

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: P545287

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-82-84-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: P545287
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-LD4-1HI-40-UNV-82-84-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

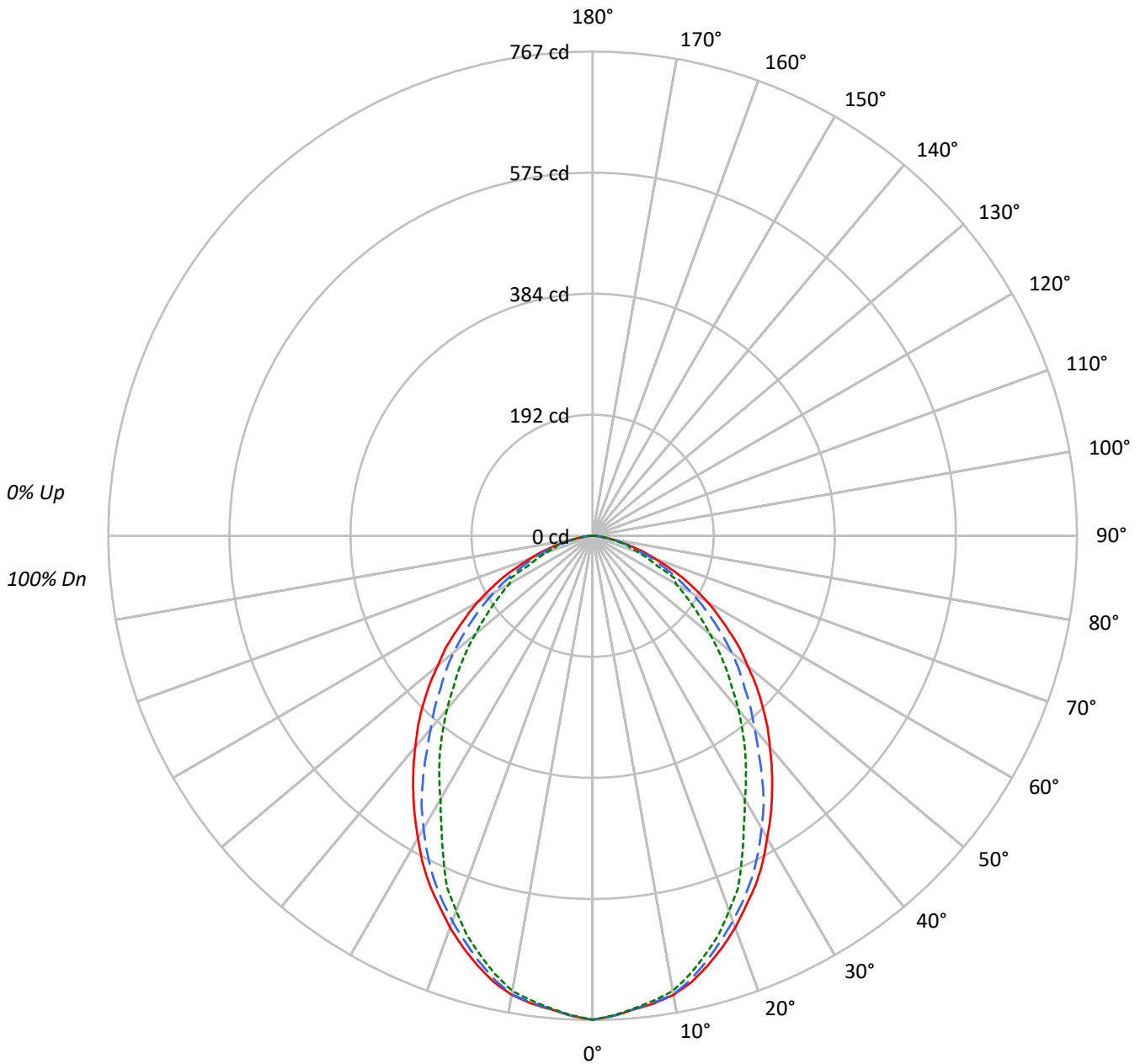
Lumens per Lamp: N/A
Luminaire Lumens: 1505.0 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	4126	4126	4126
5°	4070	4065	4061
10°	4035	4030	4001
15°	3926	3886	3832
20°	3782	3720	3619
25°	3626	3547	3326
30°	3437	3327	2996
35°	3255	3075	2772
40°	3070	2802	2522
45°	2894	2590	2280
50°	2678	2405	2033
55°	2478	2179	1821
60°	2270	1946	1632
65°	1998	1704	1444
70°	1646	1492	1227
75°	1308	1142	1198
80°	880	824	769
85°	550	655	766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.4	4.7
10°-20°	195.8	13.0
20°-30°	271.1	18.0
30°-40°	289.1	19.2
40°-50°	263.8	17.5
50°-60°	206.6	13.7
60°-70°	134.7	8.9
70°-80°	59.7	4.0
80°-90°	12.8	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°	538.4	35.8
0°-40°	827.5	55.0
0°-60°	1297.8	86.2
0°-90°	1505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	753	752	752	752	752	72
15°	705	705	698	690	688	198
25°	611	607	597	576	560	280
35°	495	492	468	432	422	310
45°	380	372	340	312	300	293
55°	264	256	232	205	194	237
65°	157	148	134	136	113	155
75°	63	58	55	52	58	67
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	766.6	766.6	766.6	766.6	766.6
2.5°	761.3	761.3	761.3	760.4	760.4
5°	753.3	752.4	752.4	751.6	751.6
7.5°	747.1	746.2	745.4	744.5	742.7
10°	738.3	738.3	737.4	732.9	732.1
12.5°	724.1	723.2	719.7	713.5	711.7
15°	704.6	704.6	697.5	690.4	687.7
17.5°	683.3	682.4	673.6	666.5	662.9
20°	660.3	658.5	649.6	638.1	631.9
22.5°	634.6	634.6	623.9	608.9	602.7
25°	610.6	607.1	597.3	576.1	560.1
27.5°	583.2	577.9	567.2	537.1	518.5
30°	553.0	550.4	535.3	496.3	482.1
32.5°	524.7	520.2	504.3	463.5	452.0
35°	495.4	491.9	468.0	432.5	421.9
37.5°	466.2	461.7	431.6	403.3	390.0
40°	436.9	431.6	398.8	373.1	358.9
42.5°	409.5	402.4	370.5	343.0	327.0
45°	380.2	372.2	340.3	312.0	299.6
47.5°	351.0	343.9	314.6	285.4	271.2
50°	319.9	313.7	287.2	257.9	242.8
52.5°	294.2	284.5	258.8	229.5	217.1
55°	264.1	256.1	232.2	204.7	194.1
57.5°	236.6	228.7	206.5	180.8	171.9
60°	210.9	199.4	180.8	158.6	151.6
62.5°	182.6	173.7	157.8	139.1	148.0
65°	156.9	148.0	133.8	136.5	113.4
67.5°	128.5	124.1	111.7	99.3	95.7
70°	104.6	99.3	94.8	81.5	78.0
72.5°	83.3	78.0	71.8	64.7	62.0
75°	62.9	58.5	54.9	52.3	57.6
77.5°	43.4	41.7	39.0	36.3	35.5
80°	28.4	27.5	26.6	25.7	24.8
82.5°	16.8	16.8	16.8	16.8	16.8
85°	8.9	9.7	10.6	11.5	12.4
87.5°	5.3	5.3	6.2	7.1	8.0
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)