

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: P963128

Luminaire Tested: **NAV-SB2D-830-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963128
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-SB2D-830-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 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: 19061.9 lumens
Efficiency: N/A
Efficacy: 129.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

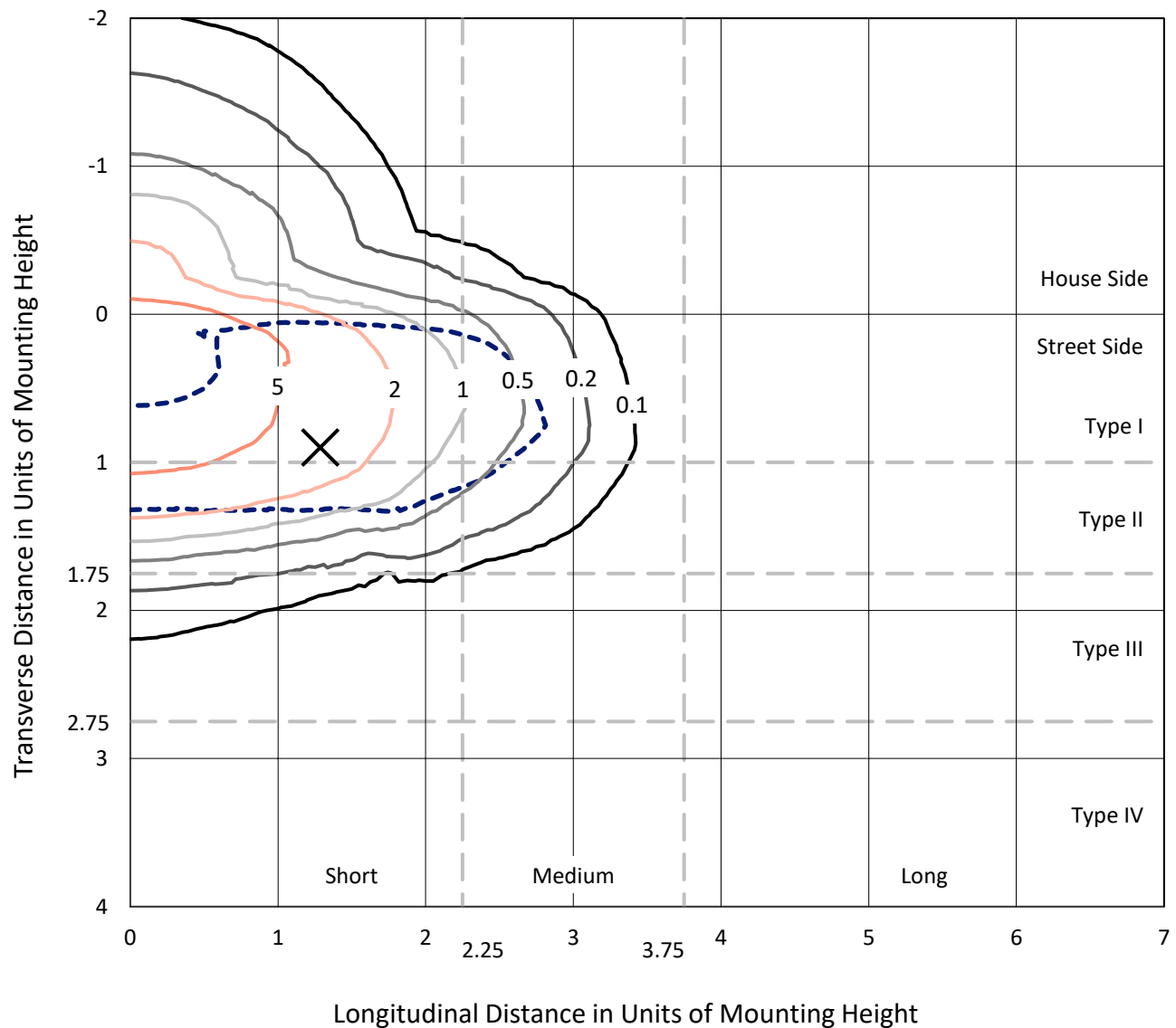
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

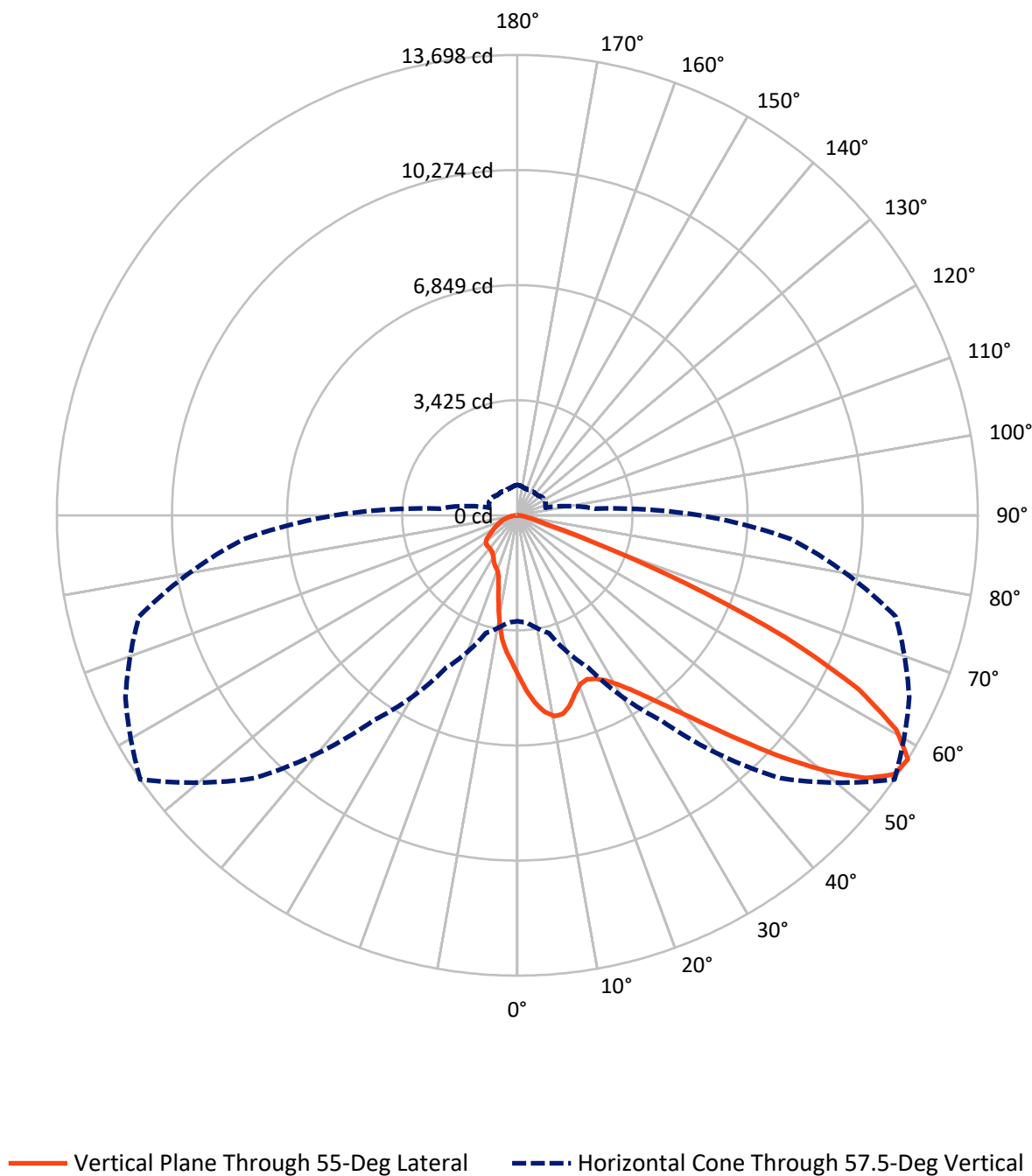
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.2 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	3449.2	0.0	3449.2
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	15612.7	0.0	15612.7
	% Fixture	81.9	0.0	81.9
Total	Lumens	19061.9	0.0	19061.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	443.2	2.3
10°-20°	1118.7	5.9
20°-30°	1785.1	9.4
30°-40°	2826.3	14.8
40°-50°	4325.9	22.7
50°-60°	4633.4	24.3
60°-70°	2914.9	15.3
70°-80°	862.0	4.5
80°-90°	152.4	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°	19061.9	100.0
0°-180°	19061.9	100.0

Coefficient of Utilization



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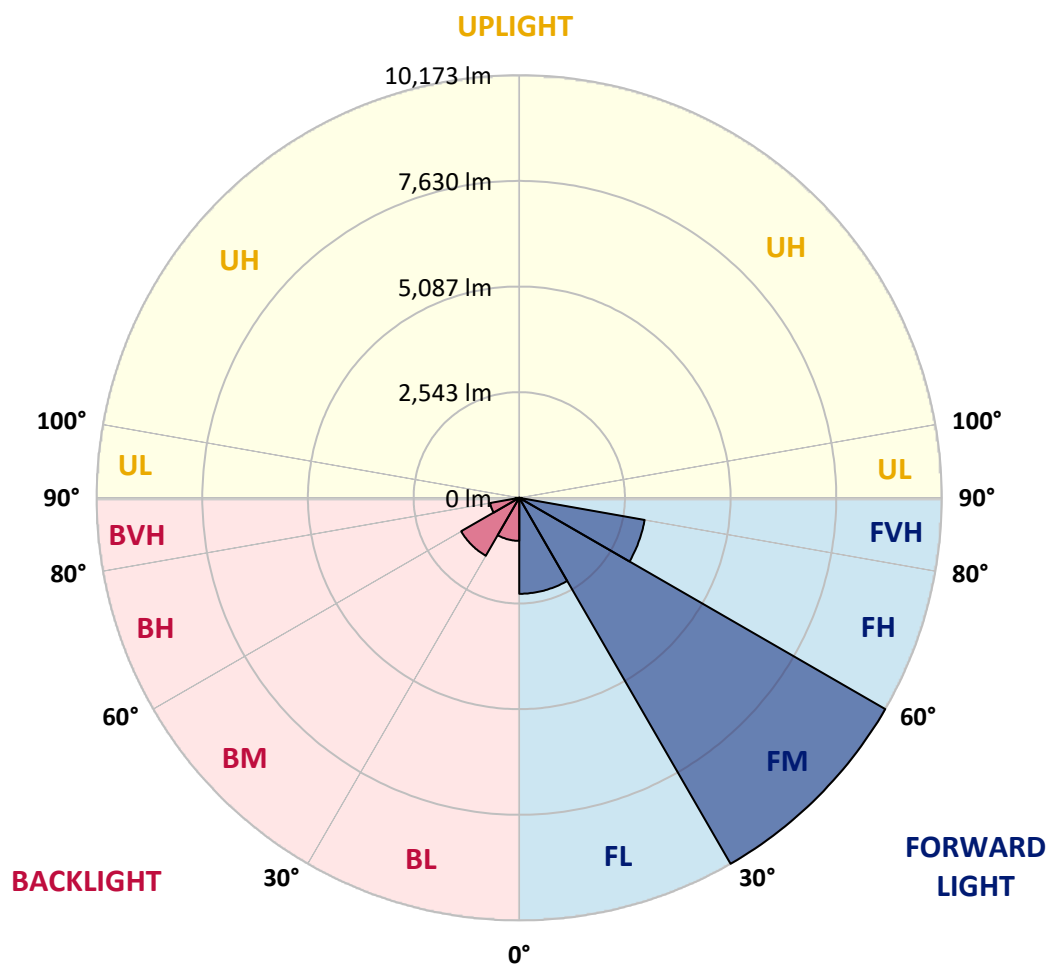
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2310.3	12.1			
FM	(30°-60°)	10173.5	53.4			
FH	(60°-80°)	3064.6	16.1			G2/5000
FVH	(80°-90°)	64.4	0.3			G1/100
BL	(0°-30°)	1036.7	5.4	B3/2500		
BM	(30°-60°)	1612.1	8.5	B2/2500		
BH	(60°-80°)	712.3	3.7	B2/1000		G2/1000
BVH	(80°-90°)	88.0	0.5			G1/100
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°	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3
2.5°	5479.9	5476.0	5497.6	5423.7	5373.5	5305.5	5215.8	5101.5	4978.3	4848.2	4792.1
5°	5973.6	5939.1	5961.7	5906.6	5851.4	5748.9	5615.9	5429.6	5202.0	4942.9	4804.9
7.5°	5895.7	5872.1	5930.2	5979.4	6020.8	6008.0	5910.6	5715.4	5421.7	5045.4	4845.3
10°	5268.0	5241.4	5323.2	5493.7	5744.0	5961.7	6080.0	5958.8	5646.4	5157.7	4884.7
12.5°	4714.2	4701.4	4755.6	4893.6	5171.4	5589.2	6058.4	6171.6	5879.9	5290.6	4937.9
15°	4477.7	4461.9	4496.5	4566.4	4743.8	5133.0	5861.3	6317.5	6109.6	5444.4	5022.6
17.5°	4425.5	4407.7	4422.6	4459.0	4573.3	4869.9	5563.6	6389.4	6349.1	5615.9	5093.6
20°	4522.1	4507.2	4509.3	4507.2	4587.1	4822.6	5356.8	6361.9	6558.0	5773.5	5162.6
22.5°	4755.6	4731.0	4731.9	4679.7	4723.1	4905.3	5302.5	6288.0	6744.2	5911.5	5214.8
25°	5136.0	5091.6	5100.5	4967.5	4955.7	5090.7	5387.3	6230.8	6929.4	6021.9	5224.6
27.5°	5656.3	5606.0	5579.4	5381.4	5286.7	5353.8	5559.7	6250.4	7104.8	6117.4	5200.0
30°	6306.6	6245.5	6191.3	5910.6	5739.1	5714.4	5827.7	6380.5	7311.7	6218.0	5157.7
32.5°	7103.9	7032.9	6934.3	6561.8	6320.5	6191.3	6174.6	6612.2	7554.1	6346.1	5136.0
35°	8052.8	7960.2	7820.2	7338.4	7032.9	6768.8	6631.9	6946.2	7886.2	6539.2	5160.6
37.5°	9030.4	8925.9	8797.8	8224.3	7848.8	7459.5	7189.6	7399.5	8328.7	6801.3	5225.7
40°	9931.9	9814.7	9695.5	9185.0	8782.0	8313.0	7872.5	7973.0	8869.7	7114.7	5336.0
42.5°	10464.1	10377.4	10332.1	10056.2	9744.8	9268.8	8721.9	8652.9	9477.7	7475.3	5462.1
45°	10440.4	10405.0	10544.9	10659.2	10585.3	10321.2	9717.2	9404.8	10087.6	7787.7	5578.5
47.5°	9882.7	9906.3	10218.7	10861.2	11144.0	11282.0	10850.3	10142.9	10617.9	8021.2	5630.6
50°	8365.1	8384.9	9108.2	10493.6	11287.9	12065.4	11974.8	10863.2	11028.8	8164.1	5618.8
52.5°	7163.9	7176.7	7487.2	9403.8	10812.9	12459.6	12987.8	11542.1	11329.3	8203.6	5552.8
55°	5396.1	5440.5	5788.3	7377.7	9577.2	12147.2	13604.6	12241.8	11519.5	8207.5	5483.9
57.5°	3152.4	3200.7	3630.2	5007.8	7443.9	11058.3	13698.2	12862.6	11648.6	8176.0	5442.4
60°	1544.2	1564.9	1752.0	2632.0	4590.1	8960.3	12945.3	13163.2	11720.5	8159.2	5440.5
62.5°	1040.6	1037.6	1045.5	1298.8	2261.6	5756.8	11376.6	12636.9	11682.0	8095.1	5420.7
65°	894.7	884.0	854.3	911.5	1171.7	2633.0	8789.9	11066.2	11389.4	7934.5	5285.7
67.5°	773.6	774.5	775.5	757.8	836.6	1215.0	5371.5	8717.0	10339.0	7173.8	4765.4
70°	640.5	649.3	653.3	653.3	681.9	797.2	2293.0	5974.5	8155.3	5624.8	3838.2
72.5°	583.3	564.7	566.6	556.8	556.8	607.0	923.3	3386.9	5137.9	3164.2	2342.3
75°	475.9	487.8	489.7	482.9	460.2	463.1	547.9	1421.0	2198.4	1312.6	1157.8
77.5°	410.9	410.9	414.8	409.9	392.2	346.9	365.6	550.8	747.9	538.0	578.4
80°	330.2	329.1	345.8	355.8	328.1	256.2	233.5	304.5	332.1	236.5	300.5
82.5°	160.6	170.5	237.5	271.0	249.3	185.2	142.9	189.2	177.3	104.4	135.0
85°	93.6	88.7	106.4	150.8	142.9	102.5	69.0	98.5	92.7	53.2	54.2
87.5°	29.5	27.6	21.7	51.2	41.4	28.6	18.8	28.6	25.6	11.8	11.8
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3	4776.3
2.5°	4722.1	4605.8	4490.5	4385.1	4321.0	4279.7	4238.3	4191.9	4174.2	4147.6
5°	4674.8	4450.1	4250.1	4077.7	3920.9	3797.8	3673.6	3573.2	3527.7	3558.3
7.5°	4647.2	4322.0	4013.6	3697.3	3392.7	3149.4	2937.5	2788.7	2721.7	2738.5
10°	4622.5	4177.2	3707.1	3207.5	2770.0	2468.5	2251.7	2138.4	2096.0	2104.8
12.5°	4599.9	4014.6	3337.6	2680.4	2215.2	2016.2	1954.1	1955.1	1963.0	1968.8
15°	4596.0	3818.4	2924.7	2219.1	1915.6	1902.8	1969.8	2012.2	2034.8	2041.8
17.5°	4590.1	3583.9	2504.0	1904.8	1842.7	1929.5	1991.5	2019.1	2036.9	2037.8
20°	4566.4	3286.4	2115.7	1755.0	1827.0	1901.9	1940.3	1962.0	1976.7	1981.6
22.5°	4493.5	2955.3	1813.1	1688.0	1763.9	1824.0	1869.3	1894.0	1902.8	1908.8
25°	4362.4	2584.7	1604.2	1624.0	1676.2	1752.0	1788.5	1793.4	1790.5	1799.4
27.5°	4190.9	2187.7	1474.2	1537.3	1604.2	1669.3	1689.0	1686.0	1680.2	1690.0
30°	3984.1	1830.9	1391.4	1439.7	1531.4	1590.5	1608.2	1601.3	1589.5	1600.3
32.5°	3765.2	1539.2	1323.4	1371.7	1471.2	1529.4	1547.1	1540.2	1531.4	1540.2
35°	3561.3	1335.3	1260.3	1326.4	1423.9	1481.1	1503.8	1504.7	1504.7	1515.6
37.5°	3374.1	1216.0	1208.2	1297.8	1391.4	1442.7	1475.2	1477.1	1434.8	1437.8
40°	3200.7	1165.7	1184.5	1279.1	1359.9	1409.2	1411.1	1300.7	1222.9	1220.9
42.5°	3058.7	1155.9	1191.4	1277.0	1337.2	1339.2	1200.3	1114.5	1092.9	1093.8
45°	2925.7	1152.9	1207.1	1277.0	1303.7	1156.9	1063.2	1040.6	1042.5	1050.4
47.5°	2776.9	1141.1	1210.1	1259.3	1207.1	1028.8	1001.2	991.3	987.4	989.3
50°	2614.3	1098.7	1172.6	1223.8	1041.6	973.5	939.1	936.1	941.1	944.0
52.5°	2442.9	1029.7	1108.6	1159.8	965.8	925.3	886.8	893.8	915.4	922.4
55°	2330.5	948.9	1023.9	1031.8	912.5	880.0	847.5	863.3	903.6	916.5
57.5°	2300.9	863.3	927.3	918.4	844.5	840.6	820.8	834.7	885.9	904.6
60°	2292.1	786.4	832.7	825.7	778.5	797.2	792.2	799.2	816.9	822.9
62.5°	2223.1	725.3	747.9	738.1	719.3	751.8	763.7	748.9	762.7	769.6
65°	2047.6	676.0	665.1	658.3	666.1	695.7	719.3	689.8	702.6	722.3
67.5°	1758.0	609.0	579.4	587.3	611.9	627.7	658.3	624.7	635.6	669.1
70°	1422.0	524.3	497.6	520.3	544.0	576.5	581.4	558.7	584.4	621.8
72.5°	1006.1	438.5	419.7	466.1	474.0	516.4	505.5	494.7	530.1	542.9
75°	697.7	353.7	343.0	378.4	406.9	443.4	435.5	448.3	523.3	529.2
77.5°	441.5	274.9	268.0	290.7	330.2	370.5	383.3	529.2	893.8	929.3
80°	256.2	205.0	197.1	214.8	249.3	286.8	369.5	649.3	589.3	582.4
82.5°	142.9	140.9	131.1	136.0	166.6	206.9	522.2	457.3	371.5	383.3
85°	67.0	82.8	70.9	68.0	93.6	242.4	348.8	261.2	173.4	169.5
87.5°	17.7	15.8	15.8	17.7	39.5	208.9	139.0	111.3	66.0	64.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)