

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: P545008

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-93-85-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: P545008
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-93-85-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

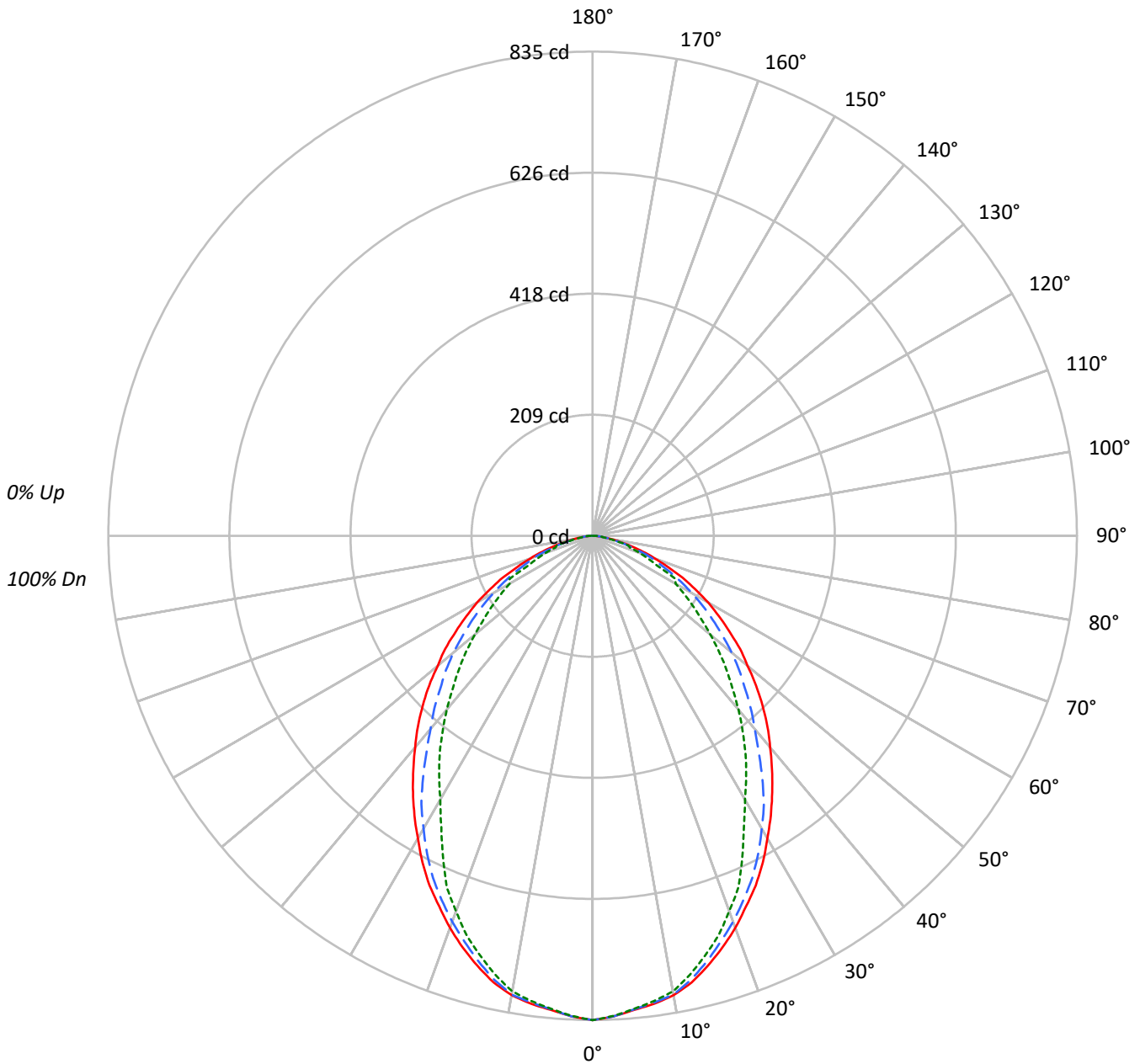
Lumens per Lamp: N/A
Luminaire Lumens: 1640.0 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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					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°	8992	8992	8992
5°	8870	8859	8849
10°	8793	8782	8719
15°	8556	8470	8351
20°	8242	8109	7888
25°	7903	7731	7250
30°	7490	7250	6530
35°	7094	6700	6041
40°	6690	6107	5495
45°	6307	5646	4969
50°	5838	5240	4431
55°	5401	4748	3969
60°	4949	4241	3554
65°	4353	3713	3148
70°	3588	3251	2675
75°	2853	2491	2612
80°	1915	1798	1674
85°	1198	1433	1667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	4.7
10°-20°	213.4	13.0
20°-30°	295.5	18.0
30°-40°	315.0	19.2
40°-50°	287.4	17.5
50°-60°	225.2	13.7
60°-70°	146.7	8.9
70°-80°	65.0	4.0
80°-90°	13.9	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°	586.6	35.8
0°-40°	901.7	55.0
0°-60°	1414.3	86.2
0°-90°	1640.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1640.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	835	835	835	835	835	
5°	821	820	820	819	819	78
15°	768	768	760	752	749	216
25°	665	662	651	628	610	305
35°	540	536	510	471	460	338
45°	414	406	371	340	326	319
55°	288	279	253	223	212	258
65°	171	161	146	149	124	168
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°	835.4	835.4	835.4	835.4	835.4
2.5°	829.6	829.6	829.6	828.6	828.6
5°	820.9	819.9	819.9	819.0	819.0
7.5°	814.1	813.2	812.2	811.2	809.3
10°	804.5	804.5	803.5	798.7	797.7
12.5°	789.0	788.1	784.2	777.4	775.5
15°	767.8	767.8	760.1	752.3	749.4
17.5°	744.6	743.6	734.0	726.3	722.4
20°	719.5	717.6	707.9	695.4	688.6
22.5°	691.5	691.5	679.9	663.5	656.7
25°	665.4	661.6	650.9	627.8	610.4
27.5°	635.5	629.7	618.1	585.3	565.0
30°	602.6	599.7	583.3	540.8	525.4
32.5°	571.7	566.9	549.5	505.1	492.5
35°	539.9	536.0	509.9	471.3	459.7
37.5°	508.0	503.2	470.3	439.4	424.9
40°	476.1	470.3	434.6	406.6	391.1
42.5°	446.2	438.5	403.7	373.8	356.4
45°	414.3	405.6	370.9	340.0	326.4
47.5°	382.4	374.7	342.8	311.0	295.5
50°	348.6	341.9	312.9	281.0	264.6
52.5°	320.6	310.0	282.0	250.1	236.6
55°	287.8	279.1	253.0	223.1	211.5
57.5°	257.9	249.2	225.0	197.0	187.4
60°	229.9	217.3	197.0	172.9	165.1
62.5°	198.9	189.3	171.9	151.6	161.3
65°	170.9	161.3	145.8	148.7	123.6
67.5°	140.0	135.2	121.7	108.2	104.3
70°	114.0	108.2	103.3	88.9	85.0
72.5°	90.8	85.0	78.2	70.5	67.6
75°	68.6	63.7	59.9	57.0	62.8
77.5°	47.3	45.4	42.5	39.6	38.6
80°	30.9	29.9	29.0	28.0	27.0
82.5°	18.3	18.3	18.3	18.3	18.3
85°	9.7	10.6	11.6	12.6	13.5
87.5°	5.8	5.8	6.8	7.7	8.7
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)