

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: P545612

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-82-94-EDD**

Issue Date: 6/15/2021

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: P545612
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-12-2-LD4-2HI-50-UNV-82-94-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

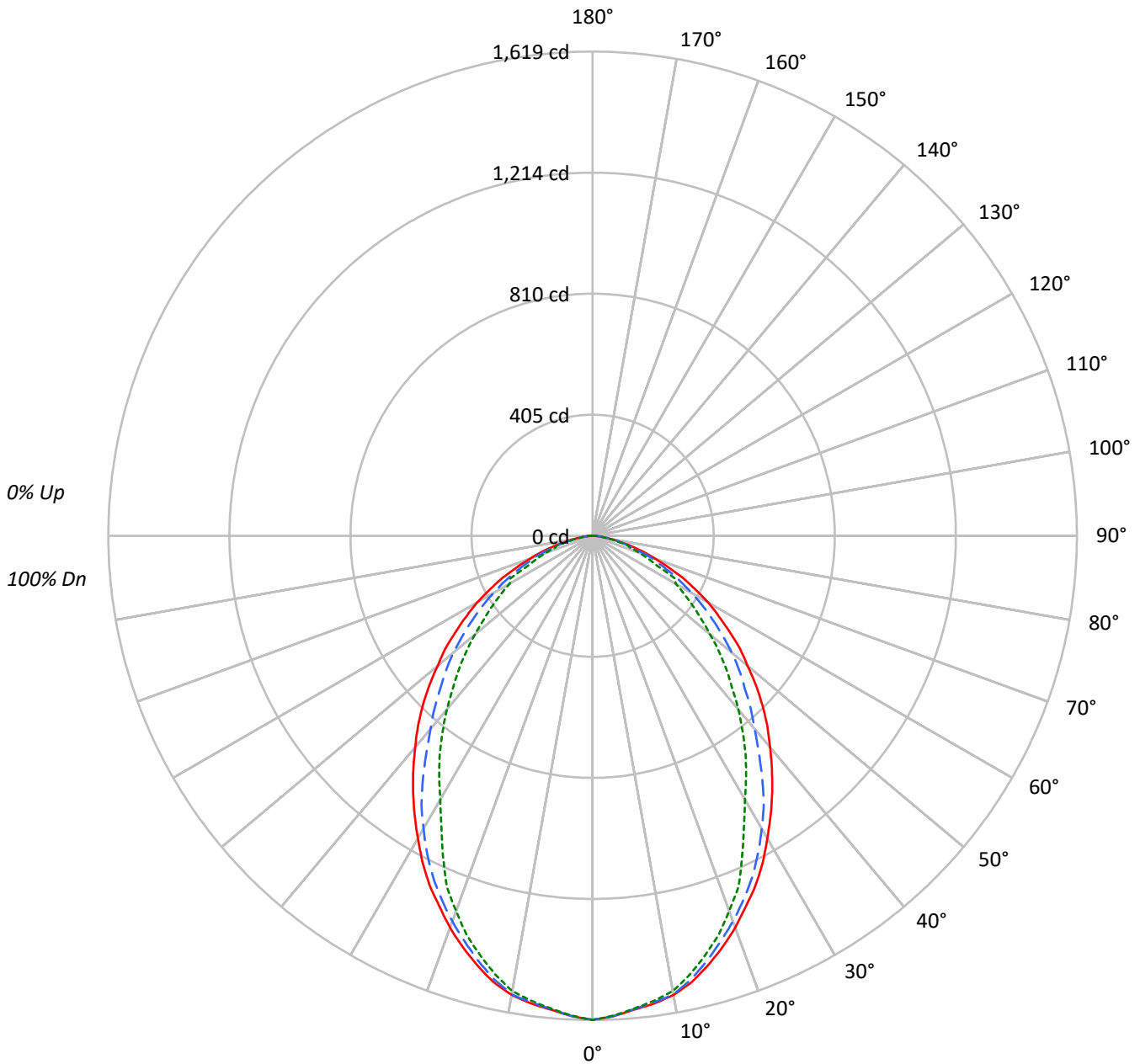
Lumens per Lamp: N/A
Luminaire Lumens: 3178.0 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8712	8712	8712
5°	8594	8584	8574
10°	8519	8510	8448
15°	8290	8207	8092
20°	7986	7857	7643
25°	7657	7491	7024
30°	7257	7025	6327
35°	6874	6492	5853
40°	6482	5917	5325
45°	6111	5469	4815
50°	5657	5077	4294
55°	5233	4601	3846
60°	4794	4110	3444
65°	4219	3599	3050
70°	3474	3150	2592
75°	2764	2412	2529
80°	1857	1739	1624
85°	1155	1389	1618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	4.7
10°-20°	413.6	13.0
20°-30°	572.5	18.0
30°-40°	610.5	19.2
40°-50°	557.0	17.5
50°-60°	436.3	13.7
60°-70°	284.4	8.9
70°-80°	126.0	4.0
80°-90°	27.1	0.9
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°	1136.8	35.8
0°-40°	1747.3	55.0
0°-60°	2740.6	86.2
0°-90°	3178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1619	1619	1619	1619	1619	
5°	1591	1589	1589	1587	1587	151
15°	1488	1488	1473	1458	1452	418
25°	1290	1282	1261	1216	1183	592
35°	1046	1039	988	913	891	654
45°	803	786	719	659	633	618
55°	558	541	490	432	410	500
65°	331	312	283	288	240	326
75°	133	124	116	110	122	142
85°	19	21	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1618.8	1618.8	1618.8	1618.8	1618.8
2.5°	1607.6	1607.6	1607.6	1605.7	1605.7
5°	1590.8	1588.9	1588.9	1587.0	1587.0
7.5°	1577.7	1575.8	1573.9	1572.0	1568.3
10°	1558.9	1558.9	1557.1	1547.7	1545.8
12.5°	1529.0	1527.1	1519.6	1506.5	1502.8
15°	1487.8	1487.8	1472.9	1457.9	1452.3
17.5°	1442.9	1441.0	1422.3	1407.4	1399.9
20°	1394.3	1390.5	1371.8	1347.5	1334.4
22.5°	1340.0	1340.0	1317.5	1285.7	1272.6
25°	1289.5	1282.0	1261.4	1216.5	1182.8
27.5°	1231.4	1220.2	1197.7	1134.1	1094.8
30°	1167.8	1162.2	1130.4	1048.0	1018.1
32.5°	1107.9	1098.6	1064.9	978.8	954.5
35°	1046.2	1038.7	988.1	913.3	890.8
37.5°	984.4	975.0	911.4	851.5	823.5
40°	922.6	911.4	842.2	787.9	757.9
42.5°	864.6	849.7	782.3	724.3	690.6
45°	802.9	786.0	718.6	658.8	632.6
47.5°	741.1	726.1	664.4	602.6	572.7
50°	675.6	662.5	606.4	544.6	512.8
52.5°	621.3	600.7	546.5	484.7	458.5
55°	557.7	540.9	490.3	432.3	409.9
57.5°	499.7	482.8	436.1	381.8	363.1
60°	445.4	421.1	381.8	335.0	320.0
62.5°	385.5	366.8	333.1	293.8	312.5
65°	331.3	312.5	282.6	288.2	239.5
67.5°	271.4	262.0	235.8	209.6	202.1
70°	220.8	209.6	200.2	172.2	164.7
72.5°	175.9	164.7	151.6	136.6	131.0
75°	132.9	123.5	116.0	110.4	121.6
77.5°	91.7	88.0	82.3	76.7	74.9
80°	59.9	58.0	56.1	54.3	52.4
82.5°	35.6	35.6	35.6	35.6	35.6
85°	18.7	20.6	22.5	24.3	26.2
87.5°	11.2	11.2	13.1	15.0	16.8
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)