

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: P547183

Luminaire Tested: **FMR-24-4-LD4-3STD-35-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: P547183
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-24-4-LD4-3STD-35-UNV-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

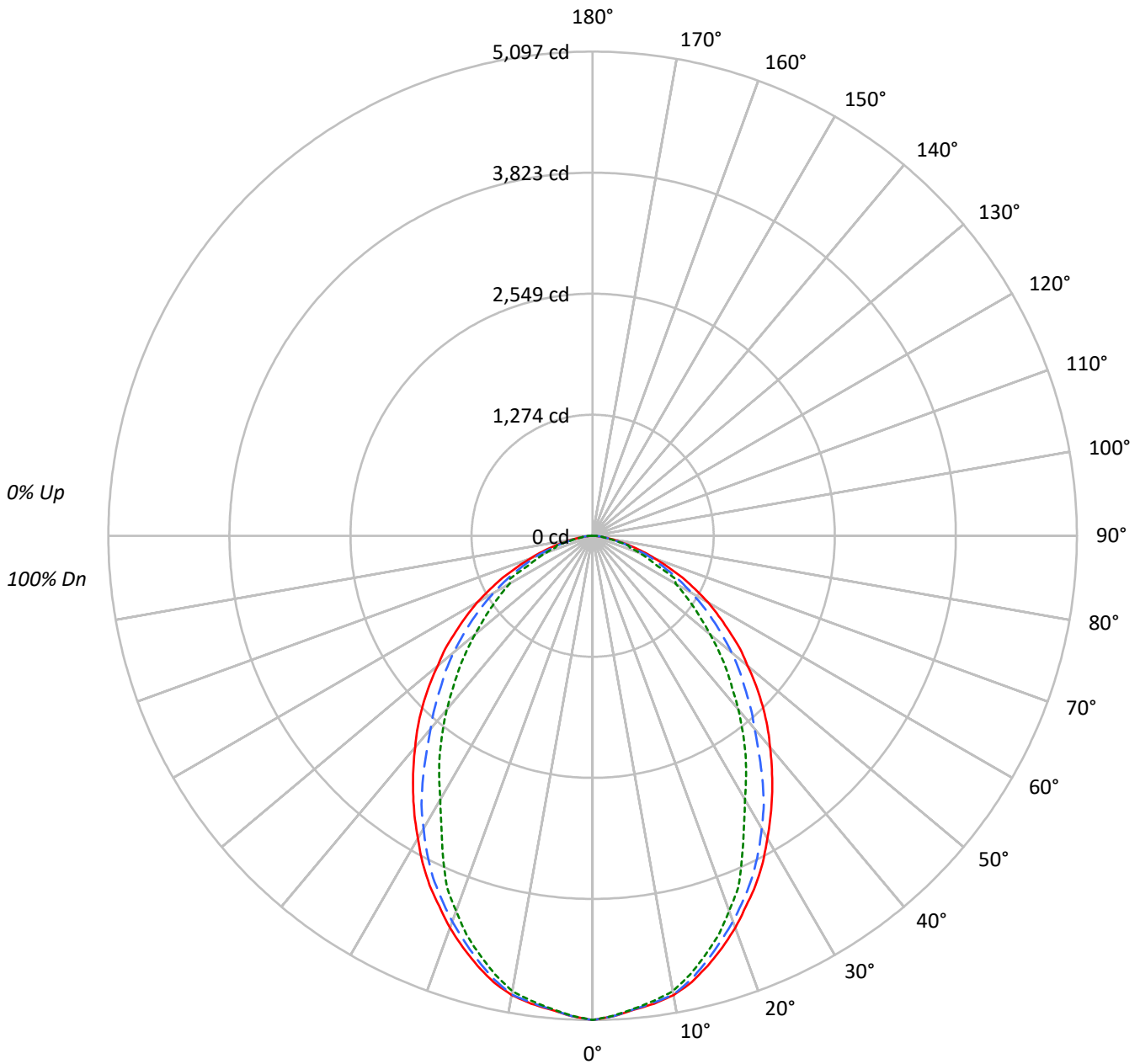
Lumens per Lamp: N/A
Luminaire Lumens: 10007.0 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6858	6858	6858
5°	6765	6757	6749
10°	6707	6699	6650
15°	6526	6460	6370
20°	6286	6185	6016
25°	6028	5897	5529
30°	5713	5530	4981
35°	5411	5111	4607
40°	5103	4658	4192
45°	4810	4306	3790
50°	4453	3997	3380
55°	4119	3622	3027
60°	3774	3235	2712
65°	3321	2833	2401
70°	2736	2480	2040
75°	2175	1900	1991
80°	1461	1370	1278
85°	909	1091	1274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	474.5	4.7
10°-20°	1302.2	13.0
20°-30°	1802.9	18.0
30°-40°	1922.4	19.2
40°-50°	1753.8	17.5
50°-60°	1373.9	13.7
60°-70°	895.5	8.9
70°-80°	396.7	4.0
80°-90°	85.2	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°	3579.6	35.8
0°-40°	5502.0	55.0
0°-60°	8629.6	86.2
0°-90°	10007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10007.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5097	5097	5097	5097	5097	
5°	5009	5003	5003	4997	4997	475
15°	4685	4685	4638	4591	4573	1317
25°	4060	4037	3972	3830	3724	1864
35°	3294	3271	3112	2876	2805	2059
45°	2528	2475	2263	2074	1992	1947
55°	1756	1703	1544	1361	1291	1575
65°	1043	984	890	908	754	1028
75°	418	389	365	348	383	448
85°	59	65	71	77	82	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5097.4	5097.4	5097.4	5097.4	5097.4
2.5°	5062.1	5062.1	5062.1	5056.2	5056.2
5°	5009.0	5003.1	5003.1	4997.3	4997.3
7.5°	4967.8	4961.9	4956.0	4950.1	4938.3
10°	4908.9	4908.9	4903.0	4873.5	4867.6
12.5°	4814.6	4808.7	4785.1	4743.9	4732.1
15°	4684.9	4684.9	4637.8	4590.6	4573.0
17.5°	4543.5	4537.6	4478.7	4431.5	4408.0
20°	4390.3	4378.5	4319.6	4242.9	4201.7
22.5°	4219.4	4219.4	4148.7	4048.5	4007.2
25°	4060.3	4036.7	3971.9	3830.4	3724.4
27.5°	3877.6	3842.2	3771.5	3571.1	3447.4
30°	3677.2	3659.5	3559.4	3300.1	3205.8
32.5°	3488.6	3459.2	3353.1	3082.0	3005.4
35°	3294.2	3270.6	3111.5	2875.8	2805.1
37.5°	3099.7	3070.2	2869.9	2681.3	2592.9
40°	2905.2	2869.9	2651.8	2480.9	2386.7
42.5°	2722.6	2675.4	2463.3	2280.6	2174.5
45°	2528.1	2475.1	2262.9	2074.3	1991.8
47.5°	2333.6	2286.5	2092.0	1897.5	1803.3
50°	2127.4	2086.1	1909.3	1714.9	1614.7
52.5°	1956.5	1891.6	1720.8	1526.3	1443.8
55°	1756.1	1703.1	1544.0	1361.3	1290.6
57.5°	1573.4	1520.4	1373.1	1202.2	1143.2
60°	1402.5	1325.9	1202.2	1054.8	1007.7
62.5°	1214.0	1155.0	1049.0	925.2	984.1
65°	1043.1	984.1	889.8	907.5	754.3
67.5°	854.5	825.0	742.5	660.0	636.4
70°	695.4	660.0	630.5	542.2	518.6
72.5°	553.9	518.6	477.3	430.2	412.5
75°	418.4	388.9	365.4	347.7	383.0
77.5°	288.8	277.0	259.3	241.6	235.7
80°	188.6	182.7	176.8	170.9	165.0
82.5°	112.0	112.0	112.0	112.0	112.0
85°	58.9	64.8	70.7	76.6	82.5
87.5°	35.4	35.4	41.3	47.1	53.0
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)