

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: P196500

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196500
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-AFL-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28841.2 lumens
Efficiency: N/A
Efficacy: 115.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

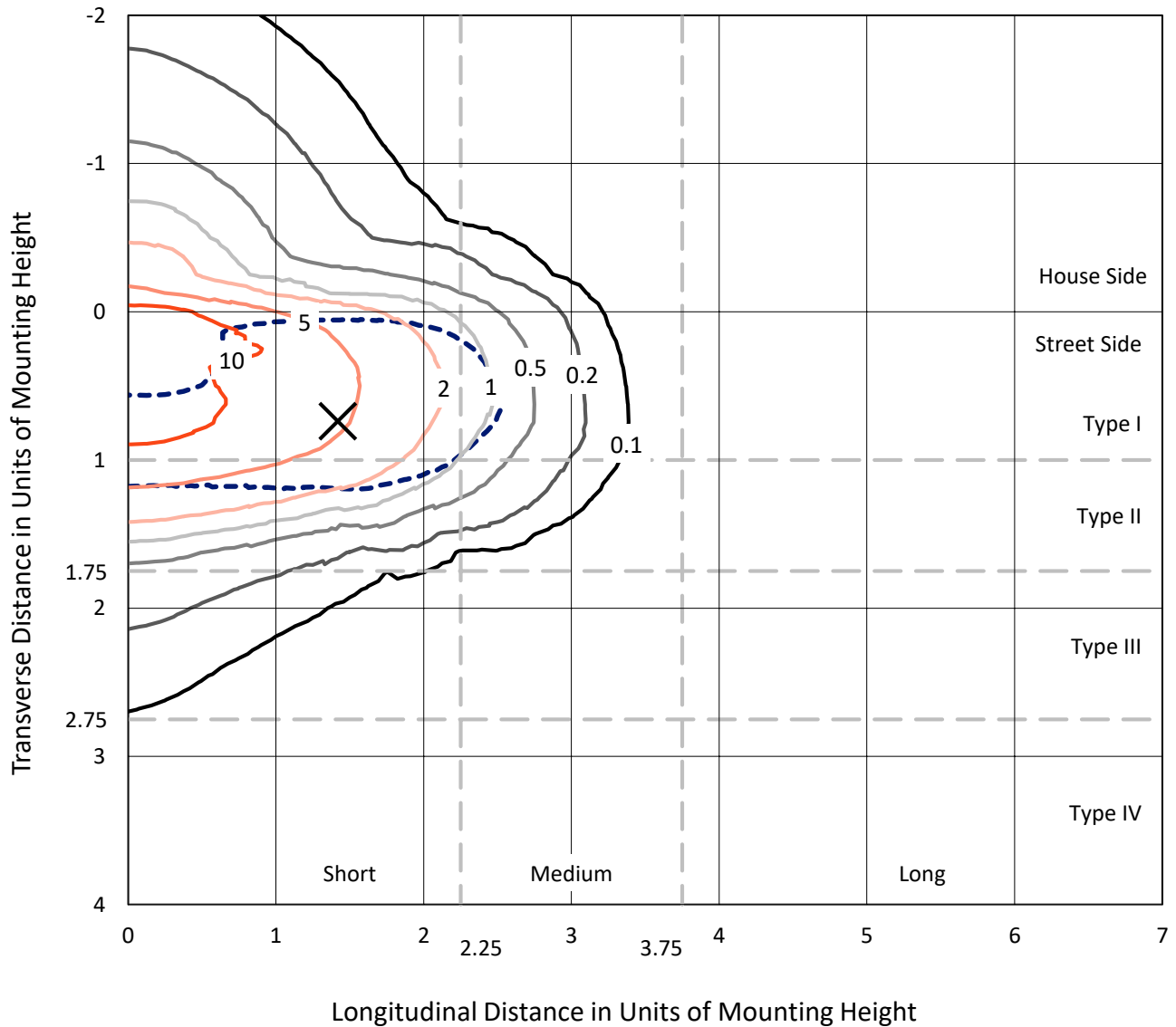
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

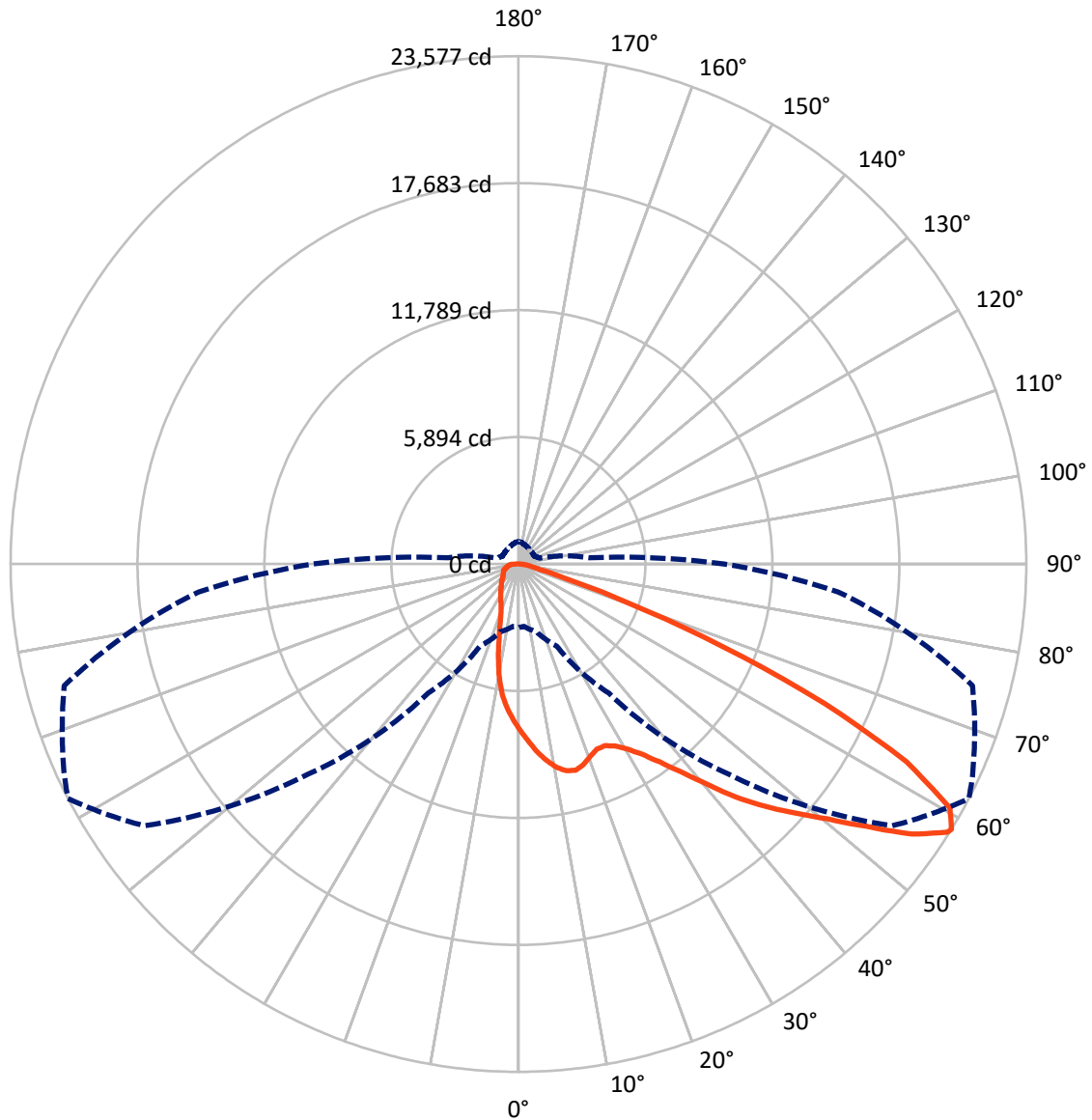
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.4 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4428.2	0.0	4428.2
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	24413.0	0.0	24413.0
	% Fixture	84.6	0.0	84.6
Total	Lumens	28841.2	0.0	28841.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	688.3	2.4
10°-20°	1737.1	6.0
20°-30°	2815.1	9.8
30°-40°	4494.6	15.6
40°-50°	6537.5	22.7
50°-60°	6840.9	23.7
60°-70°	4170.5	14.5
70°-80°	1166.3	4.0
80°-90°	390.9	1.4
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°	28841.2	100.0
0°-180°	28841.2	100.0



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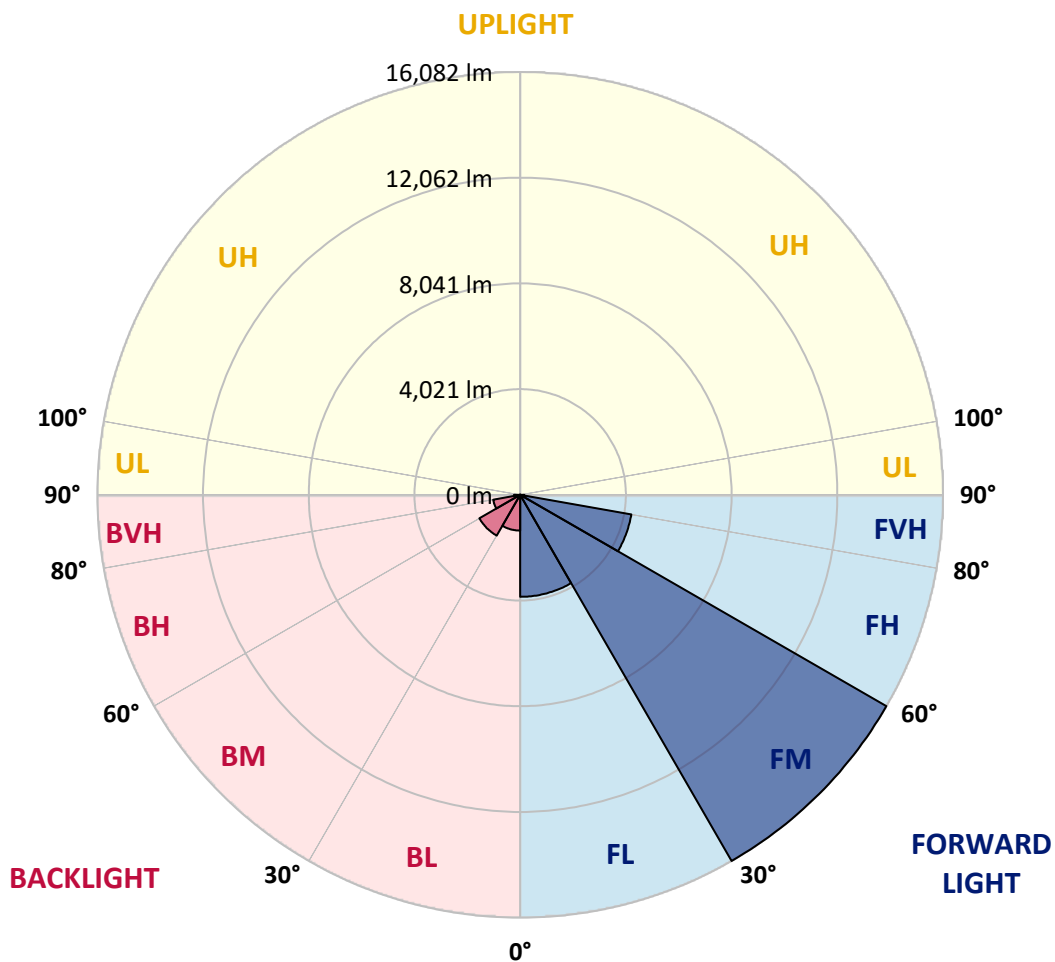
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3879.2	13.5			
FM (30°-60°)	16082.2	55.8			
FH (60°-80°)	4294.3	14.9			G2/5000
FVH (80°-90°)	157.3	0.5			G2/225
BL (0°-30°)	1361.2	4.7	B3/2500		
BM (30°-60°)	1790.8	6.2	B2/2500		
BH (60°-80°)	1042.5	3.6	B3/2500		G3/2500
BVH (80°-90°)	233.7	0.8			G3/500
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°	62.5°	65°	75°	85°
0°	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4
2.5°	8740.4	8735.1	8661.2	8612.5	8554.8	8421.3	8288.1	8188.9	8138.4	7945.6	7758.1
5°	9463.3	9441.6	9400.2	9347.9	9272.2	9104.6	8893.7	8711.6	8639.5	8297.0	7952.8
7.5°	9081.2	9115.4	9243.4	9387.5	9539.0	9549.8	9400.2	9183.9	9104.6	8646.8	8142.0
10°	8023.0	8008.6	8169.1	8450.2	8949.5	9443.5	9690.4	9584.0	9501.0	8978.4	8331.2
12.5°	7702.2	7698.6	7725.6	7797.8	8111.4	8789.2	9616.5	9847.2	9818.4	9329.8	8533.1
15°	7799.6	7803.2	7801.3	7810.4	7896.9	8219.6	9203.7	9935.5	10025.6	9677.7	8738.7
17.5°	8111.4	8098.8	8059.1	8015.8	8028.5	8143.8	8758.4	9784.1	10054.5	9987.8	8911.7
20°	8592.7	8592.7	8486.2	8365.6	8286.2	8311.5	8572.8	9524.5	9921.1	10251.0	9041.5
22.5°	9196.5	9205.5	9048.8	8828.8	8648.5	8580.0	8679.2	9331.8	9758.9	10494.4	9156.8
25°	9946.3	9944.6	9715.7	9400.2	9115.4	8951.4	8949.5	9340.7	9708.4	10779.1	9277.6
27.5°	10874.7	10789.9	10523.2	10074.4	9672.4	9421.9	9308.3	9567.9	9814.8	11128.8	9439.9
30°	11922.0	11835.4	11485.7	10908.9	10364.6	9998.7	9811.2	9960.7	10139.3	11574.1	9685.0
32.5°	12958.3	12978.3	12567.2	11916.5	11217.1	10701.6	10424.0	10515.9	10640.3	12118.4	10016.7
35°	14476.1	14474.3	13937.1	13124.2	12293.2	11579.4	11227.9	11276.6	11390.2	12886.2	10481.7
37.5°	15608.1	15590.1	15244.0	14524.8	13589.2	12733.1	12224.8	12232.0	12329.3	13850.6	11094.5
40°	15723.5	15719.9	15718.0	15615.4	14975.4	14167.8	13531.5	13400.0	13439.7	14874.4	11745.3
42.5°	14842.0	14973.7	15352.1	15932.5	16111.1	15687.5	15085.3	14791.5	14704.9	16049.7	12433.8
45°	13585.7	13652.4	14315.7	15620.7	16682.4	17115.0	16662.6	16042.5	15894.7	17192.5	12994.4
47.5°	13001.7	12972.8	13356.7	14779.0	16626.5	18250.5	18283.0	17266.5	17015.8	18178.5	13472.1
50°	11748.8	11711.1	12195.9	13540.6	16017.3	18814.8	19946.8	18600.3	18137.0	19115.8	13904.7
52.5°	9252.4	9216.3	9867.1	11599.3	14654.5	18603.9	21349.1	20237.0	19447.5	20018.9	14308.5
55°	6020.4	6024.0	6644.2	8430.5	11858.8	17374.6	22007.1	22127.8	21242.8	20921.9	14634.7
57.5°	3314.8	3284.3	3725.8	4823.6	8158.3	14582.5	21459.1	23490.5	23029.1	21697.0	14870.8
58°	2947.2	2911.1	3251.8	4198.1	7314.7	13794.7	21183.3	23577.0	23258.0	21825.0	14905.1
60°	2100.0	2038.7	1986.4	2366.8	4214.3	9946.3	19344.8	23016.4	23324.6	22081.0	14872.7
62.5°	1770.1	1699.7	1512.3	1498.0	1984.5	4865.0	15298.1	20213.5	21076.9	21491.6	14349.9
65°	1644.0	1573.7	1326.6	1238.4	1346.5	2100.0	9459.6	15608.1	16761.7	19442.0	13034.1
67.5°	1553.7	1470.8	1205.9	1090.5	1112.1	1256.4	4014.1	10207.8	11545.2	15161.1	10456.4
70°	1472.7	1380.7	1110.4	977.0	959.0	955.4	1568.2	5330.1	6618.9	9921.1	7004.6
72.5°	1380.7	1290.6	1025.6	883.3	843.6	775.0	942.7	2202.6	3019.3	4863.2	3210.2
75°	1247.3	1173.5	931.9	805.7	737.3	629.2	695.8	1056.3	1301.4	1862.0	1490.8
77.5°	1097.7	1038.3	836.4	740.9	648.9	513.7	531.8	715.6	803.9	1049.1	863.3
80°	777.0	798.4	730.1	652.5	571.4	414.5	409.1	524.6	576.8	704.8	580.3
82.5°	535.4	551.5	594.8	515.4	461.4	322.7	301.0	364.2	391.1	425.3	281.3
85°	382.2	371.4	412.8	369.6	338.9	205.5	192.9	230.7	246.9	259.6	135.2
87.5°	232.5	230.7	237.9	191.1	176.7	104.6	95.5	110.0	117.1	113.5	64.9
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°	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4	7700.4
2.5°	7687.8	7599.4	7406.5	7251.5	7084.0	6956.0	6827.9	6755.8	6676.7	6631.5	6626.1
5°	7772.4	7592.2	7181.3	6799.1	6406.2	6052.9	5706.8	5450.8	5241.7	5122.8	5115.6
7.5°	7866.2	7583.2	6948.8	6287.3	5587.8	4892.1	4277.4	3842.9	3563.6	3433.8	3424.8
10°	7938.3	7545.3	6665.8	5636.4	4527.9	3608.7	3049.9	2793.9	2709.2	2687.6	2684.0
12.5°	8024.9	7518.3	6308.8	4802.0	3460.9	2747.1	2577.7	2561.4	2579.4	2590.2	2592.0
15°	8106.0	7466.1	5827.6	3877.3	2709.2	2455.0	2458.7	2492.9	2529.0	2545.2	2547.0
17.5°	8143.8	7338.1	5194.8	3055.3	2370.4	2323.5	2364.9	2409.9	2442.4	2455.0	2455.0
20°	8143.8	7132.6	4461.3	2474.8	2193.7	2202.6	2253.2	2287.5	2294.7	2283.8	2278.4
22.5°	8109.6	6878.4	3747.5	2159.4	2049.4	2083.7	2123.4	2100.0	2015.2	1950.4	1937.7
25°	8078.9	6577.4	3060.7	1966.5	1923.3	1968.5	1952.1	1791.8	1662.0	1595.1	1584.4
27.5°	8028.5	6213.3	2487.5	1807.9	1800.7	1836.7	1676.4	1521.3	1456.4	1420.4	1413.2
30°	8015.8	5818.6	2081.9	1667.3	1680.0	1629.5	1445.6	1395.1	1380.7	1361.0	1351.9
32.5°	8057.4	5423.8	1827.8	1552.0	1564.6	1398.7	1328.5	1335.7	1333.8	1308.6	1299.6
35°	8170.9	5039.9	1665.5	1447.4	1411.4	1252.7	1261.7	1283.4	1283.4	1252.7	1242.0
37.5°	8369.1	4683.0	1562.9	1359.0	1234.7	1177.0	1200.4	1229.2	1229.2	1207.7	1198.7
40°	8580.0	4335.1	1485.3	1288.8	1122.9	1124.9	1148.2	1169.8	1178.9	1182.5	1175.3
42.5°	8771.2	3974.6	1402.4	1213.1	1072.5	1085.2	1096.0	1112.1	1150.1	1175.3	1171.7
45°	8882.9	3612.2	1312.2	1119.4	1038.3	1043.7	1040.0	1068.9	1114.0	1151.8	1151.8
47.5°	8985.6	3314.8	1238.4	1025.6	1004.0	1004.0	993.1	1022.0	1063.5	1108.6	1112.1
50°	9082.9	3122.0	1186.0	953.5	960.7	955.4	951.7	978.8	1034.6	1088.8	1097.7
52.5°	9182.0	3057.1	1139.2	901.3	915.7	908.5	912.1	949.9	1013.1	1068.9	1078.0
55°	9320.9	3098.6	1090.5	865.3	872.4	870.6	885.0	928.2	984.2	1040.0	1043.7
57.5°	9492.1	3249.9	1049.1	838.1	830.9	841.8	865.3	906.7	960.7	1027.5	1032.8
58°	9526.4	3286.0	1041.9	830.9	821.9	838.1	861.6	901.3	957.1	1027.5	1032.8
60°	9578.6	3414.1	1023.9	816.5	791.2	820.1	849.0	888.6	949.9	1036.5	1047.2
62.5°	9326.3	3439.3	1018.4	800.4	759.0	794.9	829.2	874.2	942.7	1067.1	1090.5
65°	8452.1	3179.7	980.6	773.3	731.8	775.0	811.1	863.3	964.3	1159.0	1169.8
67.5°	6784.7	2640.7	888.6	731.8	701.2	751.7	796.7	863.3	973.4	1173.5	1180.6
70°	4665.0	1984.5	773.3	686.8	665.2	722.9	791.2	883.3	942.7	1110.4	1088.8
72.5°	2437.0	1380.7	677.7	634.5	621.9	697.6	843.6	863.3	906.7	1036.5	1014.8
75°	1227.5	939.1	596.7	575.0	573.2	688.6	944.5	830.9	868.8	975.1	1022.0
77.5°	724.6	735.5	531.8	519.1	528.2	672.4	946.3	798.4	825.6	897.7	948.2
80°	495.7	607.5	481.3	477.7	484.9	618.3	872.4	759.0	775.0	849.0	903.0
82.5°	279.3	335.3	421.7	445.2	441.6	506.5	753.5	690.4	710.1	1004.0	1061.7
85°	135.2	201.9	353.4	416.4	376.7	337.1	612.8	612.8	618.3	719.3	728.2
87.5°	50.5	90.1	237.9	329.9	263.2	201.9	416.4	434.5	483.0	497.4	508.3
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)