

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: P195937

Luminaire Tested: **NAV-AF-01-D-UNV-5NQ-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195937
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-5NQ-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4233 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B2 - U0 - G1

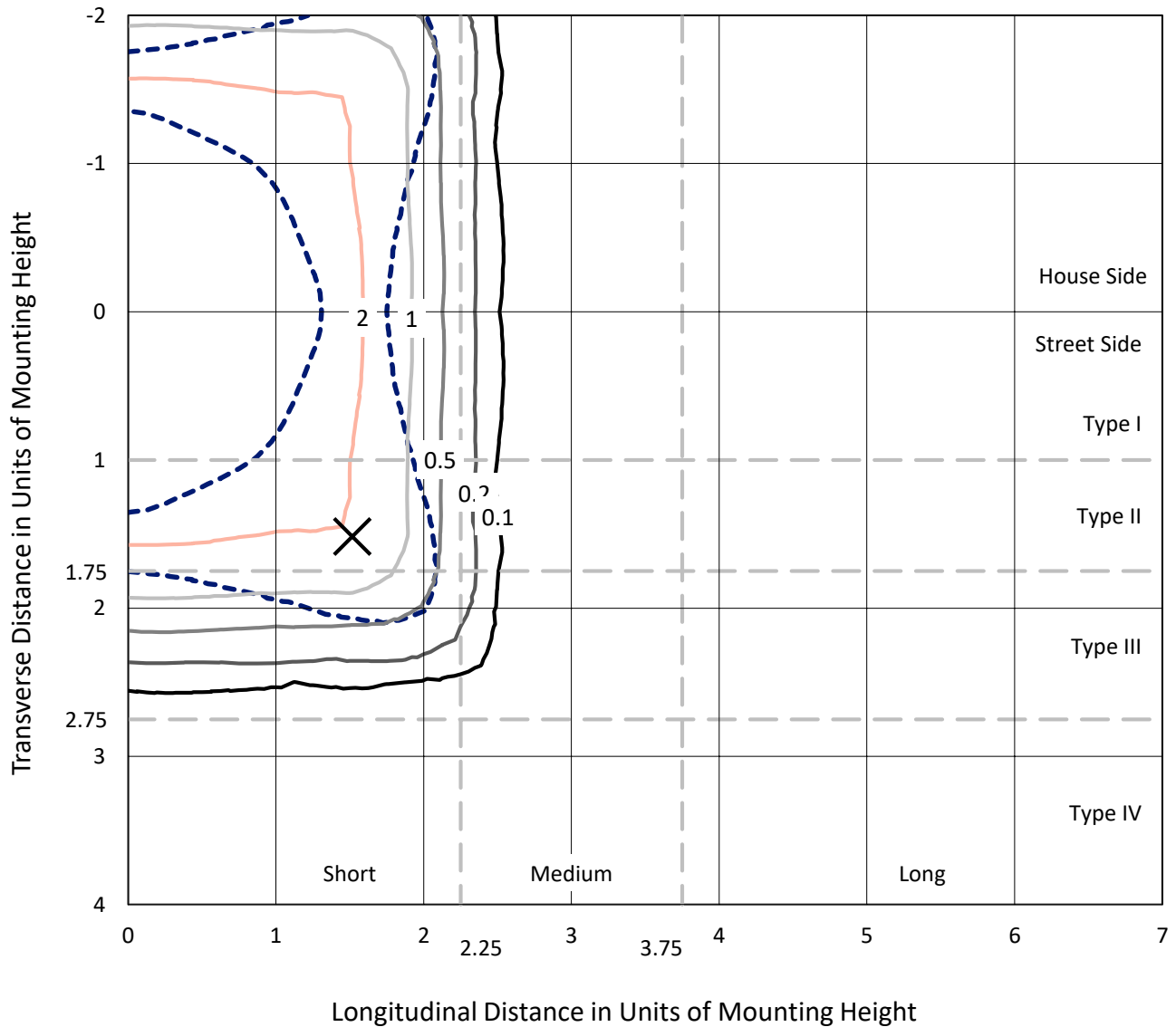
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195937
 CATALOG NUMBER: NAV-AF-01-D-UNV-5NQ-600

Iso-Footcandle Lines of Horizontal Illumination

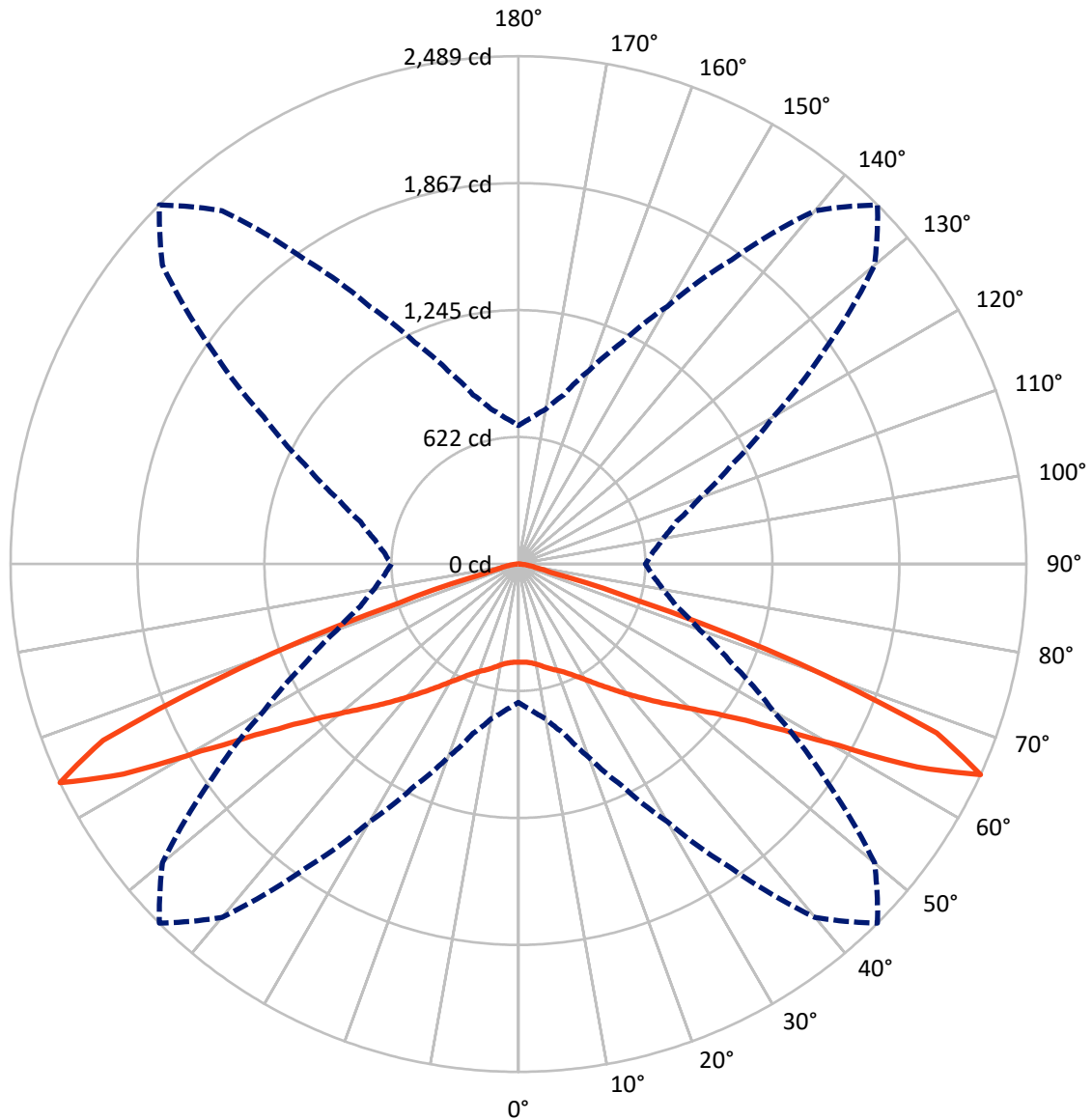
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.8 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P195937
CATALOG NUMBER: NAV-AF-01-D-UNV-5NQ-600

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P195937

CATALOG NUMBER: NAV-AF-01-D-UNV-5NQ-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2116.5	0.0	2116.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2116.5	0.0	2116.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	4233.0	0.0	4233.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.9	1.1
10°-20°	150.3	3.6
20°-30°	280.3	6.6
30°-40°	472.7	11.2
40°-50°	767.8	18.1
50°-60°	1203.0	28.4
60°-70°	1135.6	26.8
70°-80°	153.0	3.6
80°-90°	23.3	0.6
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°	4233.0	100.0
0°-180°	4233.0	100.0



REPORT NUMBER: P195937

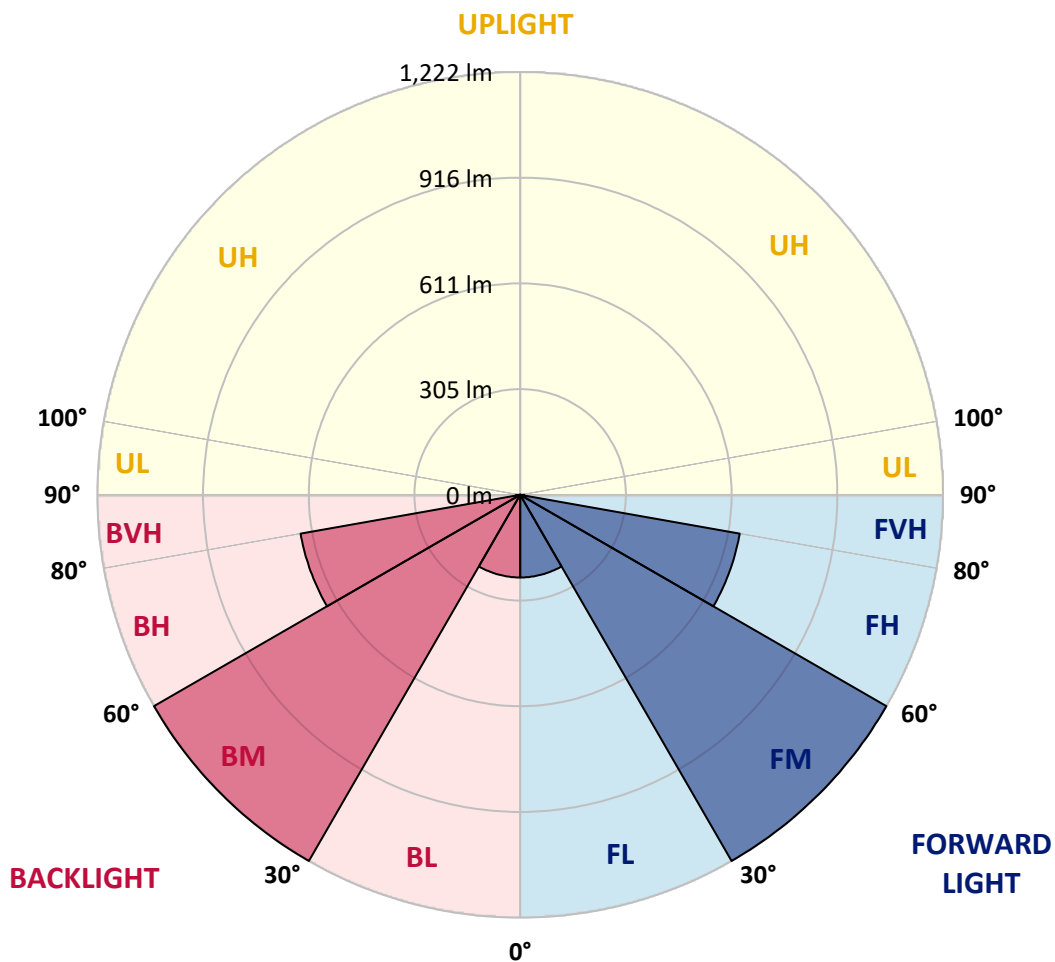
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	238.8	5.6			
FM	(30°-60°)	1221.8	28.9			
FH	(60°-80°)	644.3	15.2			G0/660
FVH	(80°-90°)	11.7	0.3			G1/100
BL	(0°-30°)	238.8	5.6	B1/500		
BM	(30°-60°)	1221.8	28.9	B2/2500		
BH	(60°-80°)	644.3	15.2	B2/1000		G0/660
BVH	(80°-90°)	11.7	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1

Type V Short





REPORT NUMBER: P195937

CATALOG NUMBER: NAV-AF-01-D-UNV-5NQ-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	481.5	481.5	481.5	481.5	481.5	481.5	481.5	481.5	481.5	481.5	481.5
2.5°	485.5	485.5	486.2	486.0	484.9	484.2	483.3	482.3	481.8	481.2	481.0
5°	488.0	488.0	488.9	488.7	487.8	486.7	486.2	485.5	484.7	484.2	484.4
7.5°	494.7	494.9	495.2	494.9	494.2	493.4	492.3	492.0	491.0	490.2	490.7
10°	504.7	504.7	504.9	505.2	504.7	502.9	502.9	502.4	501.2	500.2	500.5
12.5°	515.8	515.8	516.1	516.1	516.1	515.0	515.3	515.0	513.6	513.1	513.6
15°	526.6	526.8	526.8	527.3	527.3	527.6	528.7	528.7	528.1	527.9	527.9
17.5°	539.2	539.8	540.0	540.8	541.0	541.7	542.7	543.0	543.2	542.4	542.7
20°	556.1	556.4	557.2	557.4	558.5	558.5	559.0	558.7	558.2	557.2	557.2
22.5°	575.1	575.6	577.3	577.3	578.6	577.8	578.0	577.3	575.9	575.4	574.8
25°	599.9	600.7	602.0	601.5	602.0	600.7	600.7	600.7	599.9	599.1	598.8
27.5°	631.3	629.9	631.3	630.2	629.9	628.9	629.1	628.6	627.9	627.6	626.6
30°	664.0	662.4	663.2	663.5	662.9	662.7	661.6	660.8	659.5	659.7	659.0
32.5°	701.4	699.8	700.6	700.9	700.3	700.9	700.6	698.8	697.2	698.3	698.3
35°	745.9	744.9	747.1	747.8	746.2	745.4	744.4	742.3	739.9	741.5	741.7
37.5°	799.5	798.2	799.7	801.9	799.0	797.4	793.2	790.0	788.4	789.2	790.2
40°	855.2	855.4	859.9	860.4	857.2	855.4	851.2	846.4	842.0	842.0	843.3
42.5°	913.7	914.5	919.7	921.6	920.6	917.1	911.3	905.5	899.7	900.8	902.3
45°	979.9	978.9	984.4	988.8	988.1	986.9	981.4	970.9	965.7	965.4	968.0
47.5°	1049.4	1051.6	1057.4	1065.0	1064.8	1062.1	1055.0	1045.3	1035.5	1036.2	1039.4
50°	1130.7	1133.6	1143.4	1151.0	1152.0	1151.2	1142.8	1131.5	1117.8	1118.6	1122.8
52.5°	1203.5	1207.7	1219.1	1234.8	1244.6	1249.1	1243.6	1233.0	1219.1	1219.9	1224.3
55°	1269.4	1276.0	1292.9	1314.5	1334.0	1352.2	1360.3	1360.1	1349.8	1352.2	1358.0
57.5°	1310.8	1320.0	1345.6	1380.4	1419.1	1455.9	1487.5	1517.2	1523.9	1536.3	1536.3
60°	1255.2	1276.7	1310.8	1370.3	1446.6	1528.9	1618.0	1704.7	1760.6	1804.7	1781.0
62.5°	1048.1	1080.0	1127.8	1206.4	1325.0	1471.9	1650.9	1852.7	2063.1	2191.8	2097.4
65°	678.2	718.3	770.3	858.6	1008.1	1197.2	1457.9	1820.5	2260.8	2489.2	2278.3
67.5°	268.7	295.8	327.5	390.3	520.0	705.6	998.3	1445.5	1996.4	2211.8	1975.3
70°	128.4	132.9	138.9	152.4	184.8	249.5	401.1	712.2	1224.3	1451.4	1195.0
72.5°	92.8	93.6	96.5	101.0	110.5	123.7	150.3	217.8	422.2	613.9	422.7
75°	70.4	71.5	73.0	75.4	80.4	86.7	96.8	116.0	144.5	166.6	144.2
77.5°	53.5	54.6	55.9	58.3	60.9	65.4	69.0	76.7	88.9	93.6	93.1
80°	39.1	40.9	43.0	45.1	47.0	49.0	49.3	53.0	59.8	64.3	63.0
82.5°	24.8	26.4	31.9	34.3	34.6	35.1	34.8	35.1	38.8	41.9	40.9
85°	15.9	16.9	19.7	22.4	21.9	22.9	22.9	22.4	20.9	17.9	21.4
87.5°	7.9	8.2	9.5	11.9	11.4	10.0	9.7	9.7	7.2	6.0	6.5
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: P195937

CATALOG NUMBER: NAV-AF-01-D-UNV-5NQ-600

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	481.5	481.5	481.5	481.5	481.5	481.5	481.5	481.5
2.5°	480.2	480.7	479.9	479.9	479.7	480.2	479.4	479.4
5°	483.9	484.7	484.4	484.4	484.9	485.5	485.2	484.9
7.5°	490.5	491.0	491.5	491.7	492.3	492.0	492.6	492.3
10°	500.5	499.9	500.7	499.9	500.2	499.7	499.9	499.9
12.5°	513.1	512.4	511.8	511.3	511.3	510.2	510.2	510.5
15°	527.6	526.3	525.3	524.8	524.3	524.3	523.4	524.0
17.5°	541.9	540.5	538.7	538.7	538.0	537.4	536.8	538.2
20°	556.9	555.6	554.5	554.2	552.7	552.2	552.4	554.0
22.5°	574.3	573.6	573.6	573.0	571.9	571.1	571.1	573.0
25°	597.8	596.2	596.5	596.7	596.2	596.2	595.7	597.0
27.5°	626.6	625.2	626.0	626.6	626.0	626.8	626.0	627.1
30°	660.3	659.5	660.3	661.0	659.7	659.7	659.2	660.0
32.5°	700.6	699.6	700.1	700.1	698.3	696.6	694.6	696.1
35°	744.9	743.6	744.6	745.4	743.4	741.7	738.6	739.9
37.5°	793.7	794.2	795.5	799.0	798.4	795.9	793.4	794.5
40°	848.3	850.9	856.7	859.1	858.6	855.9	852.7	853.3
42.5°	910.0	913.4	919.5	923.4	921.6	917.9	913.9	915.5
45°	977.2	982.5	990.4	994.4	992.0	988.1	982.5	985.4
47.5°	1048.4	1059.0	1069.5	1074.8	1074.0	1068.5	1061.3	1062.1
50°	1133.6	1147.5	1161.0	1166.3	1162.4	1153.9	1143.9	1143.7
52.5°	1239.6	1254.6	1265.7	1264.4	1254.6	1241.5	1230.1	1229.6
55°	1372.0	1377.0	1375.4	1364.1	1346.9	1326.4	1311.8	1309.5
57.5°	1532.1	1515.2	1490.3	1456.1	1417.6	1378.5	1352.2	1342.4
60°	1727.7	1651.5	1562.9	1469.6	1384.4	1320.5	1280.2	1255.7
62.5°	1889.3	1668.6	1470.6	1308.5	1175.8	1096.9	1041.9	1007.8
65°	1833.9	1441.5	1154.7	945.6	800.9	719.3	661.0	622.3
67.5°	1416.8	963.2	670.3	464.6	352.3	298.2	260.5	236.0
70°	714.3	369.4	223.8	157.9	135.0	125.5	119.2	115.5
72.5°	209.6	140.0	116.3	102.8	94.6	88.9	85.2	83.4
75°	116.0	94.6	83.6	75.9	70.7	66.7	64.3	62.7
77.5°	79.9	68.8	63.3	58.3	54.0	51.1	49.3	47.8
80°	55.9	50.3	48.0	45.3	42.1	39.8	37.1	36.1
82.5°	37.1	34.8	34.3	32.1	30.3	27.7	22.9	21.4
85°	21.9	21.6	21.6	20.9	19.5	17.2	13.7	13.7
87.5°	7.7	7.9	8.2	8.7	8.4	7.2	5.8	5.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)