

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: P965809

Luminaire Tested: **NAV-SB4A-835-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965809
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-SB4A-835-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17409.6 lumens
Efficiency: N/A
Efficacy: 152.7 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): 114
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

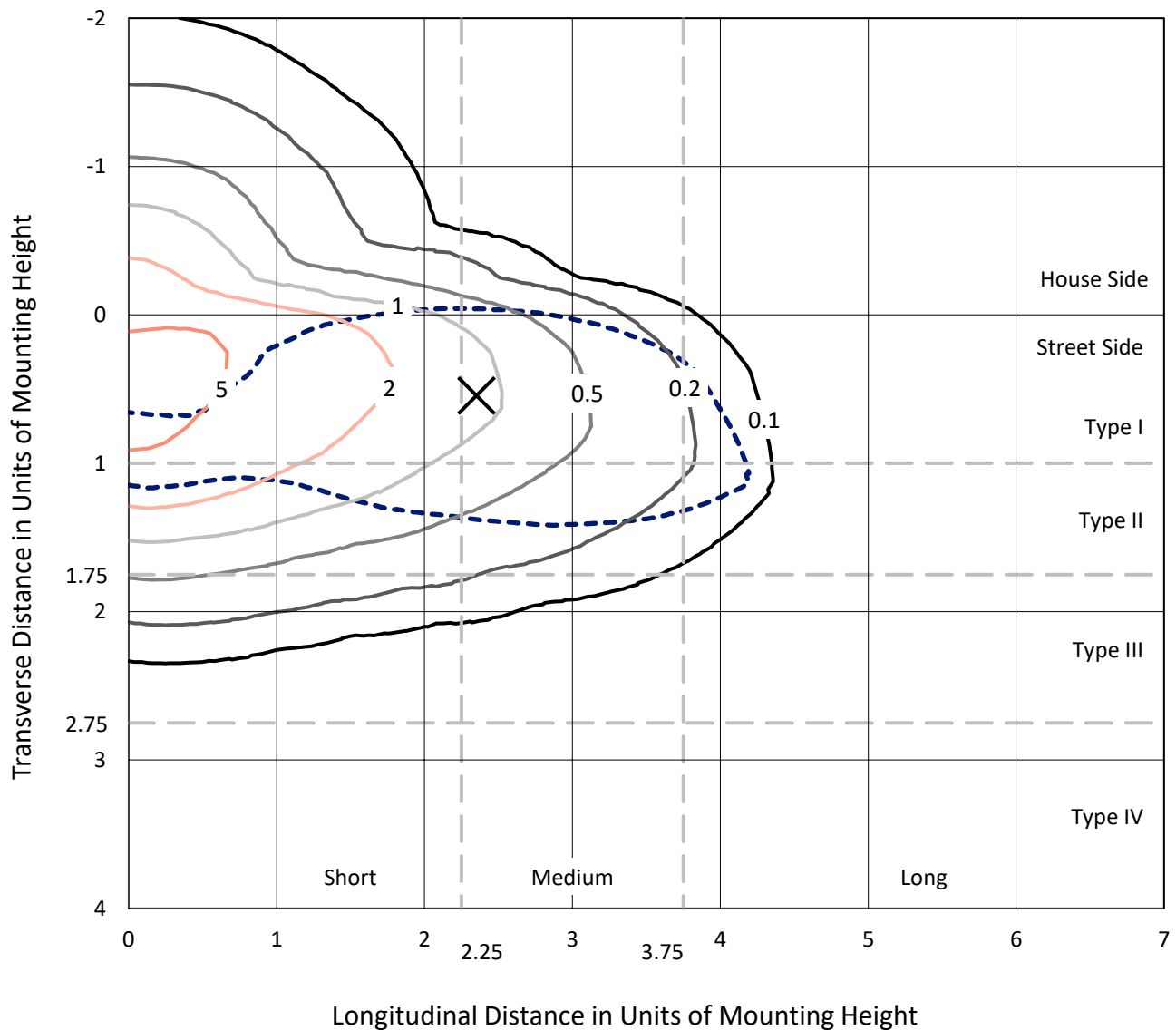


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Iso-Footcandle Lines of Horizontal Illumination

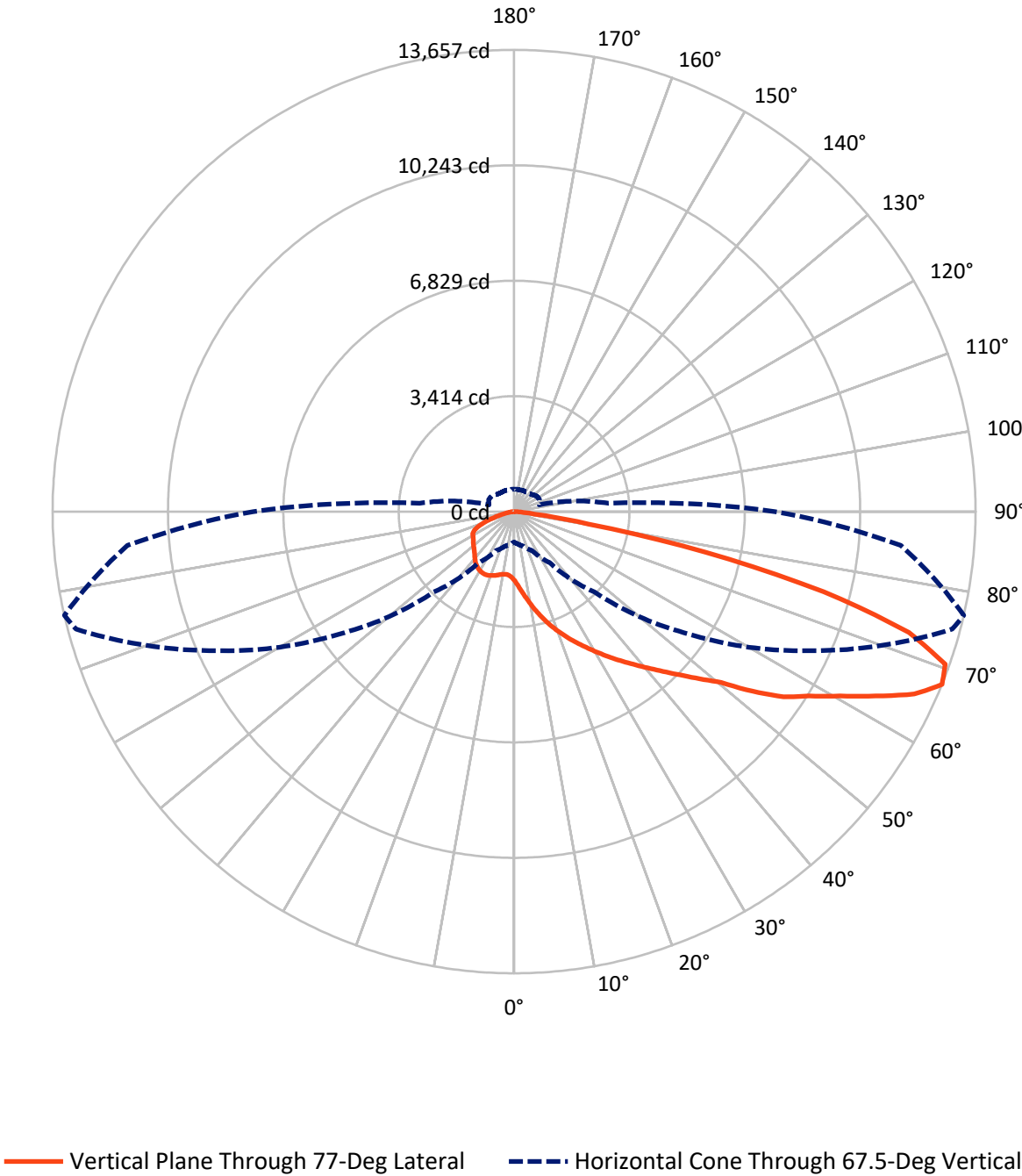
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 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	3293.2	0.0	3293.2
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	14116.4	0.0	14116.4
	% Fixture	81.1	0.0	81.1
Total	Lumens	17409.6	0.0	17409.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.0	1.3
10°-20°	786.6	4.5
20°-30°	1485.2	8.5
30°-40°	2392.6	13.7
40°-50°	3272.6	18.8
50°-60°	3691.5	21.2
60°-70°	3445.6	19.8
70°-80°	1888.8	10.8
80°-90°	227.8	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°	17409.6	100.0
0°-180°	17409.6	100.0

Coefficient of Utilization



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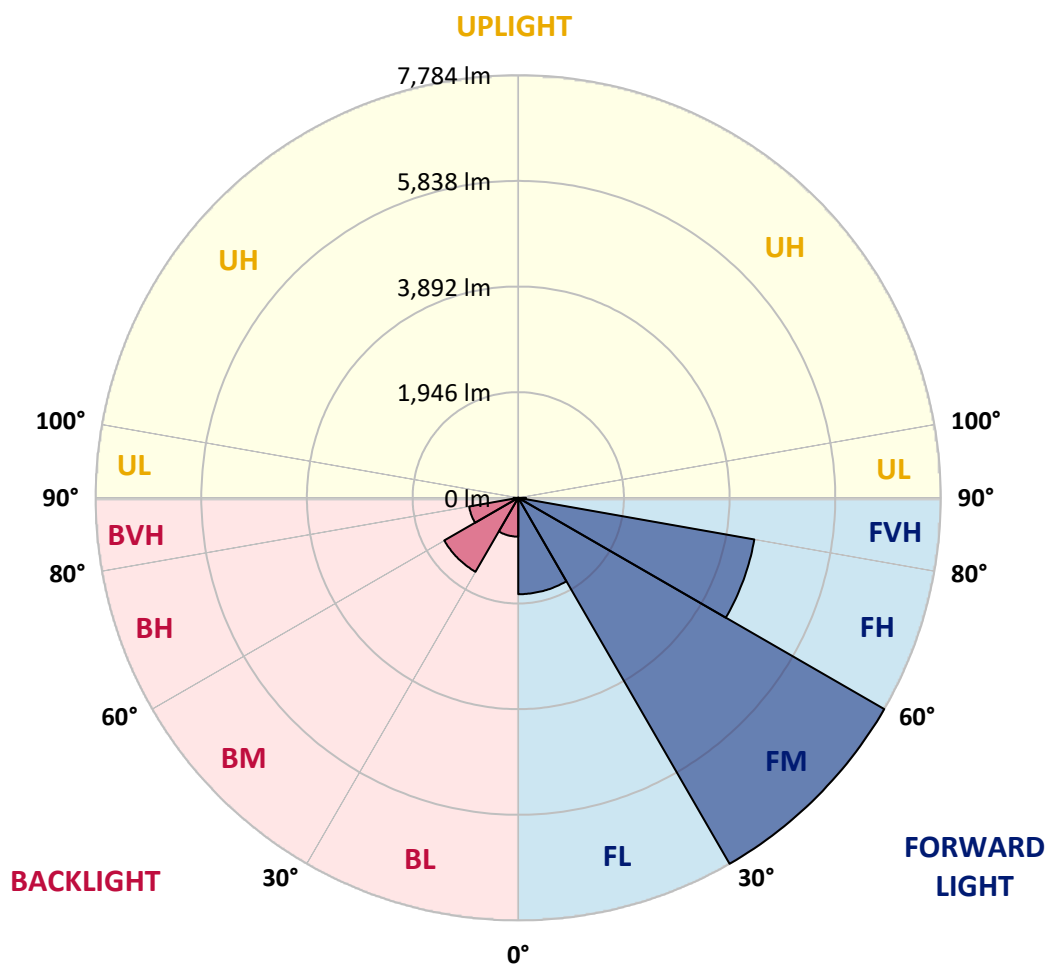
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1774.7	10.2			
FM	(30°-60°)	7783.7	44.7			
FH	(60°-80°)	4415.6	25.4			G2/5000
FVH	(80°-90°)	142.5	0.8			G2/225
BL	(0°-30°)	716.0	4.1	B2/1000		
BM	(30°-60°)	1573.1	9.0	B2/2500		
BH	(60°-80°)	918.8	5.3	B2/1000		G2/1000
BVH	(80°-90°)	85.3	0.5			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°	77°	85°
0°	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7
2.5°	2557.6	2575.6	2553.2	2553.2	2477.6	2438.1	2362.6	2305.1	2201.8	2183.8	2115.5
5°	3023.1	3045.6	3014.1	3000.7	2911.7	2829.9	2703.2	2578.3	2394.1	2375.2	2214.3
7.5°	3383.5	3412.2	3384.4	3370.0	3291.0	3199.3	3051.0	2876.7	2616.9	2580.1	2347.4
10°	3677.4	3681.9	3672.9	3678.3	3616.3	3540.8	3388.9	3185.8	2861.4	2811.1	2508.2
12.5°	3843.6	3864.4	3882.3	3914.7	3903.8	3857.1	3720.5	3477.8	3120.2	3055.5	2683.4
15°	3921.9	3957.7	3998.2	4072.8	4133.0	4144.7	4040.4	3791.5	3383.5	3305.3	2860.5
17.5°	3949.6	3983.9	4047.6	4155.5	4284.9	4372.0	4325.3	4096.2	3644.1	3554.3	3046.5
20°	4090.8	4100.6	4139.3	4241.8	4382.0	4526.6	4561.7	4389.2	3902.1	3800.5	3238.8
22.5°	4392.7	4373.0	4383.7	4430.5	4531.1	4671.3	4751.3	4648.0	4167.1	4050.3	3432.9
25°	4891.5	4834.0	4776.5	4722.6	4773.7	4852.9	4943.6	4906.8	4444.8	4296.6	3628.8
27.5°	5521.5	5451.4	5324.7	5147.7	5085.6	5113.4	5153.9	5146.7	4701.9	4551.8	3831.0
30°	6141.6	6059.8	5908.8	5652.7	5489.1	5415.4	5384.8	5364.2	4981.4	4821.4	4035.0
32.5°	6636.7	6572.0	6423.8	6137.1	5899.8	5774.0	5672.5	5598.8	5273.4	5113.4	4250.8
35°	7069.8	7009.7	6839.8	6527.1	6269.2	6135.2	6002.3	5845.0	5577.2	5415.4	4482.6
37.5°	7465.3	7405.1	7172.3	6847.0	6587.3	6494.7	6376.1	6109.2	5881.9	5729.0	4727.9
40°	7715.2	7701.6	7484.1	7115.8	6846.1	6800.3	6760.7	6415.7	6219.7	6077.7	4997.5
42.5°	7778.9	7808.6	7636.0	7333.2	7076.2	7039.3	7131.8	6762.5	6599.0	6463.2	5303.0
45°	7625.3	7710.7	7597.4	7391.6	7239.8	7220.0	7460.8	7141.8	7018.7	6894.7	5671.5
47.5°	7236.1	7380.8	7334.1	7305.4	7283.8	7369.1	7750.2	7544.4	7494.1	7386.3	6092.1
50°	6450.7	6724.8	6806.6	6988.1	7196.6	7485.1	8013.4	7983.8	8049.4	7940.7	6604.4
52.5°	5092.8	5470.2	5944.7	6399.5	6928.8	7446.4	8302.9	8614.7	8891.5	8832.2	7418.5
55°	4204.0	4373.9	4738.7	5572.7	6409.3	7283.8	8433.2	9124.2	9727.2	9674.3	8036.0
57.5°	3521.0	3672.9	3897.6	4594.0	5623.9	6914.4	8514.1	9435.2	10299.7	10294.3	8645.3
60°	2788.6	2949.4	3179.5	3672.9	4706.4	6276.4	8496.1	9789.3	11030.3	11075.3	9388.5
62.5°	1961.8	2138.9	2394.1	2854.2	3769.0	5449.6	8129.4	10045.4	11890.4	12012.6	10282.7
65°	1289.6	1406.4	1598.8	1996.0	2808.4	4386.4	7429.3	10078.6	12810.7	13017.3	11122.0
67.5°	904.0	949.0	1062.2	1277.9	1851.3	3363.7	6314.1	9734.4	13424.4	13657.2	11485.9
70°	705.5	728.0	785.5	871.8	1162.9	2262.0	4838.5	8839.4	13293.2	13535.8	11105.9
72.5°	609.3	630.9	652.4	663.2	780.0	1396.6	3277.4	7390.7	12057.5	12222.0	9656.3
75°	552.7	558.1	576.0	572.5	594.9	905.9	1891.7	5384.8	9513.3	9456.8	7128.3
77.5°	464.6	471.8	501.4	496.9	528.4	619.2	982.3	3475.2	6167.6	5782.9	3967.7
80°	393.6	397.2	429.6	424.1	459.2	448.4	501.4	1771.3	2616.0	2216.2	1144.0
82.5°	136.6	168.9	328.0	337.9	350.4	271.4	289.4	722.5	798.9	612.0	240.0
85°	66.5	71.0	167.2	237.3	236.4	136.6	141.1	257.9	251.6	197.7	79.9
87.5°	10.8	13.5	19.8	92.6	73.7	36.0	48.5	50.3	52.2	44.9	17.9
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°	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7	2042.7
2.5°	2065.2	2020.2	1925.9	1838.6	1770.4	1704.8	1668.0	1636.5	1618.5	1614.9	1614.9
5°	2120.8	2028.3	1856.7	1712.0	1617.7	1547.5	1510.6	1487.3	1475.6	1468.4	1467.5
7.5°	2200.9	2065.2	1820.7	1656.3	1557.4	1507.1	1488.2	1484.6	1483.7	1484.6	1487.3
10°	2311.4	2125.3	1817.1	1642.8	1560.0	1532.3	1531.4	1532.3	1535.9	1536.8	1537.6
12.5°	2430.9	2187.4	1831.5	1654.5	1594.3	1579.0	1576.2	1575.4	1578.1	1579.8	1580.8
15°	2561.3	2269.1	1855.8	1679.7	1632.0	1615.8	1613.1	1607.7	1606.8	1606.0	1605.0
17.5°	2695.1	2350.0	1882.7	1706.6	1656.3	1633.7	1623.9	1611.3	1601.5	1598.8	1601.5
20°	2830.8	2430.1	1901.6	1720.1	1658.0	1626.6	1606.8	1585.3	1568.1	1558.3	1561.9
22.5°	2975.5	2513.6	1913.3	1716.5	1641.8	1598.8	1562.8	1537.6	1511.6	1494.4	1495.4
25°	3116.6	2586.4	1912.3	1697.6	1610.4	1555.6	1509.8	1477.4	1441.5	1423.5	1423.5
27.5°	3252.3	2652.0	1889.9	1664.4	1565.5	1504.4	1449.6	1410.9	1375.9	1358.8	1357.9
30°	3392.5	2706.8	1854.8	1615.8	1512.5	1445.0	1384.9	1351.6	1320.2	1304.0	1303.1
32.5°	3531.8	2757.1	1805.4	1555.6	1451.4	1386.6	1327.4	1296.8	1277.9	1277.9	1278.8
35°	3679.1	2792.2	1739.8	1485.5	1386.6	1324.6	1277.9	1259.9	1258.2	1247.3	1244.7
37.5°	3834.6	2814.6	1659.9	1413.6	1322.9	1264.4	1250.1	1228.5	1210.5	1187.2	1183.6
40°	3998.2	2837.1	1563.7	1339.1	1255.4	1223.1	1216.8	1188.1	1136.8	1079.3	1071.2
42.5°	4196.9	2852.4	1463.9	1264.4	1184.5	1173.6	1182.6	1133.2	1051.4	1008.3	1009.2
45°	4426.9	2877.6	1372.3	1190.7	1111.6	1111.6	1149.4	1084.7	1017.3	990.4	994.9
47.5°	4725.2	2936.0	1286.9	1109.9	1044.3	1062.2	1075.7	1026.3	988.5	955.3	954.4
50°	5156.6	3076.1	1198.8	1028.1	993.0	1029.0	1010.1	981.3	937.4	910.4	907.6
52.5°	5692.2	3158.8	1120.6	954.4	949.0	984.9	958.0	931.0	897.8	861.8	854.6
55°	6057.0	3174.1	1055.0	900.5	919.3	915.7	905.9	881.6	863.7	816.0	816.9
57.5°	6465.1	3204.7	1001.1	868.1	900.5	860.9	857.3	836.7	813.3	780.9	770.2
60°	6953.1	3252.3	954.4	855.6	884.3	825.0	807.0	798.9	775.5	759.4	763.8
62.5°	7485.1	3295.5	906.7	857.3	865.4	790.0	763.0	760.2	745.9	740.5	740.5
65°	7848.1	3177.7	847.5	855.6	835.8	754.0	719.9	718.9	707.2	705.5	704.6
67.5°	7721.4	2804.8	767.5	830.4	805.2	718.0	680.3	676.7	661.4	662.4	662.4
70°	7087.0	2272.7	656.9	768.3	767.5	685.7	639.0	627.3	606.6	610.2	613.8
72.5°	5897.1	1684.1	508.6	665.0	707.2	656.0	591.3	572.5	546.4	550.0	549.1
75°	4258.9	1144.9	370.2	505.9	615.6	620.9	544.6	512.3	480.8	486.2	488.0
77.5°	2179.3	648.8	272.3	348.7	483.5	564.4	502.4	459.2	452.0	502.4	495.2
80°	710.8	325.3	188.7	244.5	317.2	462.0	440.3	390.9	389.1	400.8	344.2
82.5°	212.1	137.5	121.4	160.8	175.3	354.0	380.2	295.7	254.3	267.8	276.8
85°	72.8	66.5	69.2	79.9	83.5	207.6	266.0	195.9	185.1	204.0	201.3
87.5°	17.1	23.4	19.8	17.9	17.9	50.3	103.3	81.8	113.3	75.4	72.8
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)