

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: P546718

Luminaire Tested: **FMR-24-4-LD4-2HI-40-UNV-80-97-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: P546718
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-80-97-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

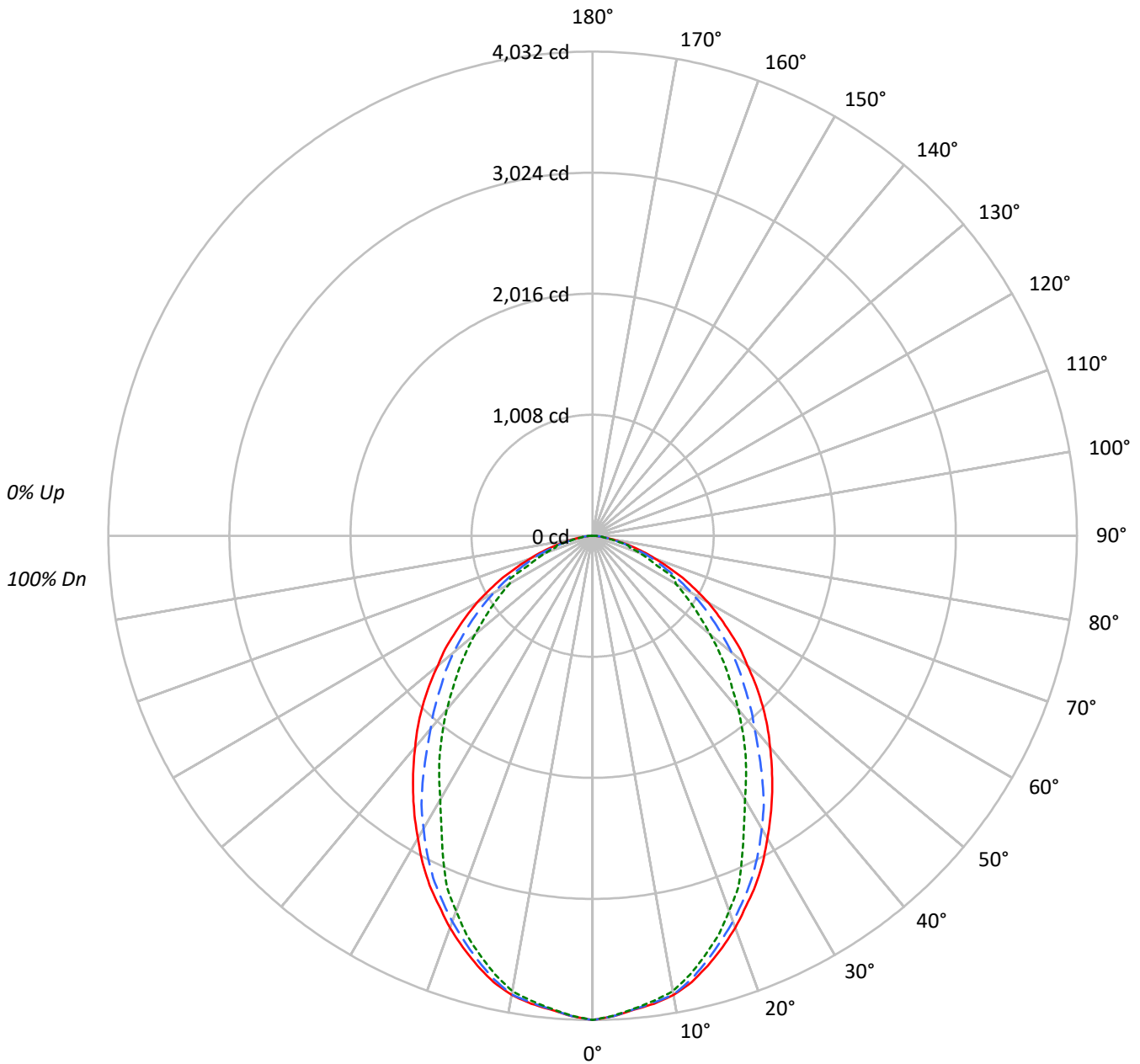
Lumens per Lamp: N/A
Luminaire Lumens: 7916.0 lumens
Efficiency: N/A
Efficacy: 91.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5425	5425	5425
5°	5352	5345	5339
10°	5305	5299	5261
15°	5162	5110	5039
20°	4973	4893	4759
25°	4768	4664	4374
30°	4519	4374	3940
35°	4280	4043	3645
40°	4037	3684	3316
45°	3805	3406	2998
50°	3522	3162	2674
55°	3259	2865	2395
60°	2986	2559	2145
65°	2627	2241	1900
70°	2164	1962	1614
75°	1721	1502	1575
80°	1156	1083	1011
85°	719	863	1008



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	375.4	4.7
10°-20°	1030.1	13.0
20°-30°	1426.1	18.0
30°-40°	1520.7	19.2
40°-50°	1387.3	17.5
50°-60°	1086.8	13.7
60°-70°	708.4	8.9
70°-80°	313.8	4.0
80°-90°	67.4	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°	2831.6	35.8
0°-40°	4352.3	55.0
0°-60°	6826.4	86.2
0°-90°	7916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4032	4032	4032	4032	4032	
5°	3962	3958	3958	3953	3953	376
15°	3706	3706	3669	3631	3617	1042
25°	3212	3193	3142	3030	2946	1475
35°	2606	2587	2461	2275	2219	1629
45°	2000	1958	1790	1641	1576	1540
55°	1389	1347	1221	1077	1021	1246
65°	825	778	704	718	597	813
75°	331	308	289	275	303	355
85°	47	51	56	61	65	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4032.3	4032.3	4032.3	4032.3	4032.3
2.5°	4004.3	4004.3	4004.3	3999.7	3999.7
5°	3962.4	3957.7	3957.7	3953.1	3953.1
7.5°	3929.7	3925.1	3920.4	3915.8	3906.4
10°	3883.1	3883.1	3878.5	3855.2	3850.5
12.5°	3808.5	3803.9	3785.2	3752.6	3743.3
15°	3706.0	3706.0	3668.7	3631.4	3617.4
17.5°	3594.1	3589.5	3542.8	3505.5	3486.9
20°	3472.9	3463.6	3417.0	3356.4	3323.7
22.5°	3337.7	3337.7	3281.8	3202.5	3169.9
25°	3211.9	3193.2	3141.9	3030.1	2946.1
27.5°	3067.3	3039.4	2983.4	2824.9	2727.0
30°	2908.9	2894.9	2815.6	2610.5	2535.9
32.5°	2759.7	2736.4	2652.5	2438.0	2377.4
35°	2605.8	2587.2	2461.3	2274.9	2218.9
37.5°	2452.0	2428.7	2270.2	2121.0	2051.1
40°	2298.2	2270.2	2097.7	1962.5	1888.0
42.5°	2153.7	2116.4	1948.6	1804.0	1720.1
45°	1999.8	1957.9	1790.1	1640.9	1575.6
47.5°	1846.0	1808.7	1654.9	1501.0	1426.5
50°	1682.8	1650.2	1510.4	1356.5	1277.3
52.5°	1547.7	1496.4	1361.2	1207.4	1142.1
55°	1389.2	1347.2	1221.3	1076.8	1020.9
57.5°	1244.7	1202.7	1086.2	951.0	904.4
60°	1109.5	1048.9	951.0	834.4	797.1
62.5°	960.3	913.7	829.8	731.9	778.5
65°	825.1	778.5	703.9	717.9	596.7
67.5°	675.9	652.6	587.4	522.1	503.5
70°	550.1	522.1	498.8	428.9	410.2
72.5°	438.2	410.2	377.6	340.3	326.3
75°	331.0	307.7	289.0	275.0	303.0
77.5°	228.4	219.1	205.1	191.1	186.5
80°	149.2	144.5	139.8	135.2	130.5
82.5°	88.6	88.6	88.6	88.6	88.6
85°	46.6	51.3	55.9	60.6	65.3
87.5°	28.0	28.0	32.6	37.3	42.0
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)