

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: P486944

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-1LO-50-120-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: P486944
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-LD4-1LO-50-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

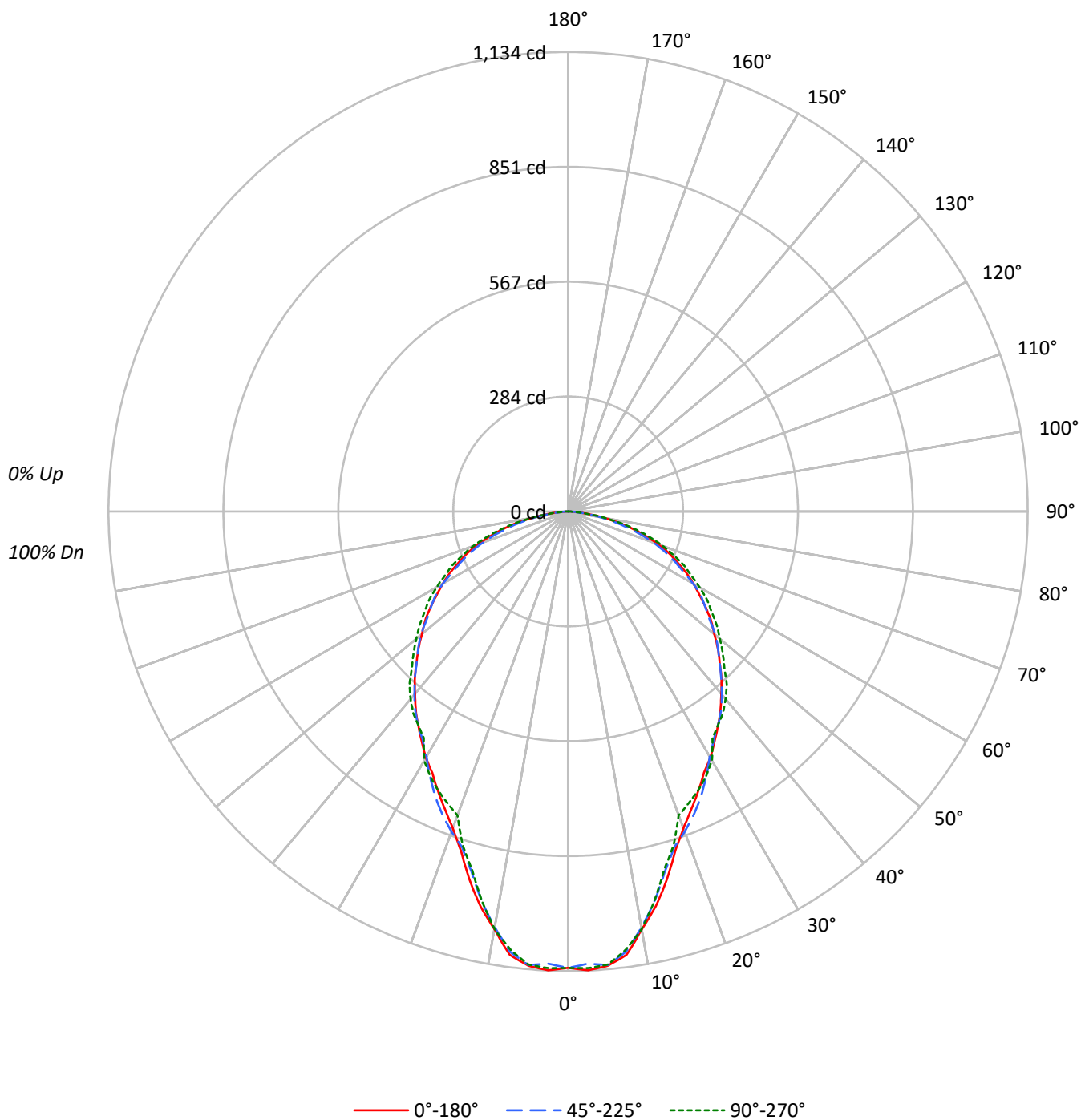
Lumens per Lamp: N/A
Luminaire Lumens: 2409.3 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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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Luminous Intensity Polar Plot





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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°	1516	1516	1516
5°	1520	1518	1516
10°	1430	1424	1430
15°	1311	1282	1275
20°	1190	1204	1142
25°	1129	1152	1127
30°	1090	1086	1102
35°	1058	1058	1058
40°	1032	1036	1062
45°	1007	1005	1037
50°	985	992	1023
55°	974	970	1014
60°	962	960	1009
65°	949	919	1004
70°	931	878	977
75°	862	780	905
80°	699	635	717
85°	443	398	389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.6	4.3
10°-20°	261.6	10.9
20°-30°	353.3	14.7
30°-40°	404.5	16.8
40°-50°	414.4	17.2
50°-60°	376.0	15.6
60°-70°	293.5	12.2
70°-80°	166.5	6.9
80°-90°	34.9	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°	719.5	29.9
0°-40°	1124.1	46.7
0°-60°	1914.4	79.5
0°-90°	2409.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2409.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1127	1127	1127	1127	1127	
5°	1125	1112	1124	1126	1122	105
15°	941	944	920	925	915	263
25°	760	770	776	757	759	351
35°	644	646	644	645	644	404
45°	529	533	528	550	545	409
55°	415	415	414	428	432	371
65°	298	292	289	302	315	296
75°	166	154	150	159	174	173
85°	29	26	26	24	25	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1126.6	1126.6	1126.6	1126.6	1126.6
2.5°	1133.6	1124.8	1117.2	1129.5	1128.3
5°	1125.4	1112.5	1123.6	1126.0	1122.5
7.5°	1103.7	1095.5	1096.1	1091.4	1090.8
10°	1046.9	1051.6	1042.2	1050.4	1046.3
12.5°	998.3	1001.2	984.8	988.3	983.6
15°	940.9	943.8	920.4	925.0	915.1
17.5°	878.2	888.7	869.4	875.2	864.7
20°	831.3	840.1	840.7	831.3	797.9
22.5°	794.4	803.2	810.2	782.1	778.6
25°	760.4	770.4	775.7	756.9	759.2
27.5°	726.4	737.6	737.6	741.7	736.4
30°	701.8	706.5	698.9	714.1	709.5
32.5°	672.5	674.3	667.9	679.0	662.6
35°	644.4	645.6	644.4	645.0	644.4
37.5°	617.5	614.5	619.8	616.3	627.4
40°	587.6	587.6	589.9	595.8	604.6
42.5°	560.1	562.4	559.5	575.9	579.4
45°	529.0	533.1	528.4	550.1	544.8
47.5°	500.9	502.7	501.5	516.1	517.3
50°	470.4	472.8	473.9	486.8	488.6
52.5°	445.2	444.7	440.6	459.3	462.2
55°	415.4	414.8	413.6	428.2	432.3
57.5°	384.9	385.5	388.4	396.6	406.6
60°	357.4	354.4	356.8	366.7	374.9
62.5°	329.2	324.0	318.7	335.1	342.7
65°	298.2	291.7	288.8	302.3	315.2
67.5°	269.5	258.9	257.2	266.6	281.8
70°	236.7	223.8	223.2	230.2	248.4
72.5°	200.4	189.2	186.3	195.7	212.1
75°	165.8	153.5	150.0	158.8	174.0
77.5°	128.3	118.3	116.0	120.7	133.0
80°	90.2	84.4	82.0	83.8	92.6
82.5°	56.8	52.7	51.6	51.0	55.7
85°	28.7	25.8	25.8	24.0	25.2
87.5°	8.8	8.2	7.6	5.9	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)