

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: P967189

Luminaire Tested: **NAV-SB4D-735-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967189
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-735-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42515 lumens
Efficiency: N/A
Efficacy: 144.8 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

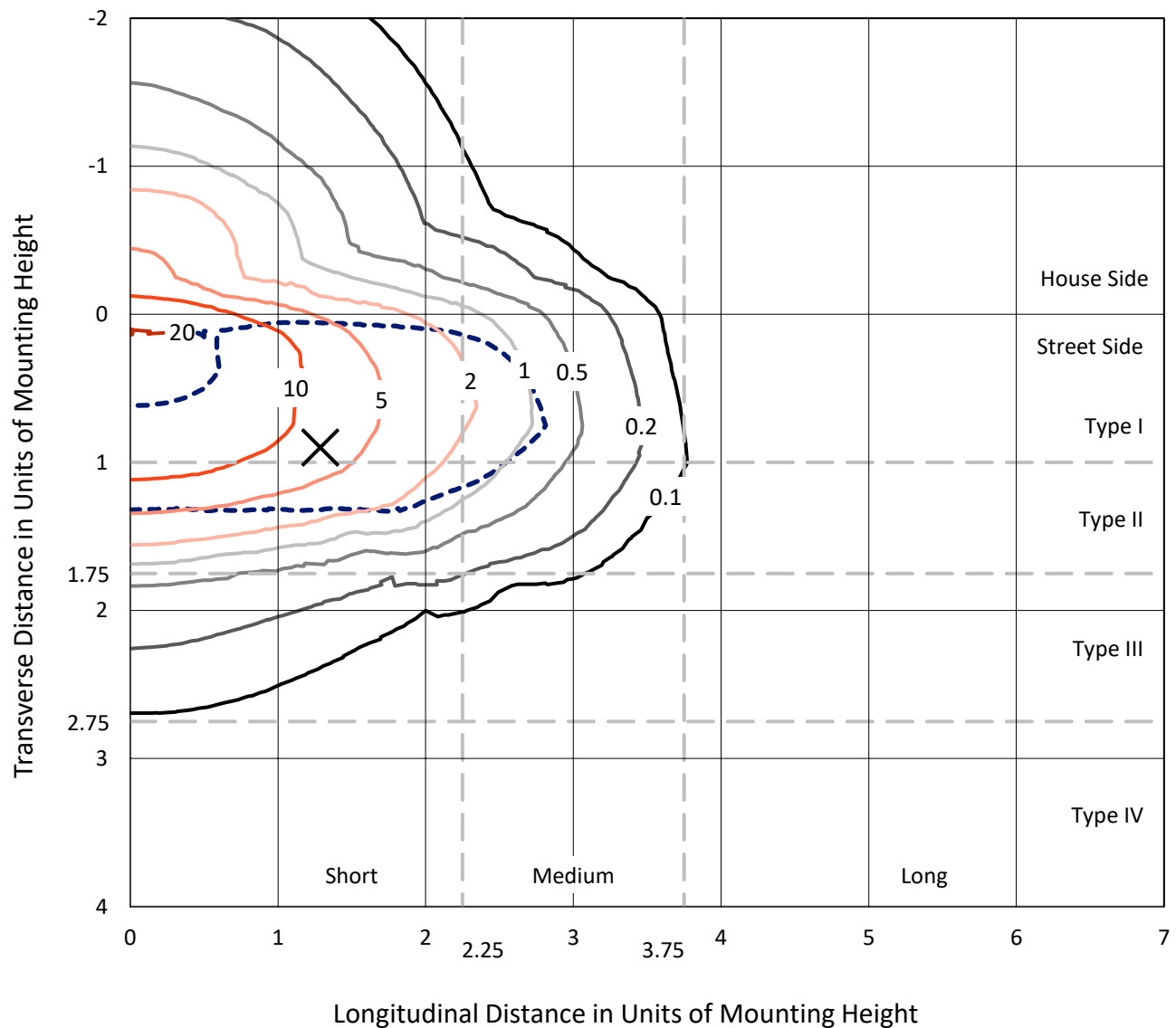


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Iso-Footcandle Lines of Horizontal Illumination

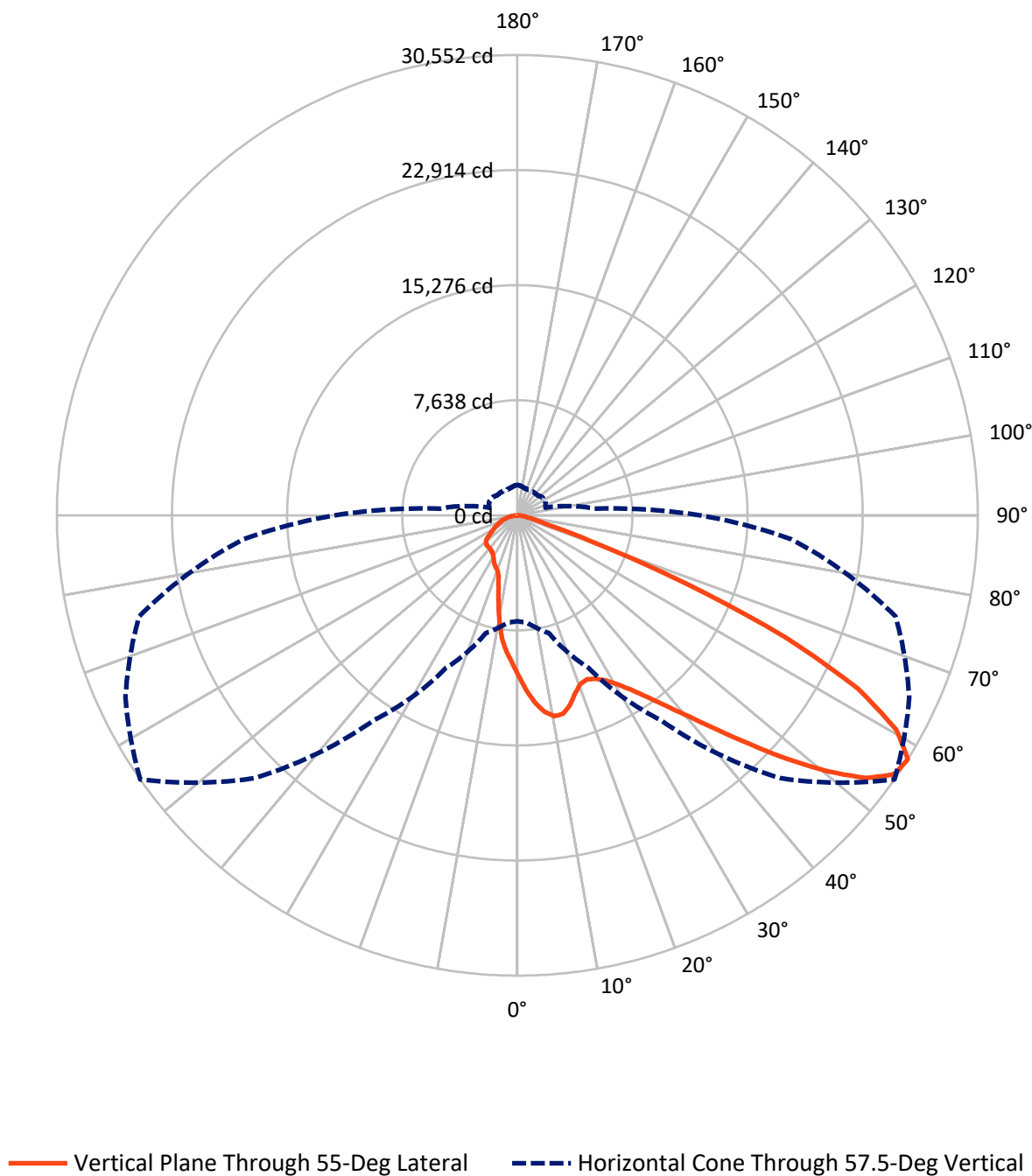
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 20.6 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	7692.9	0.0	7692.9
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	34822.1	0.0	34822.1
	% Fixture	81.9	0.0	81.9
Total	Lumens	42515.0	0.0	42515.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	988.5	2.3
10°-20°	2495.1	5.9
20°-30°	3981.4	9.4
30°-40°	6303.6	14.8
40°-50°	9648.3	22.7
50°-60°	10334.2	24.3
60°-70°	6501.3	15.3
70°-80°	1922.6	4.5
80°-90°	339.9	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°	42515.0	100.0
0°-180°	42515.0	100.0

Coefficient of Utilization



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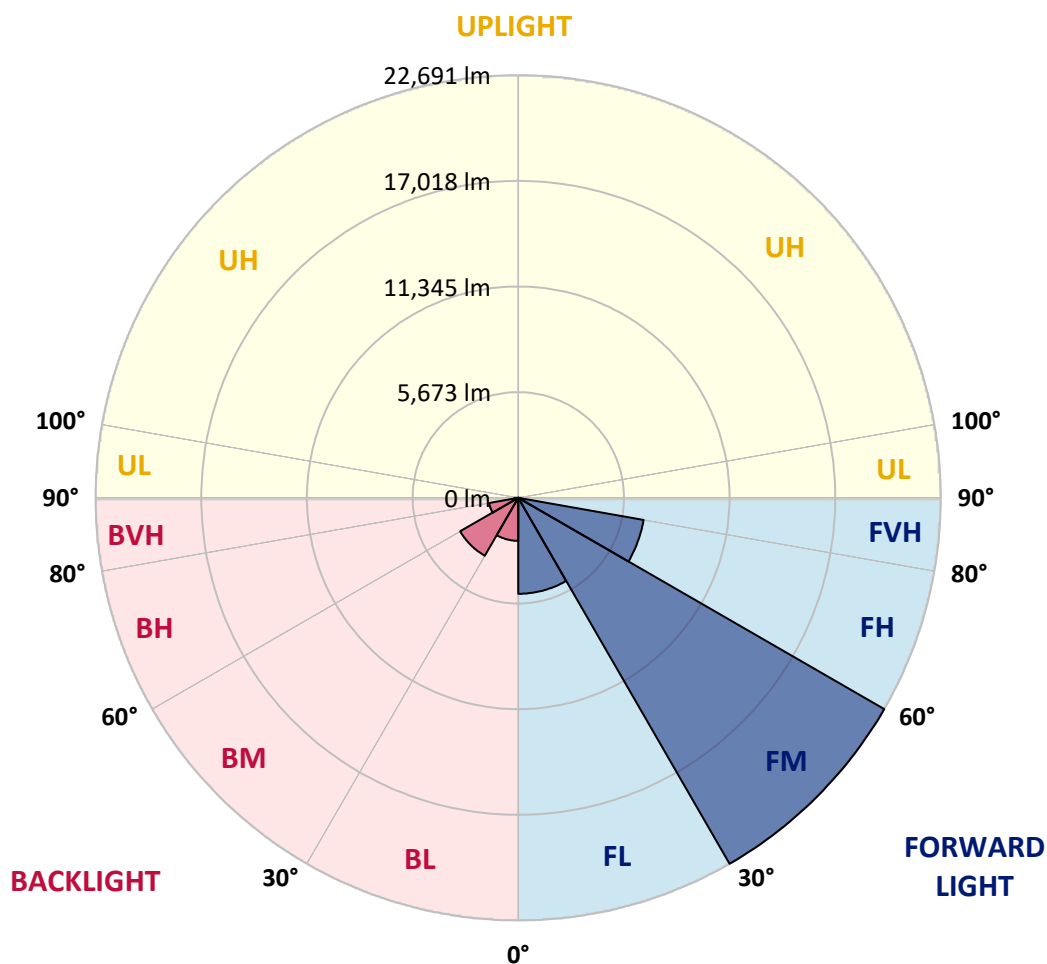
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	5152.8	12.1			
FM	(30°-60°)	22690.5	53.4			
FH	(60°-80°)	6835.1	16.1			G3/7500
FVH	(80°-90°)	143.6	0.3			G2/225
BL	(0°-30°)	2312.2	5.4	B3/2500		
BM	(30°-60°)	3595.6	8.5	B3/5000		
BH	(60°-80°)	1588.8	3.7	B3/2500		G3/2500
BVH	(80°-90°)	196.3	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°	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8
2.5°	12222.1	12213.3	12261.7	12096.8	11984.7	11833.1	11633.1	11378.1	11103.4	10813.3	10688.0
5°	13323.3	13246.3	13296.8	13173.8	13050.7	12822.1	12525.4	12110.1	11602.3	11024.3	10716.6
7.5°	13149.6	13096.8	13226.5	13336.4	13428.7	13400.1	13182.5	12747.4	12092.4	11252.9	10806.7
10°	11749.6	11690.2	11872.7	12252.8	12811.2	13296.8	13560.5	13290.3	12593.6	11503.5	10894.6
12.5°	10514.4	10485.9	10606.7	10914.4	11534.2	12466.0	13512.3	13765.0	13114.5	11800.1	11013.3
15°	9986.9	9951.7	10028.7	10184.7	10580.4	11448.4	13072.6	14090.3	13626.6	12143.0	11202.3
17.5°	9870.4	9830.9	9863.9	9945.2	10200.1	10861.6	12409.0	14250.7	14160.6	12525.4	11360.6
20°	10085.8	10052.9	10057.3	10052.9	10230.8	10756.1	11947.4	14189.2	14626.5	12877.1	11514.4
22.5°	10606.7	10551.8	10554.0	10437.5	10534.2	10940.7	11826.6	14024.4	15042.0	13184.8	11630.9
25°	11455.1	11356.2	11376.0	11079.2	11052.9	11353.9	12015.6	13896.8	15455.2	13430.9	11652.9
27.5°	12615.5	12503.5	12444.1	12002.3	11791.3	11940.8	12400.1	13940.8	15846.3	13644.1	11598.0
30°	14066.1	13929.9	13808.9	13182.5	12800.1	12745.2	12997.9	14230.9	16307.9	13868.2	11503.5
32.5°	15844.1	15685.9	15466.1	14635.4	14096.8	13808.9	13771.6	14747.4	16848.5	14154.0	11455.1
35°	17960.7	17754.0	17441.9	16367.2	15685.9	15096.9	14791.4	15492.5	17589.2	14584.8	11510.0
37.5°	20140.8	19908.0	19622.2	18343.1	17505.7	16637.6	16035.3	16503.5	18576.1	15169.4	11655.1
40°	22151.9	21890.3	21624.4	20486.0	19587.0	18540.9	17558.5	17782.6	19782.6	15868.3	11901.3
42.5°	23338.7	23145.3	23044.3	22428.8	21734.3	20672.7	19453.0	19299.1	21138.7	16672.8	12182.5
45°	23285.9	23206.8	23518.9	23773.8	23609.0	23020.1	21672.8	20976.0	22499.2	17369.4	12441.9
47.5°	22042.0	22094.8	22791.5	24224.4	24855.2	25162.9	24200.2	22622.3	23681.6	17890.4	12558.4
50°	18657.4	18701.3	20314.5	23404.6	25176.2	26910.1	26708.0	24228.8	24598.1	18209.0	12532.0
52.5°	15978.2	16006.8	16699.1	20973.9	24116.7	27789.3	28967.3	25743.2	25268.4	18296.9	12384.8
55°	12035.3	12134.2	12910.1	16455.1	21360.7	27092.6	30343.2	27303.6	25692.5	18305.7	12230.9
57.5°	7030.9	7138.5	8096.8	11169.3	16602.3	24664.1	30552.0	28688.2	25980.5	18235.4	12138.6
60°	3444.0	3490.1	3907.7	5870.4	10237.5	19984.8	28872.8	29358.6	26141.0	18198.1	12134.2
62.5°	2320.9	2314.3	2331.9	2896.8	5044.0	12839.7	25373.9	28184.9	26055.2	18055.2	12090.3
65°	1995.7	1971.5	1905.5	2033.0	2613.2	5872.6	19604.7	24681.6	25402.5	17696.9	11789.1
67.5°	1725.3	1727.5	1729.7	1690.1	1865.9	2709.9	11980.4	19442.0	23059.6	16000.1	10628.7
70°	1428.5	1448.3	1457.1	1457.1	1520.9	1778.1	5114.3	13325.4	18189.2	12545.2	8560.5
72.5°	1301.1	1259.3	1263.7	1241.8	1241.8	1353.8	2059.3	7553.9	11459.5	7057.2	5224.2
75°	1061.6	1087.9	1092.3	1077.0	1026.4	1033.0	1222.0	3169.3	4903.4	2927.5	2582.5
77.5°	916.5	916.5	925.3	914.3	874.7	773.7	815.4	1228.6	1668.2	1200.0	1290.2
80°	736.3	734.1	771.4	793.5	731.8	571.4	520.9	679.2	740.7	527.5	670.3
82.5°	358.2	380.3	529.7	604.4	556.1	413.2	318.7	422.0	395.6	233.0	301.1
85°	208.8	197.8	237.4	336.3	318.7	228.6	153.9	219.8	206.6	118.7	120.8
87.5°	65.9	61.5	48.4	114.3	92.4	63.8	41.7	63.8	57.1	26.3	26.3
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°	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8	10652.8
2.5°	10532.0	10272.7	10015.5	9780.3	9637.5	9545.2	9452.9	9349.5	9310.0	9250.6
5°	10426.5	9925.4	9479.2	9094.6	8745.2	8470.4	8193.5	7969.3	7868.2	7936.4
7.5°	10364.9	9639.7	8951.7	8246.2	7567.2	7024.2	6551.7	6219.8	6070.4	6107.8
10°	10310.0	9316.6	8268.3	7153.9	6178.1	5505.6	5022.0	4769.3	4674.8	4694.6
12.5°	10259.4	8954.0	7444.1	5978.1	4940.7	4496.8	4358.3	4360.5	4378.1	4391.3
15°	10250.6	8516.6	6523.1	4949.5	4272.6	4244.0	4393.5	4488.0	4538.5	4553.9
17.5°	10237.5	7993.5	5584.7	4248.4	4109.9	4303.4	4441.8	4503.3	4542.9	4545.1
20°	10184.7	7329.8	4718.7	3914.4	4074.8	4241.8	4327.5	4375.8	4408.8	4419.8
22.5°	10022.0	6591.3	4044.0	3764.9	3934.2	4068.2	4169.3	4224.2	4244.0	4257.2
25°	9729.8	5764.9	3578.1	3622.0	3738.5	3907.7	3989.1	4000.1	3993.5	4013.2
27.5°	9347.4	4879.2	3288.0	3428.6	3578.1	3723.1	3767.1	3760.5	3747.3	3769.2
30°	8885.8	4083.6	3103.3	3211.0	3415.4	3547.3	3586.9	3571.5	3545.1	3569.3
32.5°	8397.9	3433.0	2951.7	3059.4	3281.3	3411.0	3450.6	3435.2	3415.4	3435.2
35°	7942.9	2978.0	2811.1	2958.3	3175.9	3303.4	3353.9	3356.1	3356.1	3380.2
37.5°	7525.3	2712.1	2694.5	2894.5	3103.3	3217.6	3290.1	3294.6	3200.0	3206.6
40°	7138.5	2600.0	2641.8	2852.8	3033.0	3142.9	3147.3	2901.2	2727.5	2723.1
42.5°	6822.1	2578.1	2657.2	2848.4	2982.4	2986.8	2677.0	2485.7	2437.3	2439.6
45°	6525.4	2571.4	2692.4	2848.4	2907.7	2580.2	2371.4	2320.9	2325.3	2342.8
47.5°	6193.5	2545.1	2698.9	2808.8	2692.4	2294.6	2233.0	2211.0	2202.2	2206.6
50°	5830.8	2450.6	2615.4	2729.7	2323.1	2171.5	2094.5	2087.9	2098.9	2105.6
52.5°	5448.4	2296.7	2472.5	2586.8	2153.8	2063.7	1978.0	1993.4	2041.8	2057.2
55°	5197.9	2116.5	2283.5	2301.1	2035.1	1962.7	1890.1	1925.3	2015.5	2044.0
57.5°	5132.0	1925.3	2068.1	2048.4	1883.5	1874.7	1830.8	1861.6	1975.9	2017.6
60°	5112.2	1753.9	1857.2	1841.8	1736.2	1778.1	1767.1	1782.5	1822.0	1835.2
62.5°	4958.3	1617.6	1668.2	1646.2	1604.4	1676.9	1703.3	1670.3	1701.1	1716.5
65°	4567.1	1507.7	1483.5	1468.1	1485.7	1551.6	1604.4	1538.5	1567.0	1611.0
67.5°	3920.9	1358.2	1292.3	1309.9	1364.9	1400.0	1468.1	1393.4	1417.6	1492.3
70°	3171.5	1169.2	1109.9	1160.4	1213.2	1285.8	1296.7	1246.2	1303.3	1386.8
72.5°	2243.9	978.1	936.2	1039.6	1057.2	1151.7	1127.5	1103.3	1182.4	1211.0
75°	1556.1	789.0	764.9	844.0	907.7	989.0	971.4	1000.0	1167.1	1180.2
77.5°	984.6	613.2	597.8	648.3	736.3	826.4	855.0	1180.2	1993.4	2072.5
80°	571.4	457.2	439.5	479.1	556.1	639.6	824.2	1448.3	1314.3	1298.9
82.5°	318.7	314.3	292.3	303.3	371.5	461.6	1164.8	1019.8	828.6	855.0
85°	149.4	184.6	158.3	151.7	208.8	540.7	778.1	582.4	386.8	378.0
87.5°	39.6	35.2	35.2	39.6	87.9	466.0	309.9	248.4	147.3	142.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)