

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: P545122

Luminaire Tested: **FMR-12-1-LD4-2LO-50-UNV-81-87-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: P545122
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-LD4-2LO-50-UNV-81-87-EDD
Description: 1X1 FMR TROFFER WITH .156 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

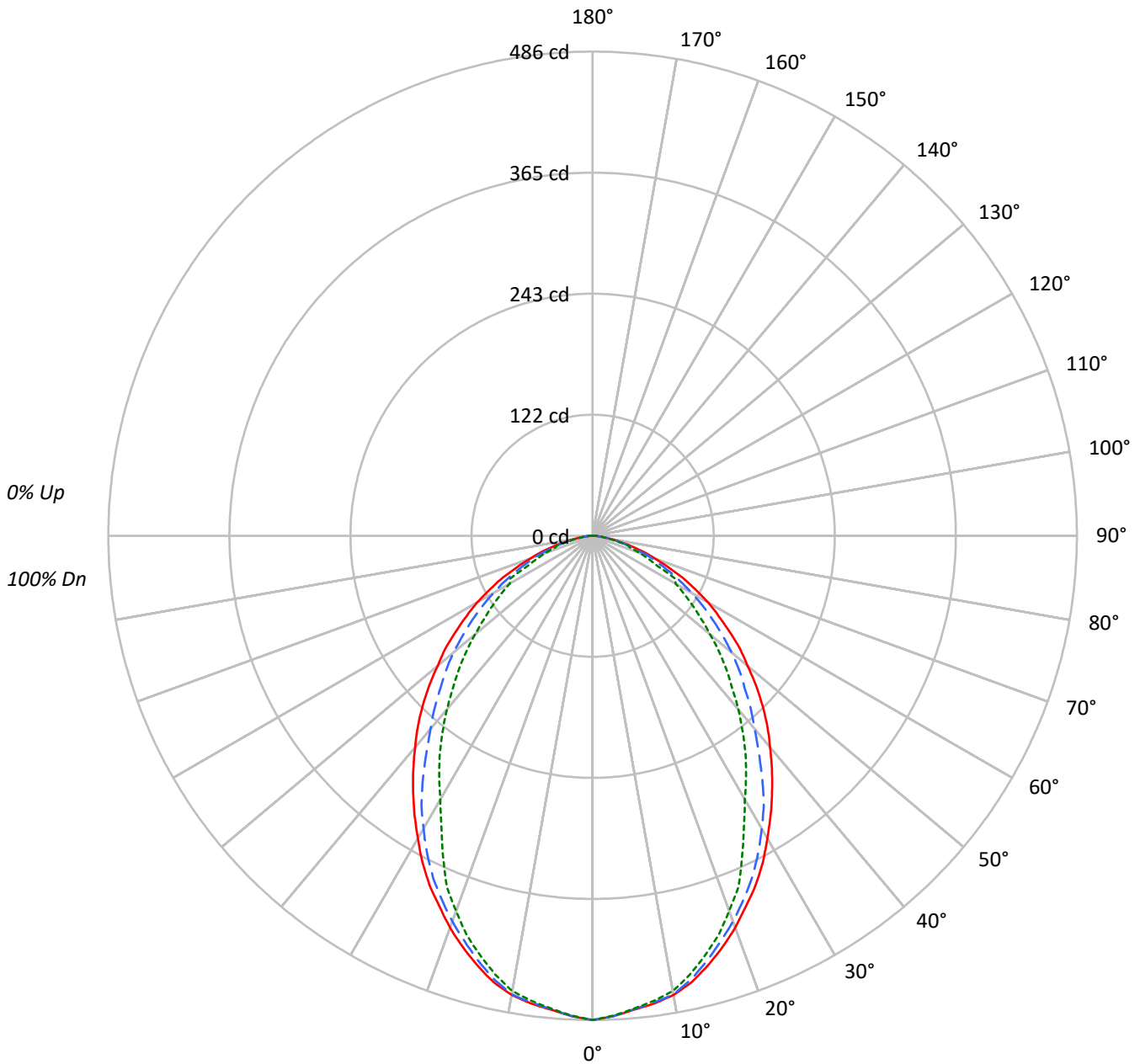
Lumens per Lamp: N/A
Luminaire Lumens: 954.0 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	5231	5231	5231
5°	5159	5154	5148
10°	5115	5109	5072
15°	4977	4927	4859
20°	4794	4717	4589
25°	4597	4498	4217
30°	4358	4217	3798
35°	4126	3897	3514
40°	3892	3552	3197
45°	3669	3283	2891
50°	3396	3048	2577
55°	3141	2762	2308
60°	2878	2467	2069
65°	2532	2160	1831
70°	2087	1891	1555
75°	1659	1447	1518
80°	1116	1048	973
85°	692	827	976



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.2	4.7
10°-20°	124.1	13.0
20°-30°	171.9	18.0
30°-40°	183.3	19.2
40°-50°	167.2	17.5
50°-60°	131.0	13.7
60°-70°	85.4	8.9
70°-80°	37.8	4.0
80°-90°	8.1	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°	341.3	35.8
0°-40°	524.5	55.0
0°-60°	822.7	86.2
0°-90°	954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	478	477	477	476	476	45
15°	447	447	442	438	436	126
25°	387	385	379	365	355	178
35°	314	312	297	274	267	196
45°	241	236	216	198	190	186
55°	167	162	147	130	123	150
65°	99	94	85	86	72	98
75°	40	37	35	33	36	43
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	486.0	486.0	486.0	486.0	486.0
2.5°	482.6	482.6	482.6	482.0	482.0
5°	477.5	477.0	477.0	476.4	476.4
7.5°	473.6	473.0	472.5	471.9	470.8
10°	468.0	468.0	467.4	464.6	464.0
12.5°	459.0	458.4	456.2	452.2	451.1
15°	446.6	446.6	442.1	437.6	436.0
17.5°	433.1	432.6	427.0	422.5	420.2
20°	418.5	417.4	411.8	404.5	400.6
22.5°	402.2	402.2	395.5	386.0	382.0
25°	387.1	384.8	378.7	365.2	355.1
27.5°	369.7	366.3	359.6	340.4	328.7
30°	350.6	348.9	339.3	314.6	305.6
32.5°	332.6	329.8	319.7	293.8	286.5
35°	314.0	311.8	296.6	274.2	267.4
37.5°	295.5	292.7	273.6	255.6	247.2
40°	277.0	273.6	252.8	236.5	227.5
42.5°	259.6	255.1	234.8	217.4	207.3
45°	241.0	236.0	215.7	197.8	189.9
47.5°	222.5	218.0	199.4	180.9	171.9
50°	202.8	198.9	182.0	163.5	153.9
52.5°	186.5	180.3	164.0	145.5	137.6
55°	167.4	162.4	147.2	129.8	123.0
57.5°	150.0	144.9	130.9	114.6	109.0
60°	133.7	126.4	114.6	100.6	96.1
62.5°	115.7	110.1	100.0	88.2	93.8
65°	99.4	93.8	84.8	86.5	71.9
67.5°	81.5	78.7	70.8	62.9	60.7
70°	66.3	62.9	60.1	51.7	49.4
72.5°	52.8	49.4	45.5	41.0	39.3
75°	39.9	37.1	34.8	33.1	36.5
77.5°	27.5	26.4	24.7	23.0	22.5
80°	18.0	17.4	16.9	16.3	15.7
82.5°	10.7	10.7	10.7	10.7	10.7
85°	5.6	6.2	6.7	7.3	7.9
87.5°	3.4	3.4	3.9	4.5	5.1
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)