

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: P546717

Luminaire Tested: **FMR-24-4-LD4-2HI-40-UNV-80-96-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: P546717
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-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

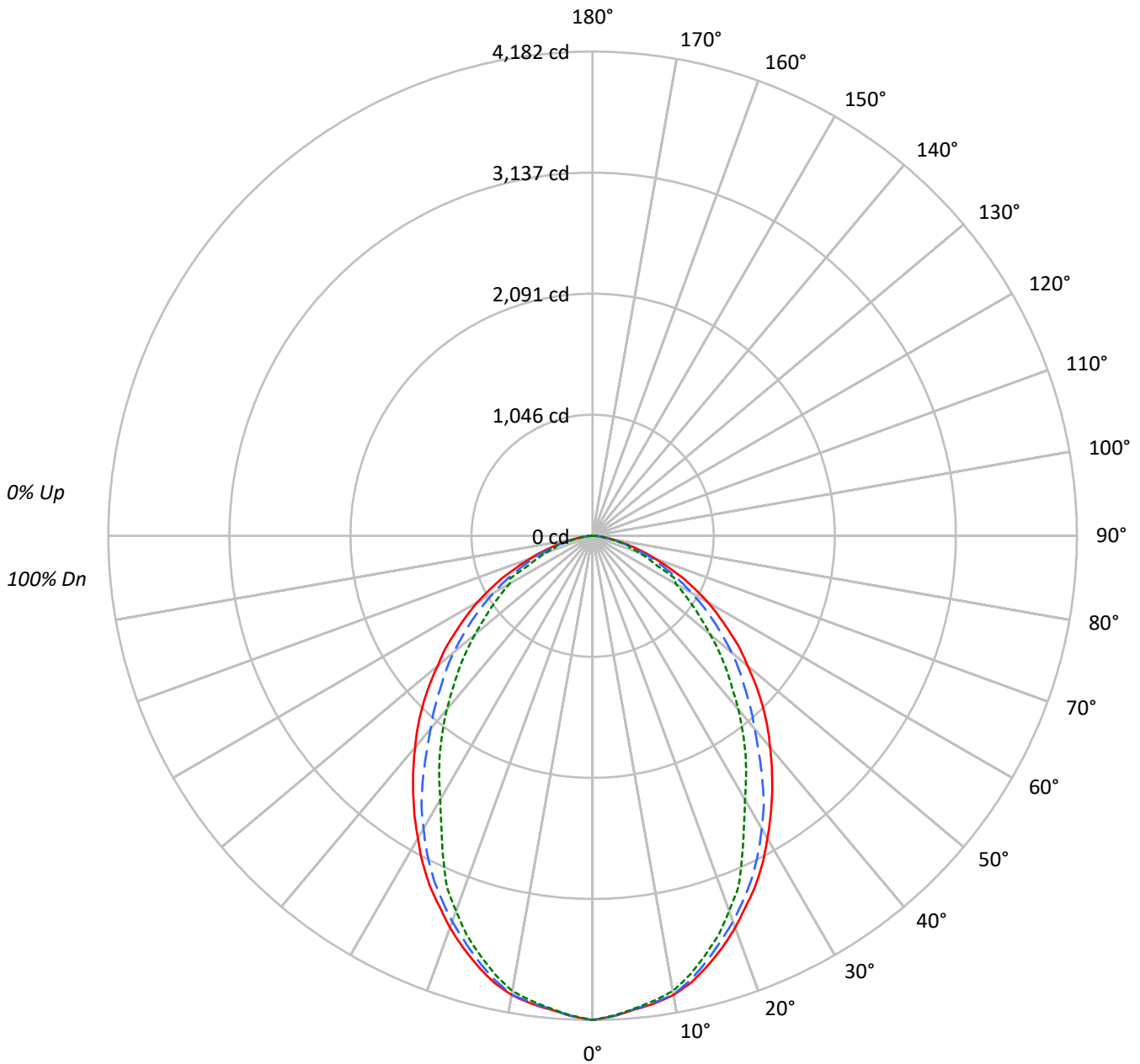
Lumens per Lamp: N/A
Luminaire Lumens: 8210.0 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5627	5627	5627
5°	5550	5544	5537
10°	5502	5496	5456
15°	5354	5300	5226
20°	5157	5074	4936
25°	4945	4838	4536
30°	4687	4537	4086
35°	4439	4193	3780
40°	4186	3821	3439
45°	3947	3533	3109
50°	3653	3279	2773
55°	3380	2971	2484
60°	3097	2654	2225
65°	2725	2324	1970
70°	2244	2035	1674
75°	1785	1559	1634
80°	1199	1124	1049
85°	746	895	1045



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.3	4.7
10°-20°	1068.4	13.0
20°-30°	1479.1	18.0
30°-40°	1577.2	19.2
40°-50°	1438.8	17.5
50°-60°	1127.2	13.7
60°-70°	734.7	8.9
70°-80°	325.5	4.0
80°-90°	69.9	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°	2936.8	35.8
0°-40°	4513.9	55.0
0°-60°	7080.0	86.2
0°-90°	8210.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8210.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4182	4182	4182	4182	4182	
5°	4110	4105	4105	4100	4100	390
15°	3844	3844	3805	3766	3752	1081
25°	3331	3312	3259	3143	3056	1529
35°	2703	2683	2553	2359	2301	1690
45°	2074	2031	1856	1702	1634	1598
55°	1441	1397	1267	1117	1059	1292
65°	856	807	730	745	619	843
75°	343	319	300	285	314	368
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°	4182.1	4182.1	4182.1	4182.1	4182.1
2.5°	4153.1	4153.1	4153.1	4148.2	4148.2
5°	4109.5	4104.7	4104.7	4099.9	4099.9
7.5°	4075.7	4070.9	4066.0	4061.2	4051.5
10°	4027.4	4027.4	4022.5	3998.3	3993.5
12.5°	3950.0	3945.2	3925.8	3892.0	3882.3
15°	3843.6	3843.6	3805.0	3766.3	3751.8
17.5°	3727.6	3722.8	3674.4	3635.7	3616.4
20°	3601.9	3592.2	3543.9	3481.0	3447.2
22.5°	3461.7	3461.7	3403.7	3321.5	3287.6
25°	3331.1	3311.8	3258.6	3142.6	3055.6
27.5°	3181.3	3152.3	3094.2	2929.9	2828.3
30°	3016.9	3002.4	2920.2	2707.5	2630.1
32.5°	2862.2	2838.0	2751.0	2528.6	2465.7
35°	2702.6	2683.3	2552.8	2359.4	2301.3
37.5°	2543.1	2518.9	2354.5	2199.8	2127.3
40°	2383.5	2354.5	2175.6	2035.4	1958.1
42.5°	2233.7	2195.0	2020.9	1871.1	1784.0
45°	2074.1	2030.6	1856.5	1701.8	1634.1
47.5°	1914.6	1875.9	1716.3	1556.8	1479.4
50°	1745.3	1711.5	1566.5	1406.9	1324.7
52.5°	1605.1	1552.0	1411.7	1252.2	1184.5
55°	1440.8	1397.2	1266.7	1116.8	1058.8
57.5°	1290.9	1247.4	1126.5	986.3	937.9
60°	1150.7	1087.8	986.3	865.4	826.7
62.5°	996.0	947.6	860.6	759.1	807.4
65°	855.8	807.4	730.0	744.6	618.8
67.5°	701.0	676.9	609.2	541.5	522.2
70°	570.5	541.5	517.3	444.8	425.5
72.5°	454.5	425.5	391.6	352.9	338.4
75°	343.3	319.1	299.8	285.3	314.3
77.5°	236.9	227.2	212.7	198.2	193.4
80°	154.7	149.9	145.0	140.2	135.4
82.5°	91.9	91.9	91.9	91.9	91.9
85°	48.3	53.2	58.0	62.9	67.7
87.5°	29.0	29.0	33.8	38.7	43.5
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)