

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: P546741

Luminaire Tested: **FMR-24-4-LD4-2HI-40-UNV-93-96-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: P546741
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-LD4-2HI-40-UNV-93-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

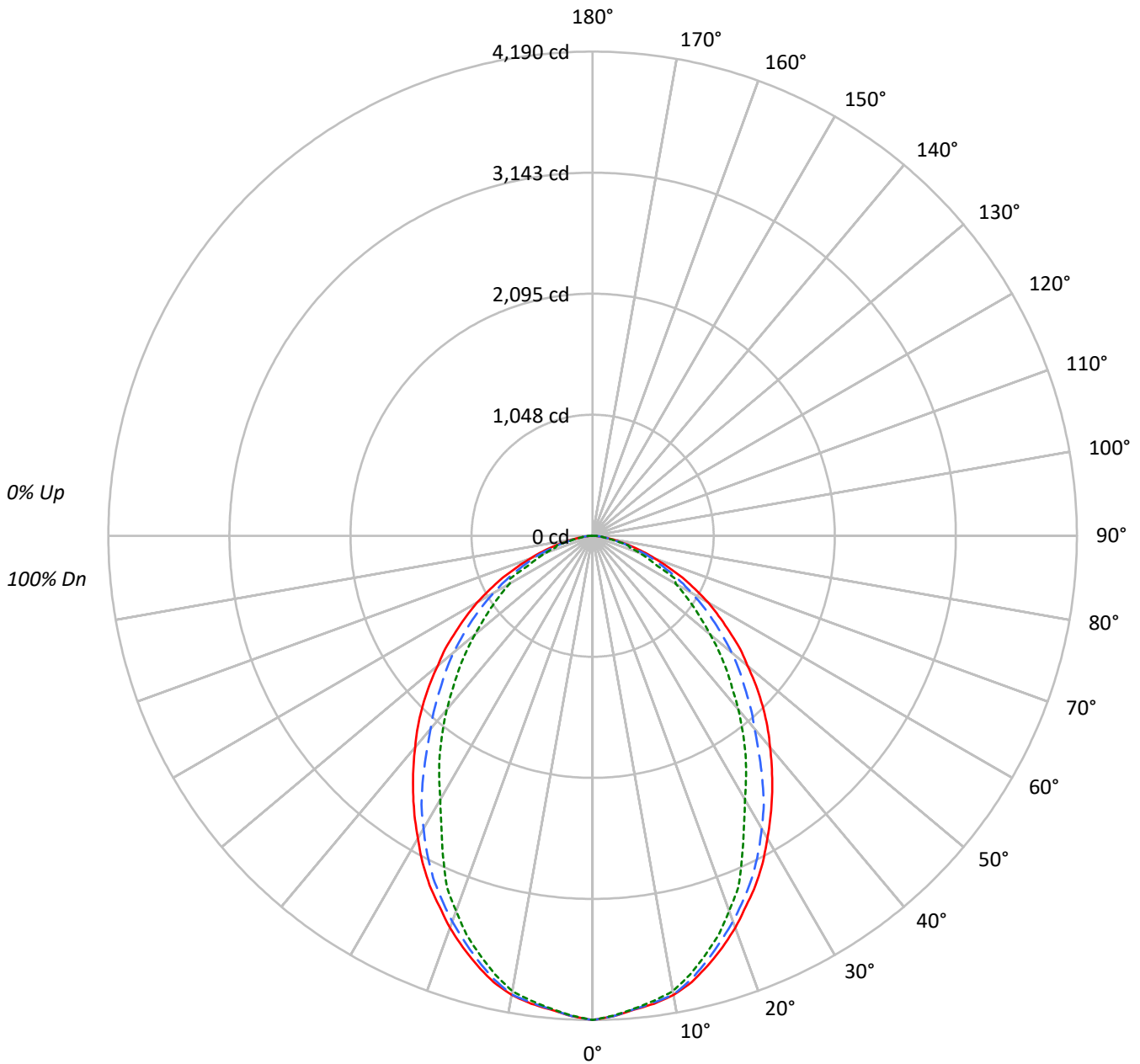
Lumens per Lamp: N/A
Luminaire Lumens: 8226.0 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	5638	5638	5638
5°	5561	5555	5548
10°	5513	5507	5467
15°	5364	5310	5236
20°	5167	5084	4945
25°	4955	4847	4545
30°	4696	4546	4094
35°	4448	4201	3787
40°	4195	3829	3446
45°	3954	3540	3115
50°	3660	3285	2778
55°	3386	2977	2489
60°	3102	2659	2229
65°	2730	2329	1974
70°	2249	2039	1677
75°	1788	1561	1637
80°	1201	1126	1051
85°	747	897	1047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.1	4.7
10°-20°	1070.5	13.0
20°-30°	1482.0	18.0
30°-40°	1580.2	19.2
40°-50°	1441.6	17.5
50°-60°	1129.4	13.7
60°-70°	736.1	8.9
70°-80°	326.1	4.0
80°-90°	70.0	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°	2942.5	35.8
0°-40°	4522.7	55.0
0°-60°	7093.8	86.2
0°-90°	8226.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8226.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4190	4190	4190	4190	4190	
5°	4118	4113	4113	4108	4108	391
15°	3851	3851	3812	3774	3759	1083
25°	3338	3318	3265	3149	3062	1532
35°	2708	2688	2558	2364	2306	1693
45°	2078	2035	1860	1705	1637	1601
55°	1444	1400	1269	1119	1061	1295
65°	857	809	732	746	620	845
75°	344	320	300	286	315	369
85°	48	53	58	63	68	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4190.2	4190.2	4190.2	4190.2	4190.2
2.5°	4161.1	4161.1	4161.1	4156.3	4156.3
5°	4117.6	4112.7	4112.7	4107.9	4107.9
7.5°	4083.6	4078.8	4074.0	4069.1	4059.4
10°	4035.2	4035.2	4030.4	4006.1	4001.3
12.5°	3957.7	3952.8	3933.5	3899.6	3889.9
15°	3851.1	3851.1	3812.4	3773.6	3759.1
17.5°	3734.9	3730.0	3681.6	3642.8	3623.4
20°	3608.9	3599.2	3550.8	3487.8	3453.9
22.5°	3468.4	3468.4	3410.3	3328.0	3294.0
25°	3337.6	3318.3	3265.0	3148.7	3061.5
27.5°	3187.5	3158.4	3100.3	2935.6	2833.8
30°	3022.8	3008.2	2925.9	2712.7	2635.2
32.5°	2867.8	2843.5	2756.3	2533.5	2470.5
35°	2707.9	2688.5	2557.7	2364.0	2305.8
37.5°	2548.0	2523.8	2359.1	2204.1	2131.4
40°	2388.2	2359.1	2179.9	2039.4	1961.9
42.5°	2238.0	2199.3	2024.9	1874.7	1787.5
45°	2078.2	2034.6	1860.2	1705.2	1637.3
47.5°	1918.3	1879.5	1719.7	1559.8	1482.3
50°	1748.7	1714.8	1569.5	1409.7	1327.3
52.5°	1608.3	1555.0	1414.5	1254.6	1186.8
55°	1443.6	1400.0	1269.2	1119.0	1060.9
57.5°	1293.4	1249.8	1128.7	988.2	939.8
60°	1152.9	1089.9	988.2	867.1	828.4
62.5°	997.9	949.5	862.3	760.5	809.0
65°	857.4	809.0	731.5	746.0	620.1
67.5°	702.4	678.2	610.4	542.5	523.2
70°	571.6	542.5	518.3	445.7	426.3
72.5°	455.4	426.3	392.4	353.6	339.1
75°	343.9	319.7	300.3	285.8	314.9
77.5°	237.4	227.7	213.1	198.6	193.8
80°	155.0	150.2	145.3	140.5	135.6
82.5°	92.0	92.0	92.0	92.0	92.0
85°	48.4	53.3	58.1	63.0	67.8
87.5°	29.1	29.1	33.9	38.8	43.6
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)