

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: FAIL-SAFE

Report Number: P834536

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5STD-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834536
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-5STD-27-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

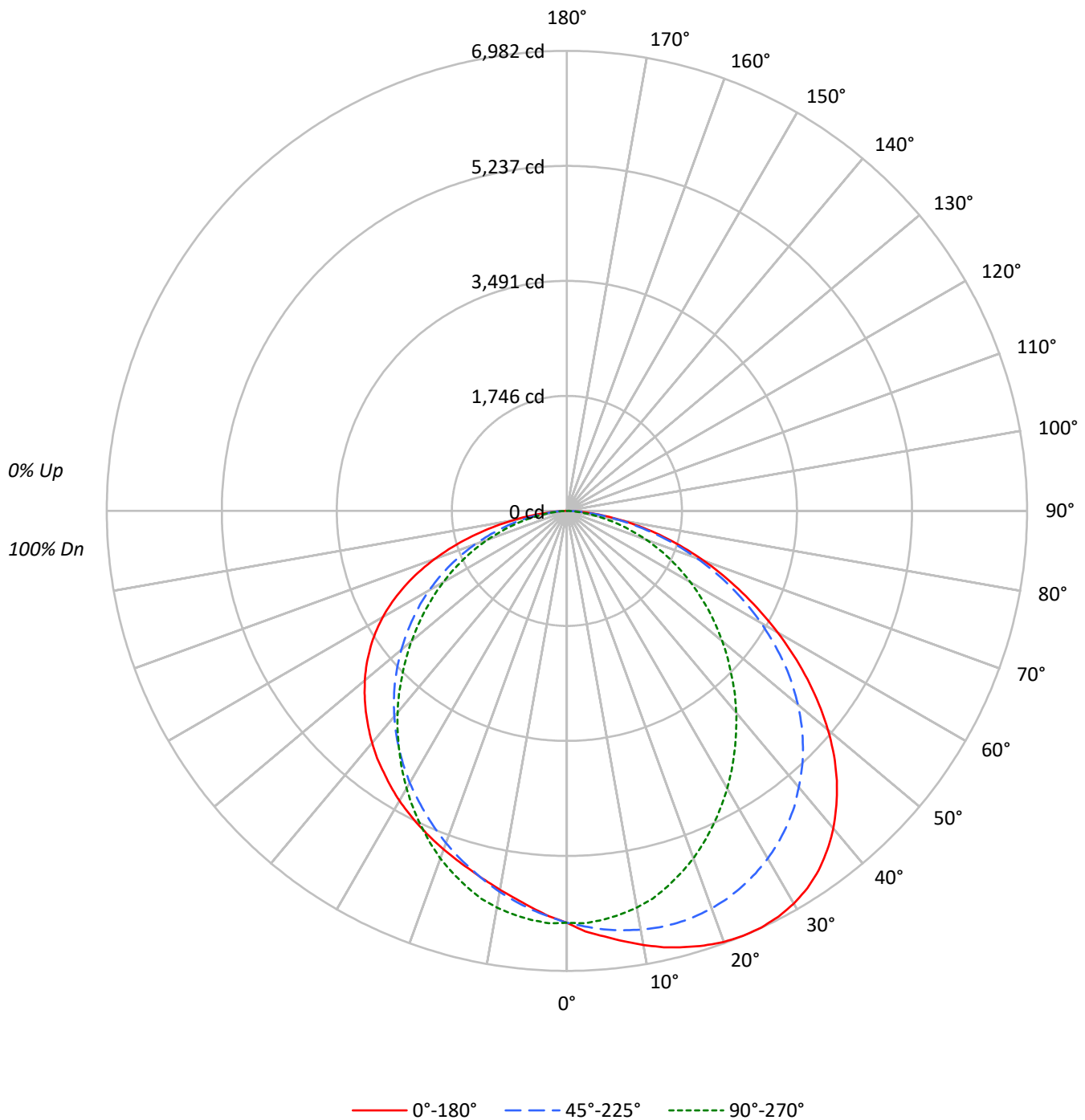
Lumens per Lamp: N/A
Luminaire Lumens: 18386.2 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
Input Voltage (V): 120
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: 28.75 FT

TEST NUMBER: P834536

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5STD-27-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834536

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5STD-27-120-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8410	8410	8410
5°	8756	8415	8165
10°	9139	8351	7976
15°	9550	8218	7862
20°	9967	8036	7829
25°	10359	7803	7841
30°	10696	7559	7892
35°	10940	7289	7958
40°	11050	7019	8075
45°	11020	6723	8207
50°	10824	6440	8376
55°	10454	6144	8551
60°	9945	5827	8680
65°	9339	5472	8669
70°	8691	5047	8412
75°	7891	4432	7756
80°	6775	3642	6542
85°	5167	2489	4492

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834536

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5STD-27-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	592.8	3.2
10°-20°	1712.0	9.3
20°-30°	2622.7	14.3
30°-40°	3200.7	17.4
40°-50°	3347.2	18.2
50°-60°	3029.5	16.5
60°-70°	2294.3	12.5
70°-80°	1278.6	7.0
80°-90°	308.4	1.7
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°-30°	4927.5	26.8
0°-40°	8128.2	44.2
0°-60°	14504.8	78.9
0°-90°	18386.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18386.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6250	6250	6250	6250	6250	
5°	6483	6375	6230	6077	6046	625
15°	6856	6475	5899	5625	5644	1944
25°	6977	6292	5256	5070	5282	3219
35°	6660	5826	4438	4432	4845	4159
45°	5792	5066	3533	3689	4313	4456
55°	4457	4024	2619	2850	3645	3977
65°	2933	2758	1719	1954	2723	2910
75°	1518	1433	852	1018	1492	1610
85°	335	295	161	216	291	403
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834536

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5STD-27-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5
2.5°	6388.5	6358.5	6333.9	6343.5	6348.9	6329.8	6313.4	6316.1	6299.7	6331.2	6257.4
5°	6482.8	6455.5	6426.8	6437.7	6426.8	6398.1	6374.9	6368.0	6324.3	6342.1	6266.9
7.5°	6588.0	6558.0	6515.6	6527.9	6504.7	6451.4	6421.3	6403.6	6336.6	6338.0	6254.6
10°	6689.1	6663.2	6605.8	6614.0	6571.6	6500.6	6452.8	6428.2	6333.9	6320.2	6234.2
12.5°	6783.4	6747.9	6686.4	6690.5	6629.0	6534.7	6473.2	6437.7	6314.8	6273.8	6189.1
15°	6855.8	6821.6	6747.9	6746.5	6667.3	6544.3	6474.6	6425.4	6269.7	6205.5	6116.7
17.5°	6917.3	6885.8	6794.3	6791.6	6695.9	6540.2	6456.8	6395.4	6204.1	6124.9	6026.5
20°	6961.0	6929.6	6827.1	6817.5	6702.8	6519.7	6420.0	6342.1	6118.0	6023.8	5914.5
22.5°	6981.5	6950.1	6833.9	6820.3	6686.4	6478.7	6366.7	6275.1	6019.7	5896.7	5783.3
25°	6977.4	6947.3	6816.2	6802.5	6655.0	6417.2	6291.5	6186.3	5895.3	5750.5	5638.5
27.5°	6943.2	6920.0	6782.0	6764.3	6597.6	6333.9	6200.0	6083.9	5757.3	5596.1	5474.5
30°	6884.5	6866.7	6720.5	6704.1	6526.5	6242.4	6093.4	5959.5	5608.4	5426.7	5303.7
32.5°	6790.2	6773.8	6626.3	6611.2	6430.9	6124.9	5969.1	5831.1	5445.8	5245.0	5122.0
35°	6660.4	6650.9	6507.4	6491.0	6307.9	5991.0	5825.6	5674.0	5276.4	5049.6	4932.1
37.5°	6489.6	6489.6	6351.6	6333.9	6154.9	5827.0	5664.4	5503.2	5085.1	4844.7	4728.6
40°	6291.5	6309.3	6168.6	6150.8	5977.3	5650.8	5473.2	5303.7	4878.8	4628.8	4515.4
42.5°	6053.8	6070.2	5952.7	5936.3	5773.7	5447.2	5281.9	5097.4	4663.0	4408.9	4291.4
45°	5791.5	5813.4	5708.2	5695.9	5544.2	5224.5	5066.0	4878.8	4437.5	4179.3	4064.6
47.5°	5499.1	5527.8	5436.3	5429.4	5288.7	4996.3	4831.0	4641.1	4201.2	3940.2	3832.3
50°	5171.2	5212.2	5137.1	5137.1	5011.4	4720.4	4576.9	4387.0	3955.3	3694.3	3587.7
52.5°	4820.1	4872.0	4816.0	4817.4	4714.9	4453.9	4305.0	4119.2	3698.4	3441.6	3343.2
55°	4456.7	4507.2	4471.7	4477.2	4396.6	4158.8	4023.6	3839.1	3436.1	3186.1	3093.2
57.5°	4076.9	4131.5	4108.3	4119.2	4063.2	3850.1	3709.3	3548.1	3165.6	2918.3	2839.0
60°	3695.7	3747.6	3735.3	3750.3	3714.8	3530.4	3401.9	3235.3	2893.7	2656.0	2586.3
62.5°	3310.4	3358.2	3355.5	3371.9	3352.8	3199.7	3085.0	2942.9	2612.3	2393.7	2329.4
65°	2933.3	2974.3	2971.6	2989.3	2985.2	2862.3	2758.4	2628.6	2330.8	2130.0	2074.0
67.5°	2567.2	2601.3	2591.8	2612.3	2617.7	2519.3	2429.2	2313.0	2063.0	1867.6	1819.8
70°	2209.2	2232.4	2220.1	2233.8	2246.1	2172.3	2095.8	1993.3	1777.5	1605.3	1565.7
72.5°	1858.1	1874.5	1855.4	1869.0	1879.9	1826.7	1763.8	1675.0	1496.0	1347.1	1314.3
75°	1517.9	1541.1	1501.5	1515.2	1523.4	1470.1	1433.2	1360.8	1206.4	1091.6	1069.8
77.5°	1188.6	1202.3	1180.4	1175.0	1180.4	1142.2	1113.5	1057.5	941.3	847.1	833.4
80°	874.4	882.6	860.7	855.3	859.4	832.0	810.2	769.2	687.2	616.2	610.7
82.5°	586.1	590.2	571.1	565.6	568.4	560.2	534.2	505.5	467.3	407.1	405.8
85°	334.7	334.7	321.1	315.6	318.3	304.7	295.1	280.1	265.1	224.1	226.8
87.5°	123.0	123.0	116.1	114.8	128.4	113.4	109.3	102.5	106.6	84.7	90.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834536

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5STD-27-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5	6250.5
2.5°	6277.9	6264.2	6251.9	6209.6	6227.3	6183.6	6180.9	6164.5	6152.2	6129.0	6159.0
5°	6257.4	6230.1	6194.5	6144.0	6159.0	6107.1	6096.2	6077.0	6060.6	6030.6	6053.8
7.5°	6224.6	6179.5	6123.5	6059.3	6079.8	6015.6	5999.2	5978.7	5965.0	5929.5	5950.0
10°	6176.8	6112.6	6047.0	5969.1	5984.1	5914.5	5894.0	5872.1	5859.8	5828.4	5848.9
12.5°	6103.0	6025.1	5936.3	5851.6	5868.0	5802.4	5775.1	5751.9	5747.8	5721.8	5746.4
15°	6007.4	5899.4	5807.9	5717.7	5736.8	5660.3	5648.0	5624.8	5631.6	5613.9	5643.9
17.5°	5885.8	5761.4	5661.7	5564.7	5583.8	5519.6	5510.0	5499.1	5505.9	5503.2	5536.0
20°	5749.1	5612.5	5497.7	5402.1	5413.0	5362.5	5366.6	5363.9	5377.5	5392.5	5437.6
22.5°	5594.8	5440.4	5320.1	5221.8	5238.2	5194.4	5213.6	5219.0	5242.3	5276.4	5333.8
25°	5421.2	5255.9	5130.2	5037.3	5052.4	5023.7	5056.5	5070.1	5107.0	5164.4	5223.1
27.5°	5239.5	5064.7	4930.8	4842.0	4870.6	4842.0	4891.1	4918.5	4974.5	5037.3	5109.7
30°	5046.9	4865.2	4727.2	4647.9	4675.3	4649.3	4728.6	4765.4	4821.5	4907.5	4993.6
32.5°	4844.7	4653.4	4518.2	4456.7	4475.8	4471.7	4560.5	4601.5	4676.6	4775.0	4866.5
35°	4637.0	4437.5	4300.9	4249.0	4272.2	4277.7	4384.3	4432.1	4514.1	4632.9	4731.3
37.5°	4422.5	4218.9	4085.1	4042.7	4063.2	4083.7	4208.0	4255.8	4348.7	4478.5	4586.5
40°	4199.8	3996.3	3865.1	3830.9	3851.4	3873.3	4008.5	4074.1	4175.2	4316.0	4433.4
42.5°	3974.4	3770.8	3643.8	3619.2	3639.7	3682.0	3825.5	3887.0	3993.5	4149.3	4279.1
45°	3744.9	3533.1	3422.4	3403.3	3425.2	3474.3	3615.1	3688.8	3802.2	3973.0	4112.4
47.5°	3512.6	3306.3	3201.1	3188.8	3210.7	3265.3	3421.1	3488.0	3608.2	3789.9	3940.2
50°	3277.6	3076.8	2975.7	2971.6	2992.1	3050.8	3199.7	3279.0	3403.3	3606.9	3761.3
52.5°	3039.9	2847.2	2755.7	2755.7	2774.8	2834.9	2985.2	3067.2	3195.6	3410.1	3580.9
55°	2802.2	2619.1	2531.6	2538.5	2565.8	2617.7	2763.9	2850.0	2979.8	3202.5	3382.8
57.5°	2564.4	2390.9	2311.7	2321.2	2347.2	2399.1	2542.6	2639.6	2757.1	2988.0	3172.4
60°	2329.4	2165.5	2095.8	2106.7	2130.0	2181.9	2330.8	2414.1	2531.6	2766.6	2951.1
62.5°	2091.7	1942.8	1877.2	1890.9	1911.4	1963.3	2104.0	2184.6	2300.7	2531.6	2717.5
65°	1856.7	1718.7	1662.7	1676.4	1695.5	1743.3	1875.8	1953.7	2064.4	2289.8	2467.4
67.5°	1624.5	1498.8	1452.3	1466.0	1481.0	1526.1	1635.4	1720.1	1823.9	2038.4	2206.5
70°	1394.9	1282.9	1241.9	1255.6	1269.2	1310.2	1405.9	1483.7	1579.4	1776.1	1931.9
72.5°	1168.1	1058.8	1038.3	1050.6	1061.6	1097.1	1188.6	1250.1	1333.5	1508.3	1642.2
75°	946.8	852.5	838.9	851.2	860.7	888.1	964.6	1017.8	1087.5	1239.2	1348.5
77.5°	733.7	654.4	649.0	658.5	668.1	687.2	747.3	803.3	858.0	970.0	1067.0
80°	534.2	470.0	470.0	479.6	476.8	500.0	542.4	587.5	627.1	707.7	778.8
82.5°	352.5	301.9	308.8	315.6	319.7	329.3	355.2	389.4	414.0	463.2	509.6
85°	195.4	161.2	168.0	173.5	170.8	181.7	195.4	215.9	228.2	251.4	276.0
87.5°	72.4	60.1	61.5	65.6	68.3	73.8	73.8	86.1	87.4	90.2	95.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834536

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5STD-27-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	6250.5	6250.5	6250.5
2.5°	6101.6	6134.4	6159.0
5°	5996.4	6023.8	6045.6
7.5°	5894.0	5918.6	5937.7
10°	5797.0	5824.3	5837.9
12.5°	5697.2	5728.6	5739.6
15°	5598.9	5630.3	5643.9
17.5°	5497.7	5538.7	5553.8
20°	5403.5	5455.4	5467.7
22.5°	5307.8	5361.1	5376.2
25°	5204.0	5266.9	5281.9
27.5°	5093.3	5168.5	5183.5
30°	4982.7	5064.7	5079.7
32.5°	4863.8	4952.6	4966.3
35°	4739.5	4828.3	4844.7
37.5°	4601.5	4698.5	4731.3
40°	4458.0	4563.2	4597.4
42.5°	4307.8	4422.5	4458.0
45°	4146.5	4272.2	4313.2
47.5°	3984.0	4126.0	4161.6
50°	3807.7	3959.4	4001.7
52.5°	3623.3	3788.6	3830.9
55°	3432.0	3598.7	3645.1
57.5°	3224.3	3396.5	3445.7
60°	3007.1	3179.2	3225.7
62.5°	2784.4	2940.1	2985.2
65°	2535.7	2681.9	2722.9
67.5°	2272.1	2405.9	2440.1
70°	1992.0	2108.1	2138.2
72.5°	1699.6	1780.2	1819.8
75°	1397.7	1461.9	1491.9
77.5°	1094.4	1139.4	1164.0
80°	797.9	823.8	844.3
82.5°	521.9	532.8	547.9
85°	281.4	281.4	291.0
87.5°	95.6	91.5	95.6
90°	0.0	0.0	0.0

(END OF REPORT)