

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: P545042

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-93-87-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: P545042
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-93-87-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

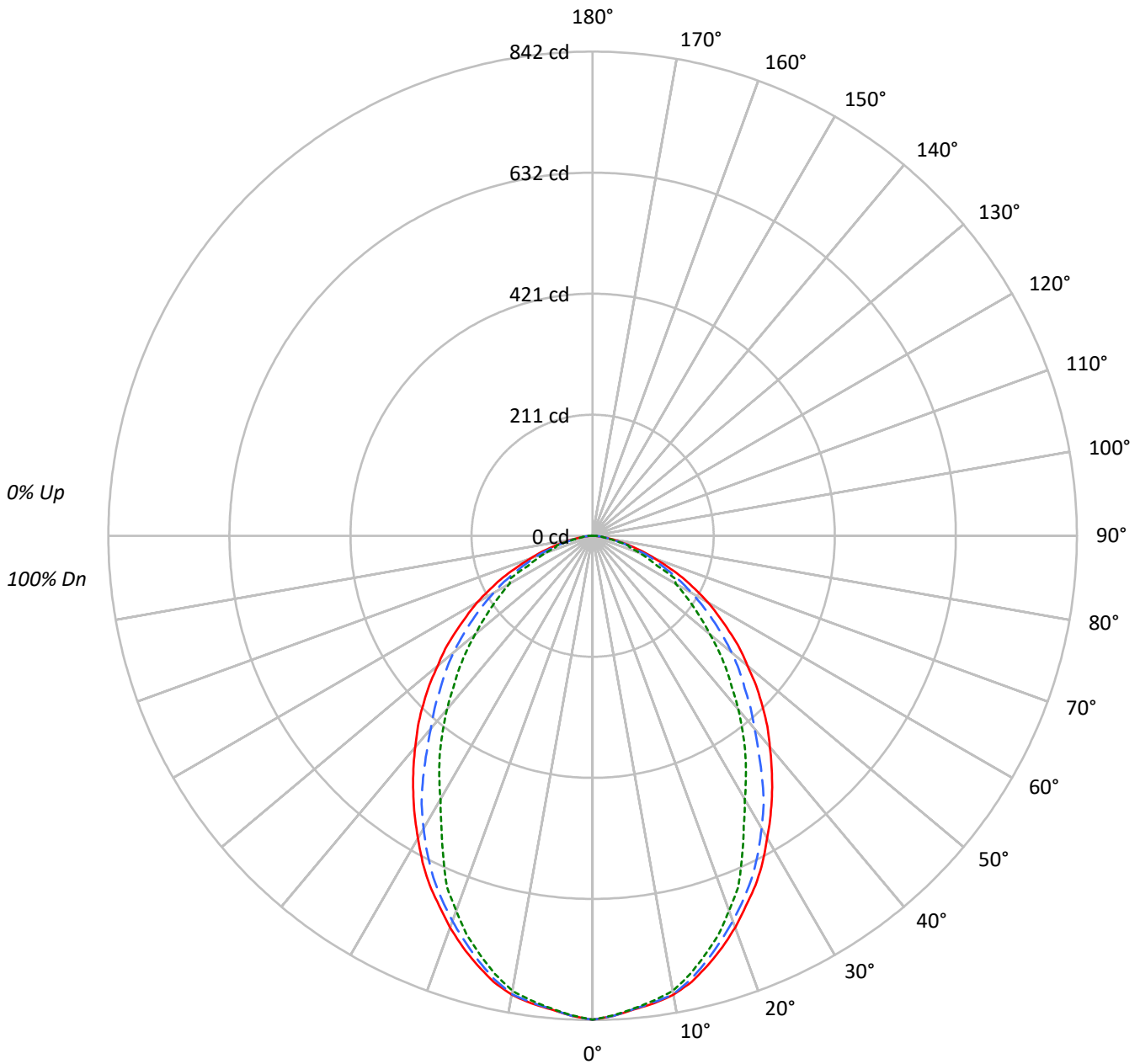
Lumens per Lamp: N/A
Luminaire Lumens: 1652.0 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	9058	9058	9058
5°	8935	8924	8914
10°	8858	8847	8783
15°	8618	8532	8412
20°	8302	8168	7945
25°	7961	7788	7302
30°	7546	7303	6577
35°	7146	6750	6085
40°	6739	6152	5536
45°	6352	5687	5005
50°	5881	5278	4464
55°	5440	4784	3999
60°	4984	4273	3582
65°	4386	3741	3171
70°	3613	3276	2694
75°	2874	2508	2628
80°	1928	1810	1686
85°	1198	1445	1680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.3	4.7
10°-20°	215.0	13.0
20°-30°	297.6	18.0
30°-40°	317.3	19.2
40°-50°	289.5	17.5
50°-60°	226.8	13.7
60°-70°	147.8	8.9
70°-80°	65.5	4.0
80°-90°	14.1	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°	590.9	35.8
0°-40°	908.3	55.0
0°-60°	1424.6	86.2
0°-90°	1652.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1652.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	842	842	842	842	842	
5°	827	826	826	825	825	78
15°	773	773	766	758	755	217
25°	670	666	656	632	615	308
35°	544	540	514	475	463	340
45°	417	409	374	342	329	321
55°	290	281	255	225	213	260
65°	172	162	147	150	124	170
75°	69	64	60	57	63	74
85°	10	11	12	13	14	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	841.5	841.5	841.5	841.5	841.5
2.5°	835.7	835.7	835.7	834.7	834.7
5°	826.9	825.9	825.9	825.0	825.0
7.5°	820.1	819.1	818.2	817.2	815.2
10°	810.4	810.4	809.4	804.5	803.6
12.5°	794.8	793.8	789.9	783.1	781.2
15°	773.4	773.4	765.6	757.8	754.9
17.5°	750.1	749.1	739.4	731.6	727.7
20°	724.8	722.8	713.1	700.4	693.6
22.5°	696.6	696.6	684.9	668.3	661.5
25°	670.3	666.4	655.7	632.3	614.8
27.5°	640.1	634.3	622.6	589.5	569.1
30°	607.1	604.1	587.6	544.8	529.2
32.5°	575.9	571.1	553.5	508.8	496.1
35°	543.8	539.9	513.7	474.7	463.1
37.5°	511.7	506.8	473.8	442.6	428.0
40°	479.6	473.8	437.8	409.6	394.0
42.5°	449.5	441.7	406.6	376.5	359.0
45°	417.3	408.6	373.6	342.4	328.8
47.5°	385.2	377.5	345.4	313.3	297.7
50°	351.2	344.4	315.2	283.1	266.6
52.5°	323.0	312.3	284.1	252.0	238.3
55°	289.9	281.2	254.9	224.7	213.1
57.5°	259.7	251.0	226.7	198.5	188.7
60°	231.5	218.9	198.5	174.1	166.4
62.5°	200.4	190.7	173.2	152.7	162.5
65°	172.2	162.5	146.9	149.8	124.5
67.5°	141.1	136.2	122.6	109.0	105.1
70°	114.8	109.0	104.1	89.5	85.6
72.5°	91.4	85.6	78.8	71.0	68.1
75°	69.1	64.2	60.3	57.4	63.2
77.5°	47.7	45.7	42.8	39.9	38.9
80°	31.1	30.2	29.2	28.2	27.2
82.5°	18.5	18.5	18.5	18.5	18.5
85°	9.7	10.7	11.7	12.6	13.6
87.5°	5.8	5.8	6.8	7.8	8.8
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)