

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: P545034

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-82-87-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: P545034
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-12-1-LD4-2HI-50-UNV-82-87-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

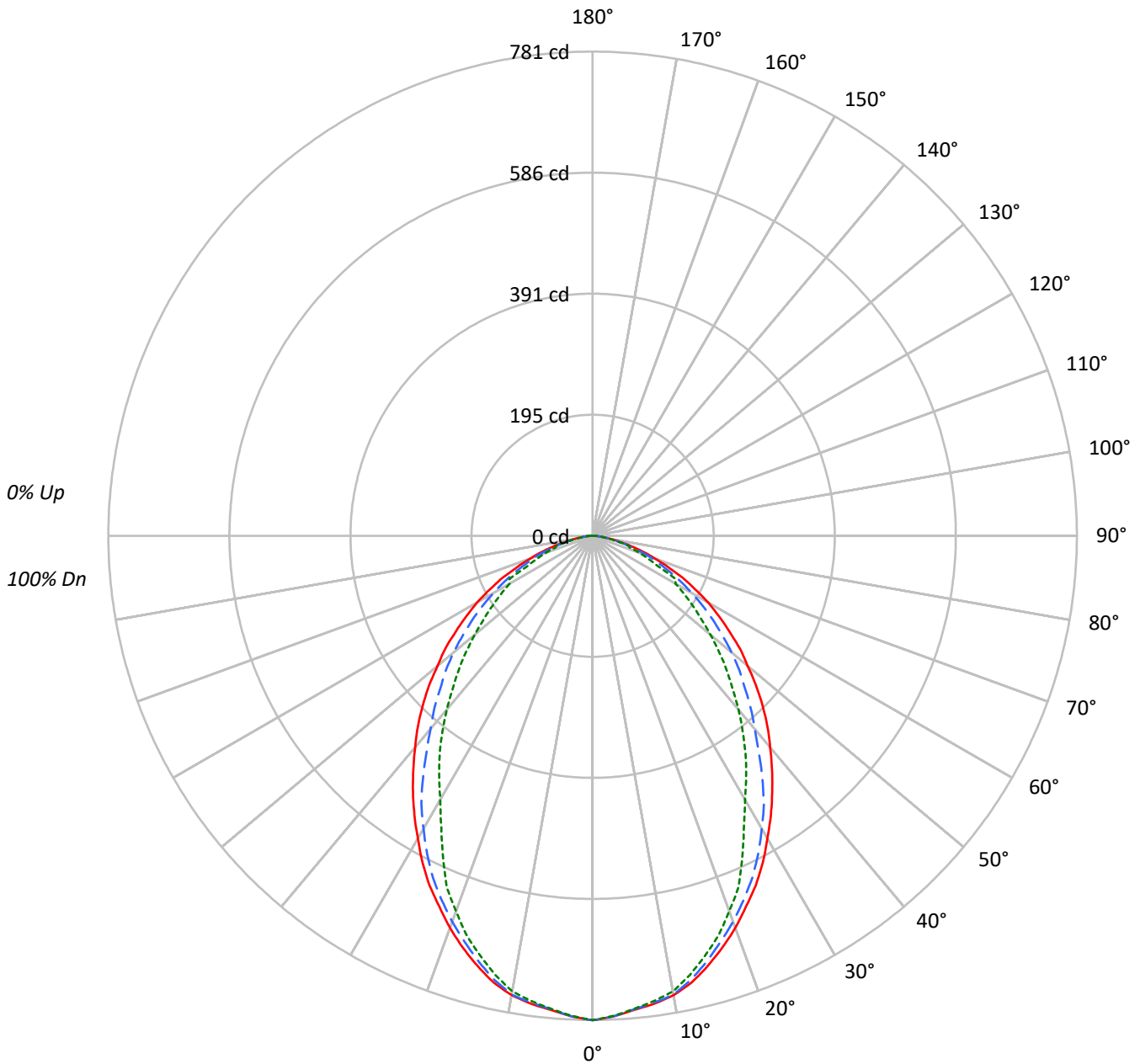
Lumens per Lamp: N/A
Luminaire Lumens: 1534.0 lumens
Efficiency: N/A
Efficacy: 71.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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				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			100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8411	8411	8411
5°	8296	8286	8277
10°	8225	8215	8156
15°	8003	7922	7812
20°	7709	7585	7378
25°	7392	7232	6780
30°	7006	6781	6108
35°	6636	6268	5650
40°	6258	5712	5141
45°	5899	5281	4647
50°	5461	4901	4145
55°	5052	4442	3712
60°	4628	3968	3326
65°	4073	3474	2944
70°	3355	3043	2502
75°	2666	2329	2441
80°	1791	1680	1568
85°	1112	1334	1556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.7	4.7
10°-20°	199.6	13.0
20°-30°	276.4	18.0
30°-40°	294.7	19.2
40°-50°	268.8	17.5
50°-60°	210.6	13.7
60°-70°	137.3	8.9
70°-80°	60.8	4.0
80°-90°	13.0	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°	548.7	35.8
0°-40°	843.4	55.0
0°-60°	1322.9	86.2
0°-90°	1534.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1534.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	781	781	781	781	781	
5°	768	767	767	766	766	73
15°	718	718	711	704	701	202
25°	622	619	609	587	571	286
35°	505	501	477	441	430	316
45°	388	379	347	318	305	298
55°	269	261	237	209	198	241
65°	160	151	136	139	116	158
75°	64	60	56	53	59	69
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	781.4	781.4	781.4	781.4	781.4
2.5°	776.0	776.0	776.0	775.1	775.1
5°	767.8	766.9	766.9	766.0	766.0
7.5°	761.5	760.6	759.7	758.8	757.0
10°	752.5	752.5	751.6	747.1	746.2
12.5°	738.0	737.1	733.5	727.2	725.4
15°	718.2	718.2	710.9	703.7	701.0
17.5°	696.5	695.6	686.5	679.3	675.7
20°	673.0	671.2	662.2	650.4	644.1
22.5°	646.8	646.8	636.0	620.6	614.3
25°	622.4	618.8	608.9	587.2	570.9
27.5°	594.4	589.0	578.1	547.4	528.5
30°	563.7	561.0	545.6	505.9	491.4
32.5°	534.8	530.3	514.0	472.5	460.7
35°	505.0	501.4	477.0	440.8	430.0
37.5°	475.2	470.6	439.9	411.0	397.5
40°	445.4	439.9	406.5	380.3	365.9
42.5°	417.3	410.1	377.6	349.6	333.3
45°	387.5	379.4	346.9	318.0	305.3
47.5°	357.7	350.5	320.7	290.9	276.4
50°	326.1	319.8	292.7	262.9	247.5
52.5°	299.9	290.0	263.8	234.0	221.3
55°	269.2	261.1	236.7	208.7	197.8
57.5°	241.2	233.1	210.5	184.3	175.3
60°	215.0	203.3	184.3	161.7	154.5
62.5°	186.1	177.1	160.8	141.8	150.9
65°	159.9	150.9	136.4	139.1	115.6
67.5°	131.0	126.5	113.8	101.2	97.6
70°	106.6	101.2	96.7	83.1	79.5
72.5°	84.9	79.5	73.2	65.9	63.2
75°	64.1	59.6	56.0	53.3	58.7
77.5°	44.3	42.5	39.7	37.0	36.1
80°	28.9	28.0	27.1	26.2	25.3
82.5°	17.2	17.2	17.2	17.2	17.2
85°	9.0	9.9	10.8	11.7	12.6
87.5°	5.4	5.4	6.3	7.2	8.1
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)