

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: P546714

Luminaire Tested: **FMR-24-4-LD4-2HI-40-UNV-80-87-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: P546714
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-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

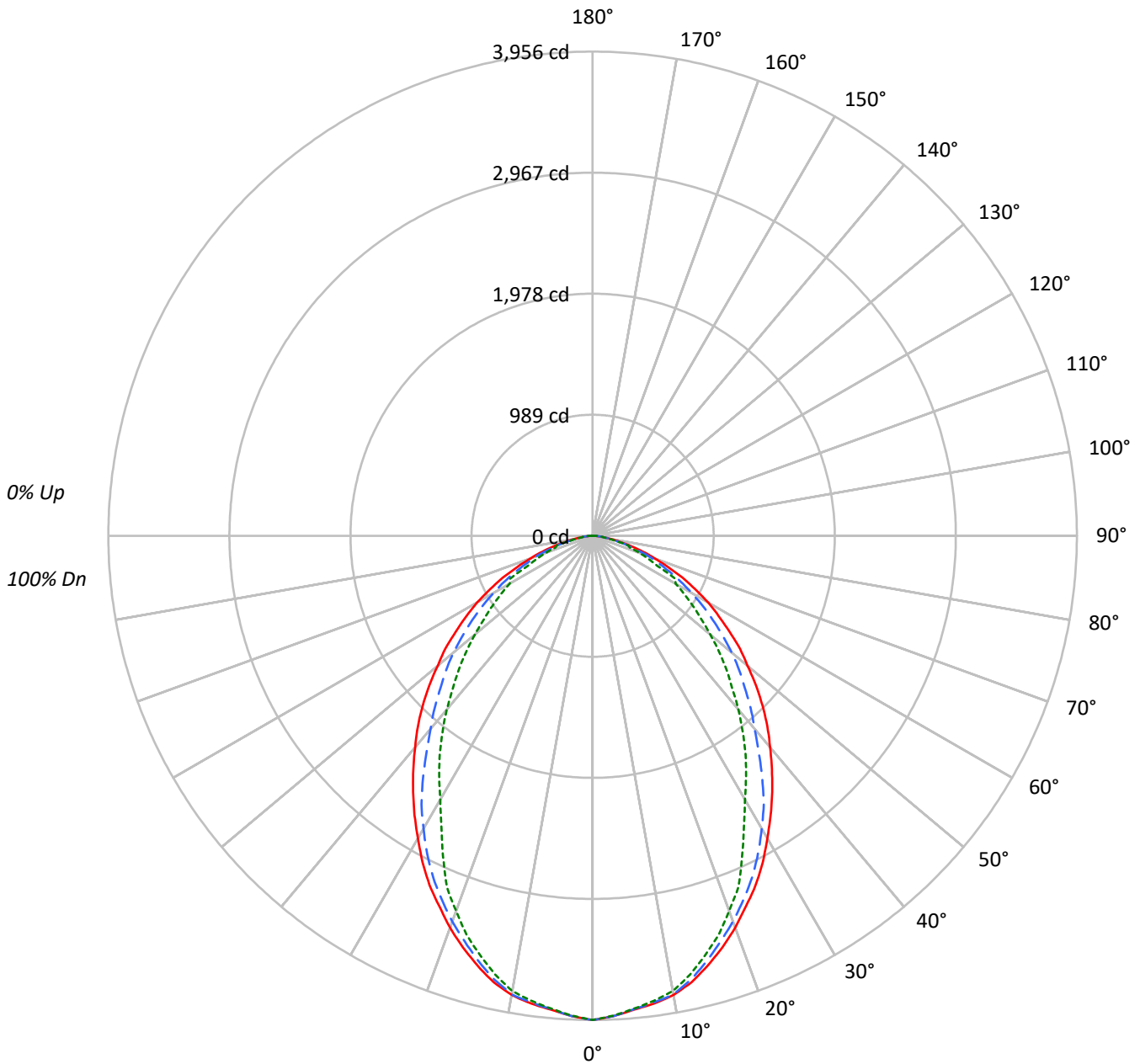
Lumens per Lamp: N/A
Luminaire Lumens: 7766.0 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P546714

CATALOG NUMBER: FMR-24-4-LD4-2HI-40-UNV-80-87-EDD

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°	5323	5323	5323
5°	5250	5244	5238
10°	5205	5199	5161
15°	5064	5014	4943
20°	4878	4800	4669
25°	4678	4576	4291
30°	4434	4292	3865
35°	4199	3966	3576
40°	3960	3615	3253
45°	3733	3342	2941
50°	3456	3102	2623
55°	3197	2811	2350
60°	2929	2511	2104
65°	2577	2199	1864
70°	2123	1925	1583
75°	1688	1474	1546
80°	1134	1063	993
85°	706	848	988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.2	4.7
10°-20°	1010.6	13.0
20°-30°	1399.1	18.0
30°-40°	1491.9	19.2
40°-50°	1361.0	17.5
50°-60°	1066.2	13.7
60°-70°	694.9	8.9
70°-80°	307.9	4.0
80°-90°	66.1	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°	2778.0	35.8
0°-40°	4269.8	55.0
0°-60°	6697.1	86.2
0°-90°	7766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3956	3956	3956	3956	3956	
5°	3887	3883	3883	3878	3878	369
15°	3636	3636	3599	3563	3549	1022
25°	3151	3133	3082	2973	2890	1447
35°	2556	2538	2415	2232	2177	1598
45°	1962	1921	1756	1610	1546	1511
55°	1363	1322	1198	1056	1002	1222
65°	810	764	691	704	585	798
75°	325	302	284	270	297	348
85°	46	50	55	60	64	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3955.9	3955.9	3955.9	3955.9	3955.9
2.5°	3928.5	3928.5	3928.5	3923.9	3923.9
5°	3887.3	3882.7	3882.7	3878.2	3878.2
7.5°	3855.3	3850.7	3846.1	3841.6	3832.4
10°	3809.6	3809.6	3805.0	3782.1	3777.5
12.5°	3736.4	3731.8	3713.5	3681.5	3672.4
15°	3635.8	3635.8	3599.2	3562.6	3548.9
17.5°	3526.0	3521.4	3475.7	3439.1	3420.8
20°	3407.1	3398.0	3352.2	3292.8	3260.8
22.5°	3274.5	3274.5	3219.6	3141.9	3109.8
25°	3151.0	3132.7	3082.4	2972.6	2890.3
27.5°	3009.2	2981.8	2926.9	2771.4	2675.4
30°	2853.7	2840.0	2762.3	2561.0	2487.9
32.5°	2707.4	2684.5	2602.2	2391.8	2332.4
35°	2556.5	2538.2	2414.7	2231.8	2176.9
37.5°	2405.6	2382.7	2227.2	2080.8	2012.2
40°	2254.6	2227.2	2058.0	1925.4	1852.2
42.5°	2112.9	2076.3	1911.6	1769.9	1687.5
45°	1961.9	1920.8	1756.1	1609.8	1545.8
47.5°	1811.0	1774.4	1623.5	1472.6	1399.4
50°	1651.0	1618.9	1481.7	1330.8	1253.1
52.5°	1518.3	1468.0	1335.4	1184.5	1120.5
55°	1362.8	1321.7	1198.2	1056.4	1001.6
57.5°	1221.1	1179.9	1065.6	933.0	887.2
60°	1088.4	1029.0	933.0	818.6	782.0
62.5°	942.1	896.4	814.0	718.0	763.7
65°	809.5	763.7	690.6	704.3	585.4
67.5°	663.1	640.3	576.2	512.2	493.9
70°	539.6	512.2	489.3	420.7	402.4
72.5°	429.9	402.4	370.4	333.9	320.1
75°	324.7	301.8	283.5	269.8	297.3
77.5°	224.1	214.9	201.2	187.5	182.9
80°	146.3	141.8	137.2	132.6	128.1
82.5°	86.9	86.9	86.9	86.9	86.9
85°	45.7	50.3	54.9	59.5	64.0
87.5°	27.4	27.4	32.0	36.6	41.2
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)