

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: P544993

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-81-86-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: P544993
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-40-UNV-81-86-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

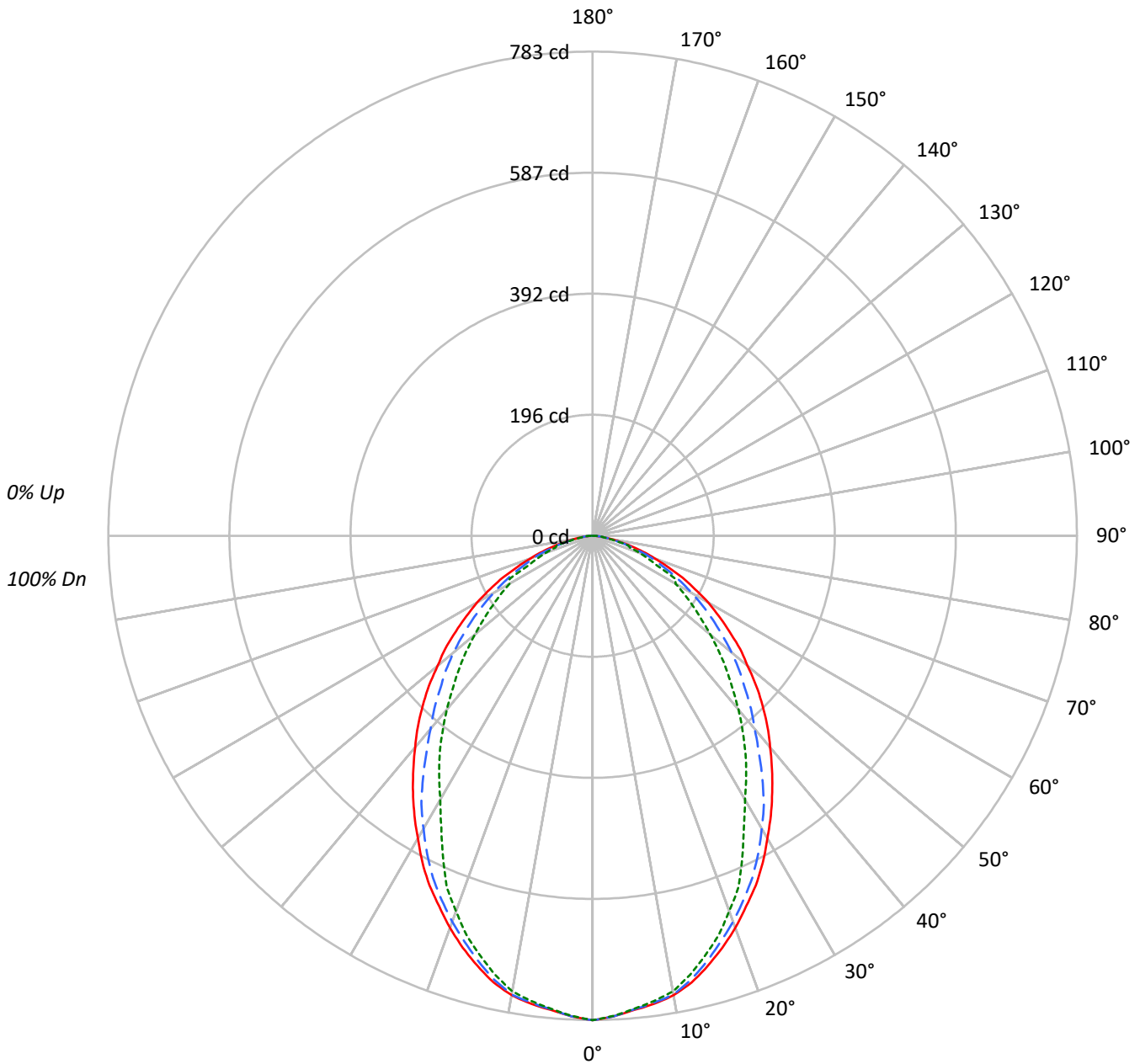
Lumens per Lamp: N/A
Luminaire Lumens: 1538.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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									
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°	8432	8432	8432
5°	8319	8308	8298
10°	8247	8236	8177
15°	8023	7943	7832
20°	7730	7605	7397
25°	7411	7250	6798
30°	7025	6799	6124
35°	6653	6284	5665
40°	6274	5727	5154
45°	5914	5294	4660
50°	5476	4913	4156
55°	5065	4453	3721
60°	4641	3978	3335
65°	4083	3484	2952
70°	3364	3050	2508
75°	2674	2337	2450
80°	1798	1686	1574
85°	1124	1346	1568



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.9	4.7
10°-20°	200.1	13.0
20°-30°	277.1	18.0
30°-40°	295.5	19.2
40°-50°	269.5	17.5
50°-60°	211.2	13.7
60°-70°	137.6	8.9
70°-80°	61.0	4.0
80°-90°	13.1	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°	550.2	35.8
0°-40°	845.6	55.0
0°-60°	1326.3	86.2
0°-90°	1538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	783	783	783	783	783	
5°	770	769	769	768	768	73
15°	720	720	713	706	703	202
25°	624	620	610	589	572	287
35°	506	503	478	442	431	317
45°	388	380	348	319	306	299
55°	270	262	237	209	198	242
65°	160	151	137	140	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°	783.4	783.4	783.4	783.4	783.4
2.5°	778.0	778.0	778.0	777.1	777.1
5°	769.9	768.9	768.9	768.0	768.0
7.5°	763.5	762.6	761.7	760.8	759.0
10°	754.5	754.5	753.5	749.0	748.1
12.5°	740.0	739.1	735.4	729.1	727.3
15°	720.0	720.0	712.8	705.5	702.8
17.5°	698.3	697.4	688.3	681.1	677.5
20°	674.8	672.9	663.9	652.1	645.8
22.5°	648.5	648.5	637.6	622.2	615.9
25°	624.0	620.4	610.4	588.7	572.4
27.5°	596.0	590.5	579.7	548.9	529.8
30°	565.2	562.4	547.0	507.2	492.7
32.5°	536.2	531.7	515.3	473.7	461.9
35°	506.3	502.7	478.2	442.0	431.1
37.5°	476.4	471.9	441.1	412.1	398.5
40°	446.5	441.1	407.6	381.3	366.8
42.5°	418.4	411.2	378.6	350.5	334.2
45°	388.5	380.4	347.8	318.8	306.1
47.5°	358.7	351.4	321.5	291.6	277.1
50°	327.0	320.6	293.4	263.6	248.2
52.5°	300.7	290.7	264.5	234.6	221.9
55°	269.9	261.7	237.3	209.2	198.3
57.5°	241.8	233.7	211.0	184.8	175.7
60°	215.6	203.8	184.8	162.1	154.9
62.5°	186.6	177.5	161.2	142.2	151.3
65°	160.3	151.3	136.8	139.5	115.9
67.5°	131.3	126.8	114.1	101.4	97.8
70°	106.9	101.4	96.9	83.3	79.7
72.5°	85.1	79.7	73.4	66.1	63.4
75°	64.3	59.8	56.2	53.4	58.9
77.5°	44.4	42.6	39.9	37.1	36.2
80°	29.0	28.1	27.2	26.3	25.4
82.5°	17.2	17.2	17.2	17.2	17.2
85°	9.1	10.0	10.9	11.8	12.7
87.5°	5.4	5.4	6.3	7.2	8.2
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)