

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: P545039

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-93-84-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: P545039
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-93-84-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

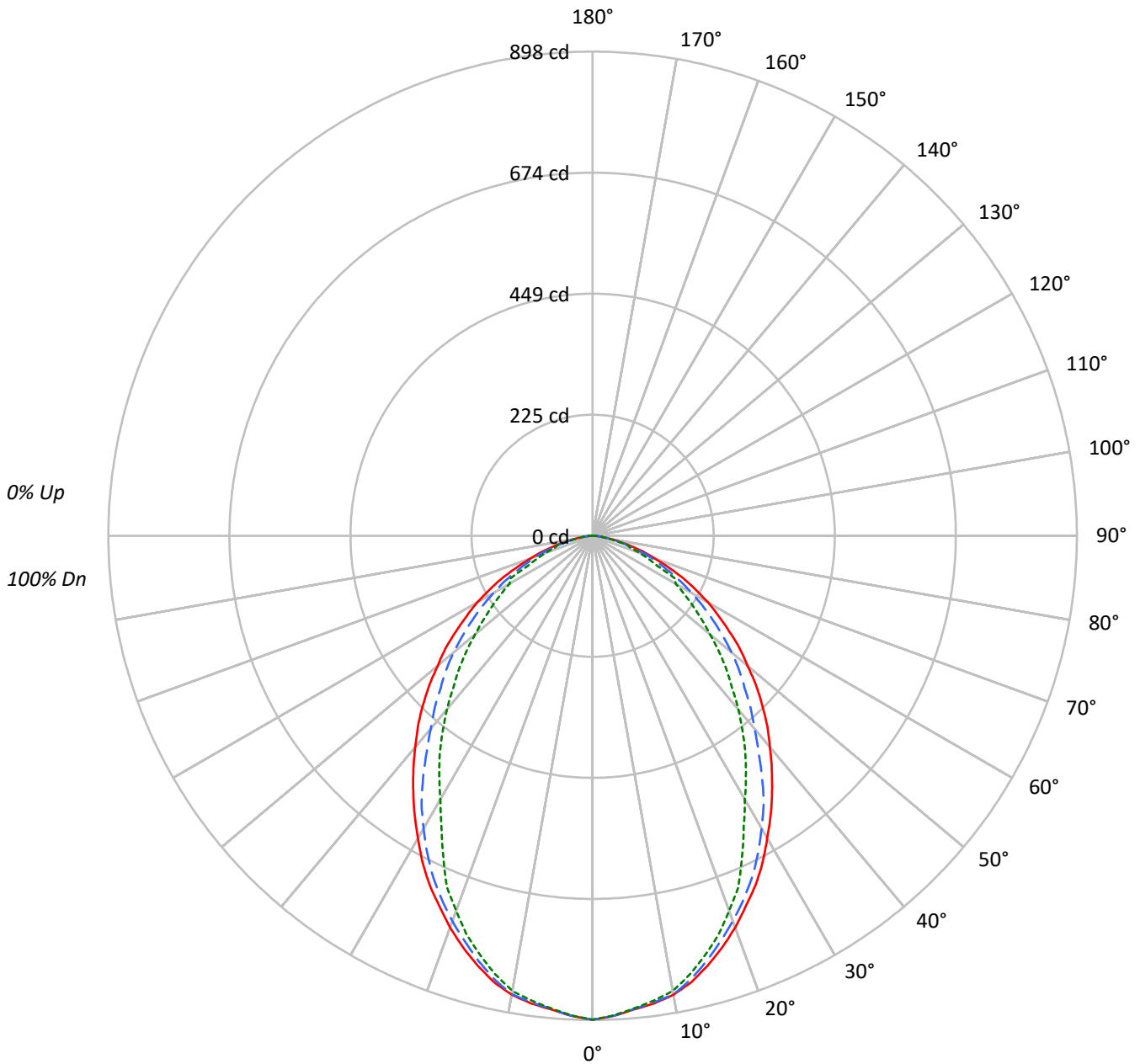
Lumens per Lamp: N/A
Luminaire Lumens: 1762.0 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	9661	9661	9661
5°	9530	9518	9507
10°	9447	9436	9368
15°	9192	9100	8973
20°	8854	8712	8474
25°	8491	8307	7789
30°	8048	7789	7016
35°	7621	7200	6490
40°	7187	6561	5904
45°	6776	6065	5339
50°	6273	5630	4761
55°	5803	5103	4264
60°	5317	4557	3819
65°	4679	3991	3382
70°	3852	3493	2873
75°	3065	2674	2803
80°	2058	1928	1804
85°	1284	1544	1791



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.5	4.7
10°-20°	229.3	13.0
20°-30°	317.4	18.0
30°-40°	338.5	19.2
40°-50°	308.8	17.5
50°-60°	241.9	13.7
60°-70°	157.7	8.9
70°-80°	69.8	4.0
80°-90°	15.0	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°	630.3	35.8
0°-40°	968.8	55.0
0°-60°	1519.5	86.2
0°-90°	1762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1762.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	882	881	881	880	880	84
15°	825	825	817	808	805	232
25°	715	711	699	674	656	328
35°	580	576	548	506	494	363
45°	445	436	398	365	351	343
55°	309	300	272	240	227	277
65°	184	173	157	160	133	181
75°	74	68	64	61	67	79
85°	10	11	12	14	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	897.5	897.5	897.5	897.5	897.5
2.5°	891.3	891.3	891.3	890.3	890.3
5°	882.0	880.9	880.9	879.9	879.9
7.5°	874.7	873.7	872.6	871.6	869.5
10°	864.3	864.3	863.3	858.1	857.1
12.5°	847.7	846.7	842.5	835.3	833.2
15°	824.9	824.9	816.6	808.3	805.2
17.5°	800.0	799.0	788.6	780.3	776.1
20°	773.0	770.9	760.6	747.1	739.8
22.5°	742.9	742.9	730.5	712.8	705.6
25°	714.9	710.8	699.4	674.5	655.8
27.5°	682.8	676.5	664.1	628.8	607.0
30°	647.5	644.4	626.7	581.1	564.5
32.5°	614.3	609.1	590.4	542.7	529.2
35°	580.0	575.9	547.9	506.4	493.9
37.5°	545.8	540.6	505.3	472.1	456.6
40°	511.5	505.3	466.9	436.8	420.2
42.5°	479.4	471.1	433.7	401.6	382.9
45°	445.1	435.8	398.4	365.2	350.7
47.5°	410.9	402.6	368.4	334.1	317.5
50°	374.6	367.3	336.2	301.9	284.3
52.5°	344.5	333.1	303.0	268.7	254.2
55°	309.2	299.9	271.9	239.7	227.2
57.5°	277.0	267.7	241.8	211.7	201.3
60°	247.0	233.5	211.7	185.7	177.4
62.5°	213.7	203.4	184.7	162.9	173.3
65°	183.7	173.3	156.7	159.8	132.8
67.5°	150.5	145.3	130.7	116.2	112.1
70°	122.4	116.2	111.0	95.5	91.3
72.5°	97.5	91.3	84.0	75.7	72.6
75°	73.7	68.5	64.3	61.2	67.4
77.5°	50.8	48.8	45.7	42.5	41.5
80°	33.2	32.2	31.1	30.1	29.1
82.5°	19.7	19.7	19.7	19.7	19.7
85°	10.4	11.4	12.5	13.5	14.5
87.5°	6.2	6.2	7.3	8.3	9.3
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)