.6	229.5	297.2	385.8	561.7	535.5	475.4	473.2	487.4	418.6
82.5°	257.9	167.2	147.5	195.6	213.1	430.6	462.3	359.6	309.2	325.6	336.6
85°	88.6	80.9	84.2	97.3	101.7	252.5	323.5	238.2	225.1	248.0	244.8
87.5°	20.8	28.4	24.1	21.8	21.8	61.2	125.7	99.4	137.7	91.8	88.6
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)