

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: P196506

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196506
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35697.2 lumens
Efficiency: N/A
Efficacy: 107.2 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

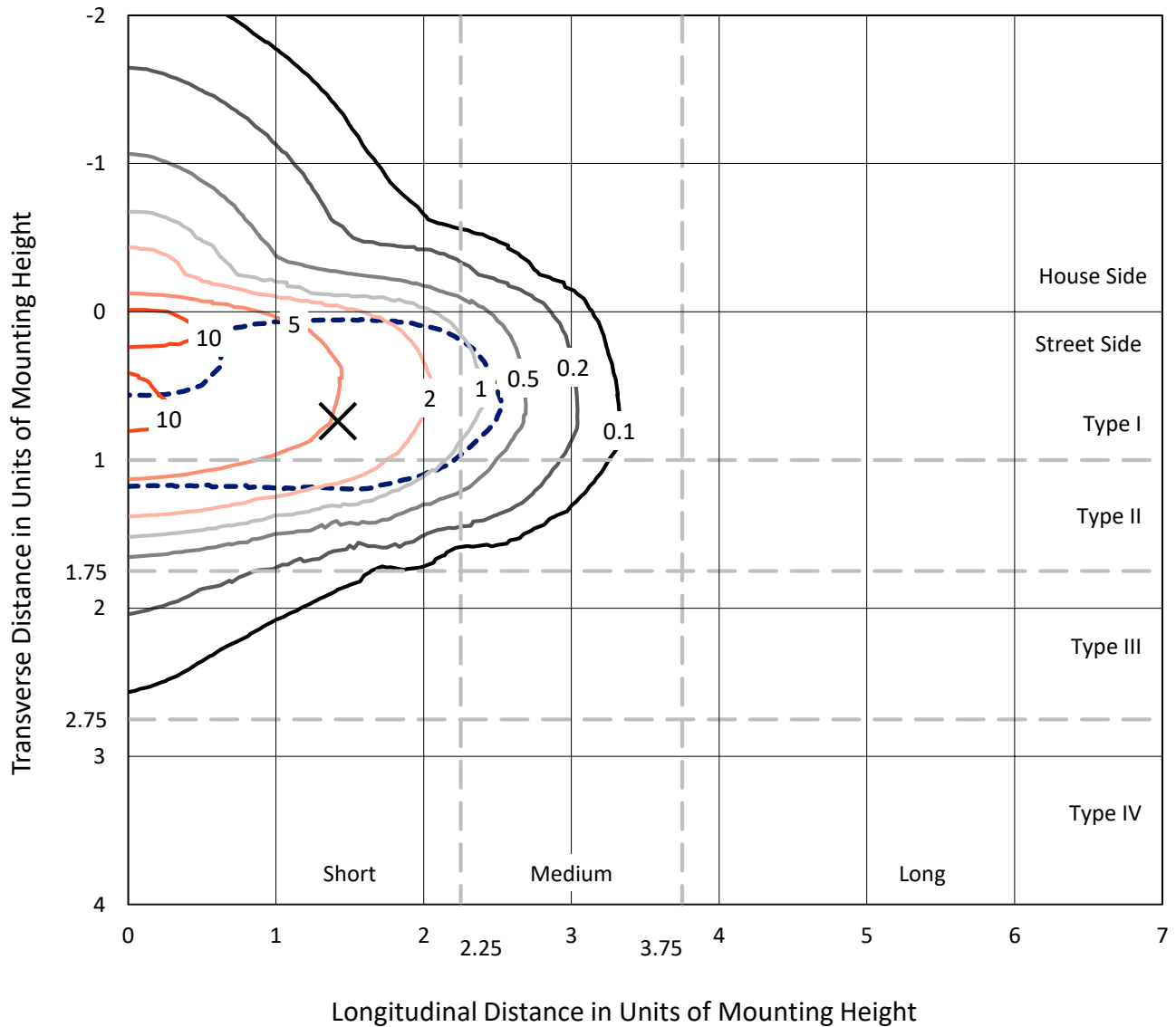
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196506
 CATALOG NUMBER: NAV-AF-06-D-UNV-AFL-7030

Iso-Footcandle Lines of Horizontal Illumination

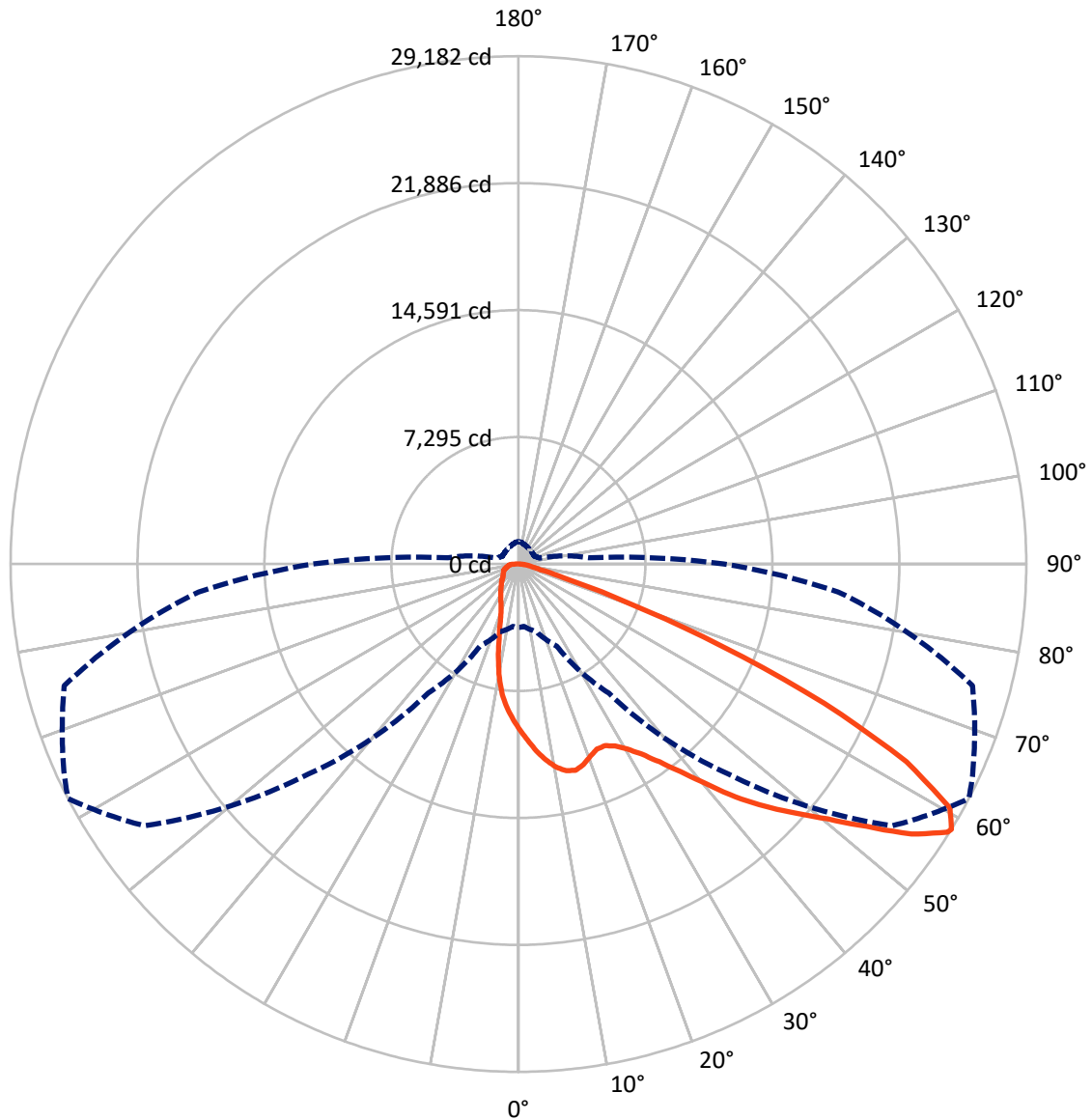
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 12.4 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P196506
CATALOG NUMBER: NAV-AF-06-D-UNV-AFL-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196506

CATALOG NUMBER: NAV-AF-06-D-UNV-AFL-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5480.9	0.0	5480.9
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	30216.3	0.0	30216.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	35697.2	0.0	35697.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	851.9	2.4
10°-20°	2150.0	6.0
20°-30°	3484.3	9.8
30°-40°	5563.0	15.6
40°-50°	8091.6	22.7
50°-60°	8467.1	23.7
60°-70°	5161.8	14.5
70°-80°	1443.5	4.0
80°-90°	483.9	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°	35697.2	100.0
0°-180°	35697.2	100.0



REPORT NUMBER: P196506

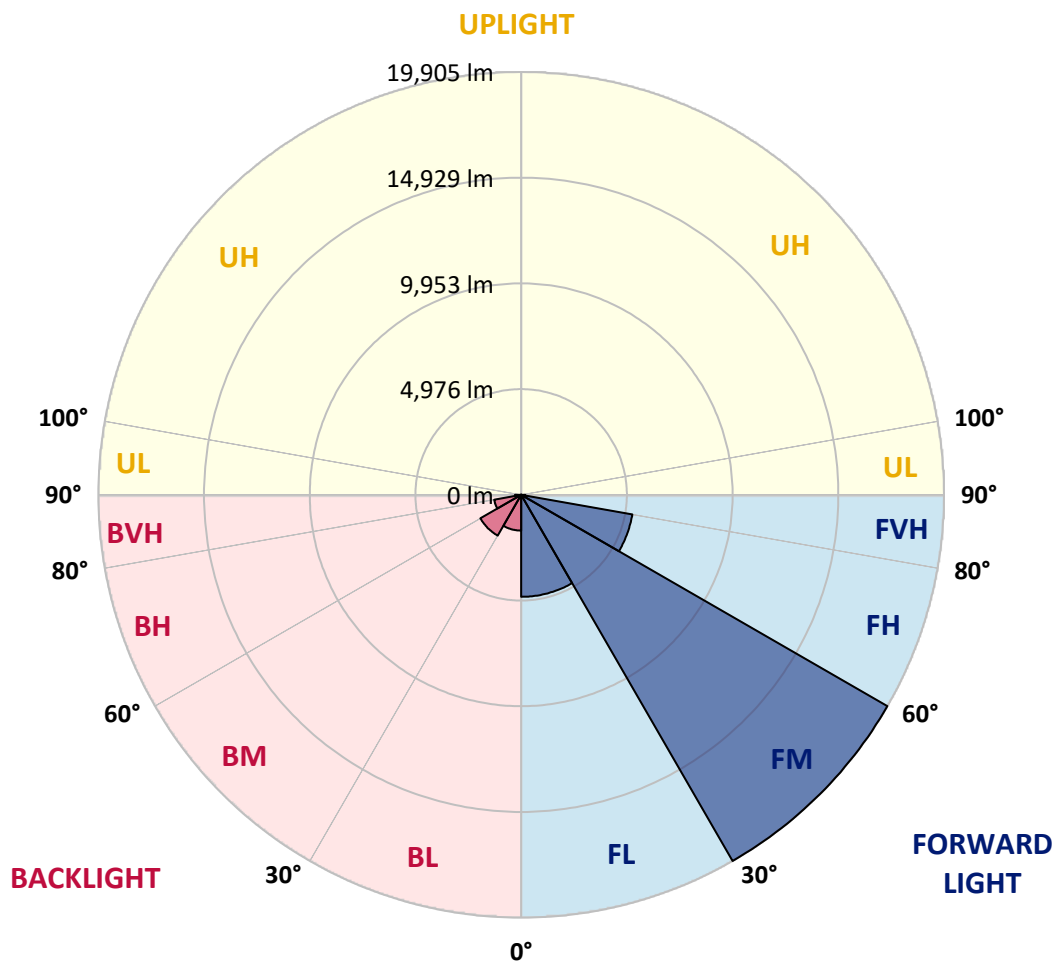
CATALOG NUMBER: NAV-AF-06-D-UNV-AFL-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4801.4	13.5			
FM	(30°-60°)	19905.2	55.8			
FH	(60°-80°)	5315.1	14.9			G3/7500
FVH	(80°-90°)	194.6	0.5			G2/225
BL	(0°-30°)	1684.8	4.7	B3/2500		
BM	(30°-60°)	2216.5	6.2	B2/2500		
BH	(60°-80°)	1290.3	3.6	B3/2500		G3/2500
BVH	(80°-90°)	289.2	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





REPORT NUMBER: P196506

CATALOG NUMBER: NAV-AF-06-D-UNV-AFL-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9
2.5°	10818.2	10811.5	10720.1	10659.8	10588.5	10423.4	10258.3	10135.6	10073.0	9834.3	9602.4
5°	11712.8	11686.1	11634.8	11570.1	11476.4	11268.9	11007.9	10782.5	10693.3	10269.4	9843.2
7.5°	11239.8	11282.2	11440.6	11619.1	11806.5	11820.0	11634.8	11367.0	11268.9	10702.2	10077.5
10°	9930.2	9912.4	10111.0	10459.1	11077.0	11688.3	11993.9	11862.3	11759.7	11112.8	10311.8
12.5°	9533.2	9528.7	9562.2	9651.4	10039.7	10878.4	11902.4	12188.1	12152.4	11547.7	10561.6
15°	9653.6	9658.1	9655.9	9667.0	9774.2	10173.4	11391.6	12297.3	12408.9	11978.3	10816.0
17.5°	10039.7	10024.0	9975.0	9921.4	9936.9	10079.7	10840.4	12110.0	12444.6	12362.0	11030.2
20°	10635.3	10635.3	10503.6	10354.2	10255.9	10287.2	10610.7	11788.7	12279.5	12687.8	11190.8
22.5°	11382.6	11393.8	11199.7	10927.6	10704.4	10619.7	10742.4	11550.1	12078.7	12989.0	11333.6
25°	12310.8	12308.5	12025.2	11634.8	11282.2	11079.2	11077.0	11561.2	12016.3	13341.5	11483.0
27.5°	13459.7	13354.9	13024.7	12469.2	11971.6	11661.6	11521.0	11842.3	12147.9	13774.4	11683.8
30°	14756.0	14648.8	14216.0	13502.1	12828.3	12375.5	12143.4	12328.6	12549.5	14325.4	11987.3
32.5°	16038.8	16063.3	15554.7	14749.2	13883.7	13245.6	12902.0	13015.7	13169.7	14999.1	12397.7
35°	17917.3	17915.1	17250.3	16244.0	15215.6	14332.1	13897.0	13957.3	14097.8	15949.5	12973.3
37.5°	19318.3	19296.1	18867.8	17977.5	16819.7	15759.9	15130.8	15139.7	15260.1	17143.1	13731.9
40°	19461.1	19456.7	19454.4	19327.3	18535.3	17535.8	16748.3	16585.4	16634.5	18410.4	14537.3
42.5°	18370.2	18533.1	19001.6	19719.9	19940.8	19416.6	18671.5	18307.7	18200.6	19865.0	15389.6
45°	16815.2	16897.7	17718.8	19334.0	20648.1	21183.5	20623.6	19856.1	19673.1	21279.5	16083.4
47.5°	16092.4	16056.6	16531.8	18292.0	20578.9	22589.1	22629.2	21370.9	21060.9	22499.9	16674.6
50°	14541.8	14494.9	15095.0	16759.4	19824.9	23287.4	24688.4	23021.9	22448.5	23660.0	17210.1
52.5°	11451.8	11407.2	12212.6	14356.5	18138.2	23026.4	26424.3	25047.6	24070.5	24777.7	17709.9
55°	7451.6	7456.1	8223.5	10434.5	14677.9	21504.9	27238.6	27388.0	26292.5	25895.4	18113.6
57.5°	4102.8	4064.9	4611.5	5970.3	10097.6	18049.0	26560.3	29074.7	28503.5	26854.8	18406.0
58°	3647.7	3603.1	4024.8	5196.1	9053.4	17074.0	26219.0	29181.7	28786.9	27013.2	18448.3
60°	2599.2	2523.3	2458.6	2929.3	5216.1	12310.8	23943.3	28487.9	28869.3	27330.0	18408.1
62.5°	2190.8	2103.9	1871.8	1854.0	2456.3	6021.5	18934.6	25018.6	26087.3	26600.5	17761.1
65°	2034.7	1947.6	1642.0	1532.7	1666.5	2599.2	11708.4	19318.3	20746.2	24063.8	16132.4
67.5°	1923.2	1820.5	1492.6	1349.8	1376.5	1555.0	4968.4	12634.3	14289.7	18765.1	12942.2
70°	1822.8	1709.0	1374.3	1209.2	1186.9	1182.4	1941.0	6597.1	8192.3	12279.5	8669.7
72.5°	1709.0	1597.4	1269.5	1093.2	1044.1	959.3	1166.8	2726.3	3737.0	6019.3	3973.4
75°	1543.9	1452.4	1153.4	997.3	912.6	778.6	861.2	1307.4	1610.8	2304.6	1845.1
77.5°	1358.6	1285.1	1035.2	916.9	803.2	635.9	658.2	885.8	995.1	1298.4	1068.7
80°	961.6	988.4	903.6	807.7	707.2	513.1	506.4	649.2	713.9	872.3	718.4
82.5°	662.6	682.7	736.2	638.1	571.1	399.4	372.6	450.7	484.1	526.5	348.0
85°	473.0	459.6	510.9	457.4	419.4	254.3	238.7	285.6	305.6	321.2	167.2
87.5°	287.8	285.6	294.5	236.4	218.6	129.4	118.2	136.1	145.0	140.5	80.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196506
 CATALOG NUMBER: NAV-AF-06-D-UNV-AFL-7030

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9	9530.9
2.5°	9515.3	9406.0	9167.3	8975.4	8767.9	8609.5	8451.1	8361.8	8263.8	8207.9	8201.2
5°	9620.2	9397.1	8888.4	8415.3	7929.1	7491.8	7063.4	6746.6	6487.9	6340.6	6331.7
7.5°	9736.2	9385.9	8600.6	7781.8	6916.1	6055.0	5294.1	4756.5	4410.7	4250.0	4238.9
10°	9825.3	9339.1	8250.2	6976.4	5604.4	4466.5	3774.9	3458.0	3353.2	3326.4	3322.0
12.5°	9932.5	9305.6	7808.5	5943.4	4283.5	3400.0	3190.4	3170.2	3192.5	3206.0	3208.2
15°	10032.8	9240.9	7212.9	4798.8	3353.2	3038.6	3043.1	3085.5	3130.2	3150.2	3152.4
17.5°	10079.7	9082.5	6429.8	3781.6	2933.8	2875.8	2927.0	2982.9	3022.9	3038.6	3038.6
20°	10079.7	8828.1	5521.8	3063.2	2715.2	2726.3	2788.8	2831.1	2840.0	2826.7	2820.0
22.5°	10037.3	8513.6	4638.3	2672.8	2536.7	2579.1	2628.1	2599.2	2494.3	2414.0	2398.3
25°	9999.4	8141.0	3788.2	2434.1	2380.5	2436.3	2416.2	2217.6	2057.1	1974.5	1961.1
27.5°	9936.9	7690.3	3078.8	2237.7	2228.8	2273.3	2074.9	1883.0	1802.7	1758.1	1749.1
30°	9921.4	7201.8	2576.9	2063.7	2079.3	2016.8	1789.2	1726.9	1709.0	1684.4	1673.3
32.5°	9972.6	6713.1	2262.2	1920.9	1936.5	1731.3	1644.3	1653.2	1650.9	1619.8	1608.6
35°	10113.2	6237.9	2061.5	1791.6	1746.8	1550.6	1561.8	1588.5	1588.5	1550.6	1537.2
37.5°	10358.7	5796.2	1934.3	1682.1	1528.2	1456.9	1485.8	1521.6	1521.6	1494.7	1483.6
40°	10619.7	5365.6	1838.4	1595.1	1389.9	1392.2	1421.1	1447.9	1459.0	1463.5	1454.7
42.5°	10856.1	4919.4	1735.7	1501.4	1327.5	1343.2	1356.5	1376.5	1423.4	1454.7	1450.2
45°	10994.4	4471.0	1624.1	1385.5	1285.1	1291.8	1287.3	1323.0	1378.8	1425.7	1425.7
47.5°	11121.6	4102.8	1532.7	1269.5	1242.8	1242.8	1229.2	1265.0	1316.3	1372.1	1376.5
50°	11242.1	3864.2	1468.0	1180.2	1189.2	1182.4	1178.0	1211.4	1280.6	1347.5	1358.6
52.5°	11364.8	3783.7	1410.0	1115.5	1133.3	1124.4	1128.8	1175.7	1253.9	1323.0	1334.2
55°	11536.5	3835.1	1349.8	1070.8	1079.8	1077.7	1095.5	1149.0	1218.1	1287.3	1291.8
57.5°	11748.5	4022.5	1298.4	1037.4	1028.4	1041.9	1070.8	1122.2	1189.2	1271.7	1278.4
58°	11790.9	4067.1	1289.5	1028.4	1017.3	1037.4	1066.5	1115.5	1184.7	1271.7	1278.4
60°	11855.6	4225.6	1267.2	1010.6	979.4	1015.1	1050.8	1099.9	1175.7	1282.8	1296.3
62.5°	11543.2	4256.7	1260.6	990.6	939.3	983.9	1026.3	1082.0	1166.8	1320.7	1349.8
65°	10461.2	3935.5	1213.7	957.1	905.8	959.3	1004.0	1068.7	1193.5	1434.6	1447.9
67.5°	8397.5	3268.5	1099.9	905.8	867.8	930.4	986.1	1068.7	1204.8	1452.4	1461.4
70°	5774.0	2456.3	957.1	850.0	823.3	894.7	979.4	1093.2	1166.8	1374.3	1347.5
72.5°	3016.3	1709.0	838.9	785.3	769.7	863.3	1044.1	1068.7	1122.2	1282.8	1256.1
75°	1519.4	1162.4	738.5	711.8	709.4	852.2	1169.1	1028.4	1075.3	1207.0	1265.0
77.5°	896.9	910.2	658.2	642.6	653.7	832.1	1171.3	988.4	1021.8	1111.0	1173.6
80°	613.5	751.8	595.7	591.2	600.2	765.3	1079.8	939.3	959.3	1050.8	1117.7
82.5°	345.8	414.9	522.0	551.1	546.7	626.9	932.5	854.5	879.0	1242.8	1314.1
85°	167.2	249.8	437.2	515.3	466.3	417.2	758.6	758.6	765.3	890.1	901.3
87.5°	62.5	111.6	294.5	408.3	325.7	249.8	515.3	537.7	597.8	615.7	629.2
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)