

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: P486970

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-2LO-20-120-EDD-90**

Issue Date: 3/1/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P486970
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35357)
Test Lab: INNOVATION CENTER
Issue Date: 3/1/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-89BC-LD4-2LO-20-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

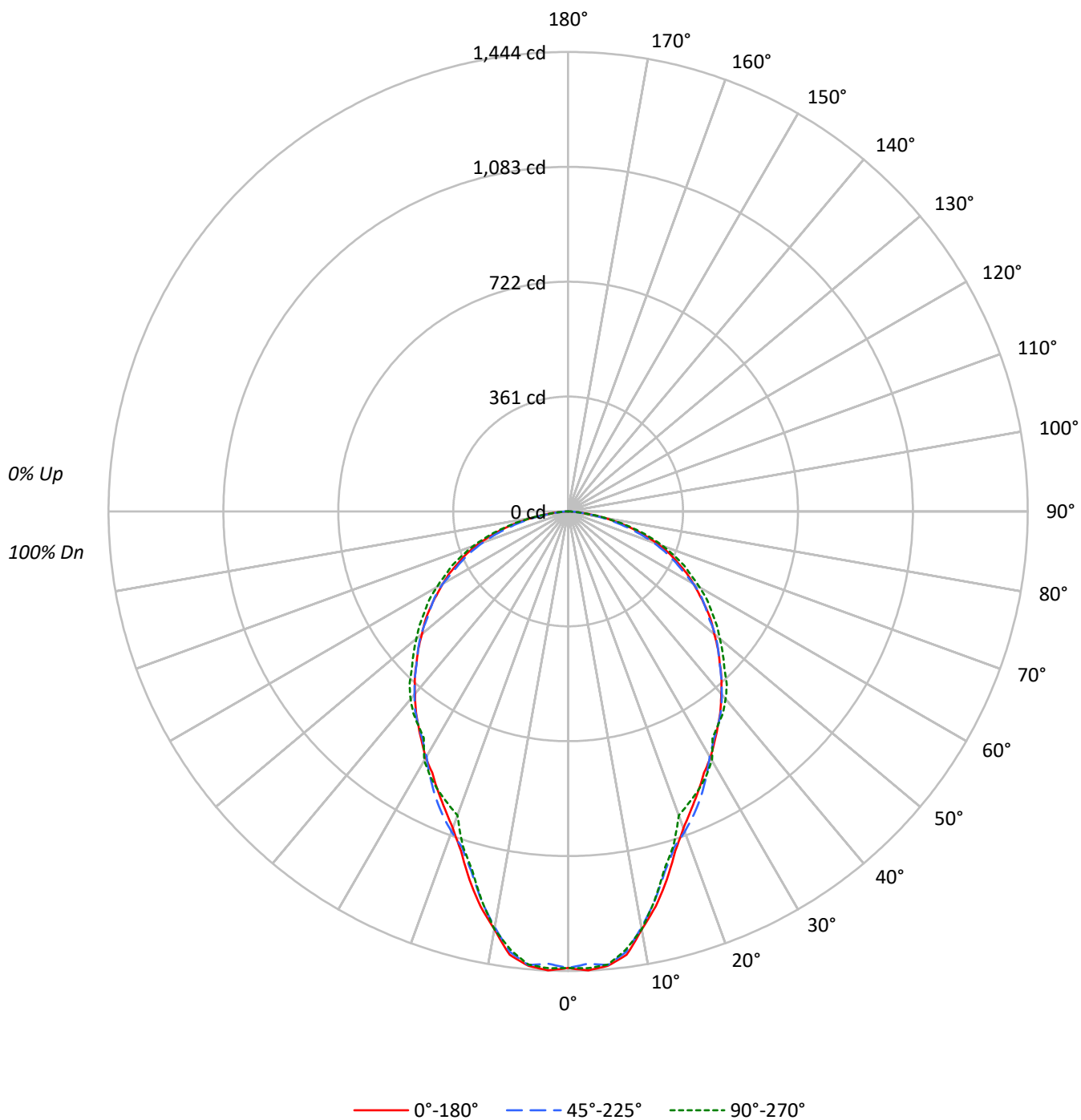
Lumens per Lamp: N/A
Luminaire Lumens: 3068.2 lumens
Efficiency: N/A
Efficacy: 65.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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

TEST NUMBER: P486970

CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-2LO-20-120-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P486970

CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-2LO-20-120-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	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
1	109	104	100	96	106	102	98	95		98	95	92		94	91	89		90	88	86
2	99	91	84	79	97	89	83	78		86	81	76		82	78	74		79	76	73
3	91	80	72	66	88	79	71	65		76	69	64		73	67	63		70	66	62
4	83	71	63	56	81	70	62	56		67	60	55		65	59	54		63	58	53
5	77	64	55	48	75	63	54	48		61	53	48		59	52	47		57	51	47
6	71	58	49	43	69	57	48	42		55	48	42		53	47	42		52	46	41
7	66	53	44	38	64	52	44	38		50	43	37		49	42	37		47	41	37
8	61	48	40	34	60	47	39	34		46	39	34		45	38	33		44	38	33
9	58	44	36	31	56	44	36	31		43	35	30		41	35	30		40	35	30
10	54	41	33	28	53	40	33	28		40	33	28		39	32	28		38	32	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1930	1930	1930
5°	1936	1933	1931
10°	1821	1813	1821
15°	1669	1633	1623
20°	1516	1533	1455
25°	1438	1466	1435
30°	1389	1383	1404
35°	1348	1348	1348
40°	1314	1320	1352
45°	1282	1280	1320
50°	1254	1263	1302
55°	1241	1236	1292
60°	1225	1223	1285
65°	1209	1171	1278
70°	1186	1118	1244
75°	1097	993	1152
80°	890	809	914
85°	565	506	496



TEST NUMBER: P486970

CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-2LO-20-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.3	4.3
10°-20°	333.1	10.9
20°-30°	449.9	14.7
30°-40°	515.2	16.8
40°-50°	527.7	17.2
50°-60°	478.8	15.6
60°-70°	373.7	12.2
70°-80°	212.0	6.9
80°-90°	44.5	1.5
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°	916.3	29.9
0°-40°	1431.5	46.7
0°-60°	2438.0	79.5
0°-90°	3068.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3068.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1435	1435	1435	1435	1435	
5°	1433	1417	1431	1434	1429	134
15°	1198	1202	1172	1178	1165	335
25°	968	981	988	964	967	447
35°	821	822	821	821	821	514
45°	674	679	673	700	694	521
55°	529	528	527	545	551	473
65°	380	372	368	385	401	376
75°	211	196	191	202	222	221
85°	37	33	33	31	32	48
90°	0	0	0	0	0	



TEST NUMBER: P486970

CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-2LO-20-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1434.7	1434.7	1434.7	1434.7	1434.7
2.5°	1443.6	1432.4	1422.7	1438.4	1436.9
5°	1433.2	1416.8	1430.9	1433.9	1429.4
7.5°	1405.6	1395.1	1395.9	1389.9	1389.2
10°	1333.2	1339.2	1327.2	1337.7	1332.5
12.5°	1271.3	1275.0	1254.1	1258.6	1252.6
15°	1198.2	1201.9	1172.1	1178.0	1165.3
17.5°	1118.3	1131.8	1107.1	1114.6	1101.2
20°	1058.7	1069.8	1070.6	1058.7	1016.1
22.5°	1011.7	1022.8	1031.8	996.0	991.5
25°	968.4	981.1	987.8	963.9	966.9
27.5°	925.1	939.3	939.3	944.5	937.8
30°	893.8	899.7	890.0	909.4	903.5
32.5°	856.5	858.7	850.5	864.7	843.8
35°	820.7	822.2	820.7	821.4	820.7
37.5°	786.3	782.6	789.3	784.9	799.0
40°	748.3	748.3	751.3	758.7	769.9
42.5°	713.2	716.2	712.5	733.4	737.8
45°	673.7	678.9	672.9	700.5	693.8
47.5°	637.9	640.1	638.6	657.3	658.8
50°	599.1	602.1	603.6	620.0	622.2
52.5°	567.0	566.3	561.0	584.9	588.6
55°	529.0	528.2	526.7	545.4	550.6
57.5°	490.2	490.9	494.6	505.1	517.8
60°	455.1	451.4	454.3	467.0	477.5
62.5°	419.3	412.6	405.9	426.7	436.4
65°	379.7	371.5	367.8	385.0	401.4
67.5°	343.2	329.8	327.5	339.5	358.9
70°	301.4	285.0	284.2	293.2	316.3
72.5°	255.2	241.0	237.2	249.2	270.1
75°	211.1	195.5	191.0	202.2	221.6
77.5°	163.4	150.7	147.7	153.7	169.4
80°	114.9	107.4	104.4	106.7	117.9
82.5°	72.4	67.1	65.7	64.9	70.9
85°	36.6	32.8	32.8	30.6	32.1
87.5°	11.2	10.4	9.7	7.5	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)