

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: P545540

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-81-94-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: P545540
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-35-UNV-81-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

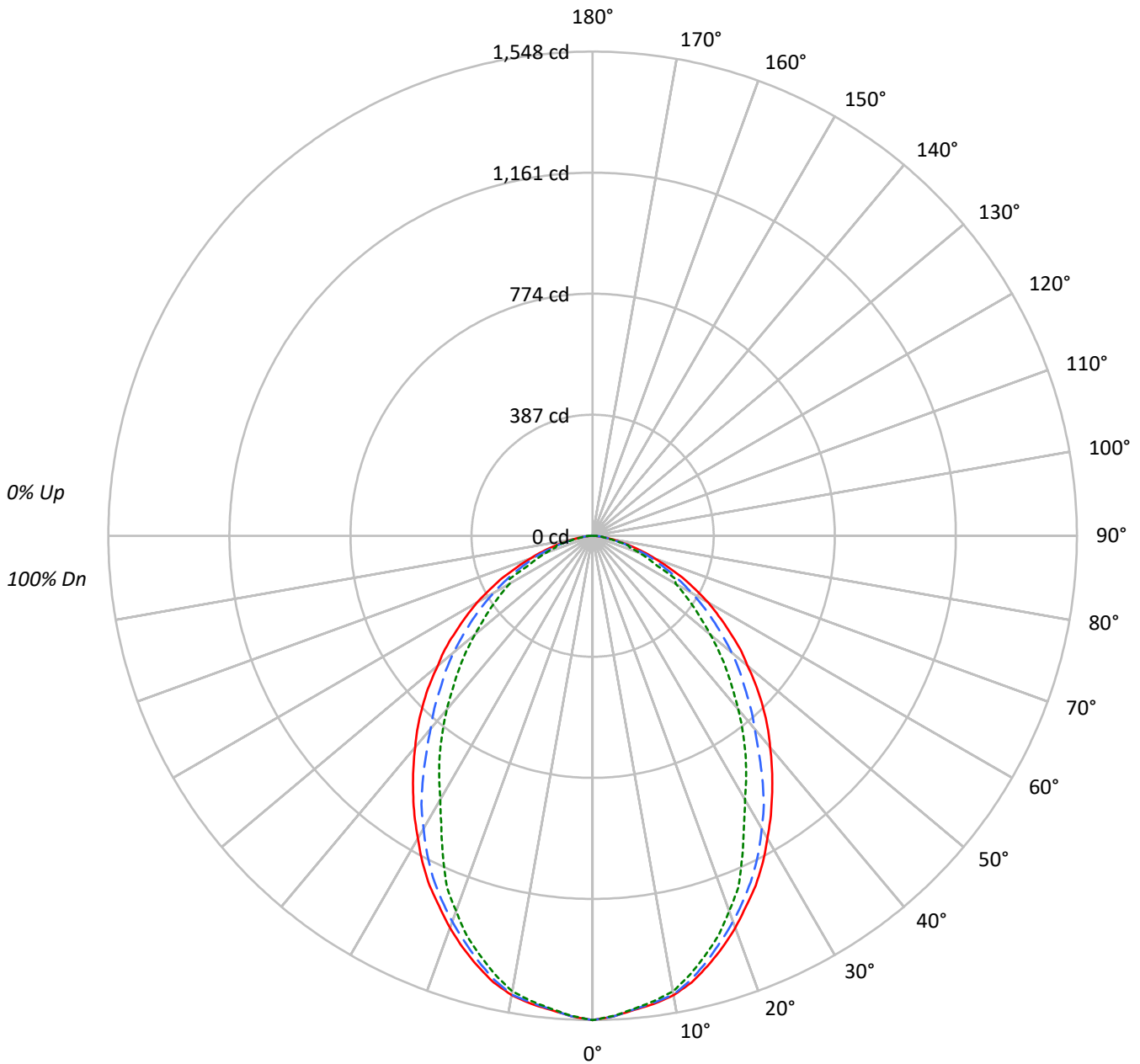
Lumens per Lamp: N/A
Luminaire Lumens: 3040.0 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	8334	8334	8334
5°	8221	8211	8202
10°	8149	8140	8081
15°	7930	7850	7740
20°	7639	7515	7310
25°	7325	7165	6719
30°	6942	6720	6052
35°	6575	6210	5598
40°	6201	5660	5094
45°	5845	5232	4606
50°	5411	4856	4107
55°	5006	4401	3679
60°	4587	3931	3295
65°	4036	3442	2918
70°	3323	3015	2478
75°	2643	2308	2420
80°	1776	1664	1553
85°	1105	1328	1550



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.1	4.7
10°-20°	395.6	13.0
20°-30°	547.7	18.0
30°-40°	584.0	19.2
40°-50°	532.8	17.5
50°-60°	417.4	13.7
60°-70°	272.0	8.9
70°-80°	120.5	4.0
80°-90°	25.9	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°	1087.4	35.8
0°-40°	1671.4	55.0
0°-60°	2621.6	86.2
0°-90°	3040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1548	1548	1548	1548	1548	
5°	1522	1520	1520	1518	1518	144
15°	1423	1423	1409	1395	1389	400
25°	1234	1226	1207	1164	1131	566
35°	1001	994	945	874	852	626
45°	768	752	687	630	605	592
55°	534	517	469	414	392	479
65°	317	299	270	276	229	312
75°	127	118	111	106	116	136
85°	18	20	22	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1548.5	1548.5	1548.5	1548.5	1548.5
2.5°	1537.8	1537.8	1537.8	1536.0	1536.0
5°	1521.7	1519.9	1519.9	1518.1	1518.1
7.5°	1509.2	1507.4	1505.6	1503.8	1500.2
10°	1491.2	1491.2	1489.5	1480.5	1478.7
12.5°	1462.6	1460.8	1453.7	1441.1	1437.5
15°	1423.2	1423.2	1408.9	1394.6	1389.2
17.5°	1380.3	1378.5	1360.6	1346.2	1339.1
20°	1333.7	1330.1	1312.2	1289.0	1276.4
22.5°	1281.8	1281.8	1260.3	1229.9	1217.3
25°	1233.5	1226.3	1206.6	1163.6	1131.4
27.5°	1178.0	1167.2	1145.7	1084.9	1047.3
30°	1117.1	1111.7	1081.3	1002.5	973.9
32.5°	1059.8	1050.9	1018.6	936.3	913.0
35°	1000.7	993.6	945.2	873.6	852.1
37.5°	941.7	932.7	871.8	814.5	787.7
40°	882.6	871.8	805.6	753.7	725.0
42.5°	827.1	812.8	748.3	692.8	660.6
45°	768.0	751.9	687.4	630.2	605.1
47.5°	708.9	694.6	635.5	576.4	547.8
50°	646.3	633.7	580.0	521.0	490.5
52.5°	594.4	574.7	522.7	463.7	438.6
55°	533.5	517.4	469.0	413.5	392.1
57.5°	478.0	461.9	417.1	365.2	347.3
60°	426.1	402.8	365.2	320.4	306.1
62.5°	368.8	350.9	318.7	281.1	299.0
65°	316.9	299.0	270.3	275.7	229.1
67.5°	259.6	250.6	225.6	200.5	193.3
70°	211.2	200.5	191.6	164.7	157.5
72.5°	168.3	157.5	145.0	130.7	125.3
75°	127.1	118.2	111.0	105.6	116.4
77.5°	87.7	84.1	78.8	73.4	71.6
80°	57.3	55.5	53.7	51.9	50.1
82.5°	34.0	34.0	34.0	34.0	34.0
85°	17.9	19.7	21.5	23.3	25.1
87.5°	10.7	10.7	12.5	14.3	16.1
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)