

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: P546172

Luminaire Tested: **FMR-12-4-LD4-2HI-50-UNV-80-94-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: P546172
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-12-4-LD4-2HI-50-UNV-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

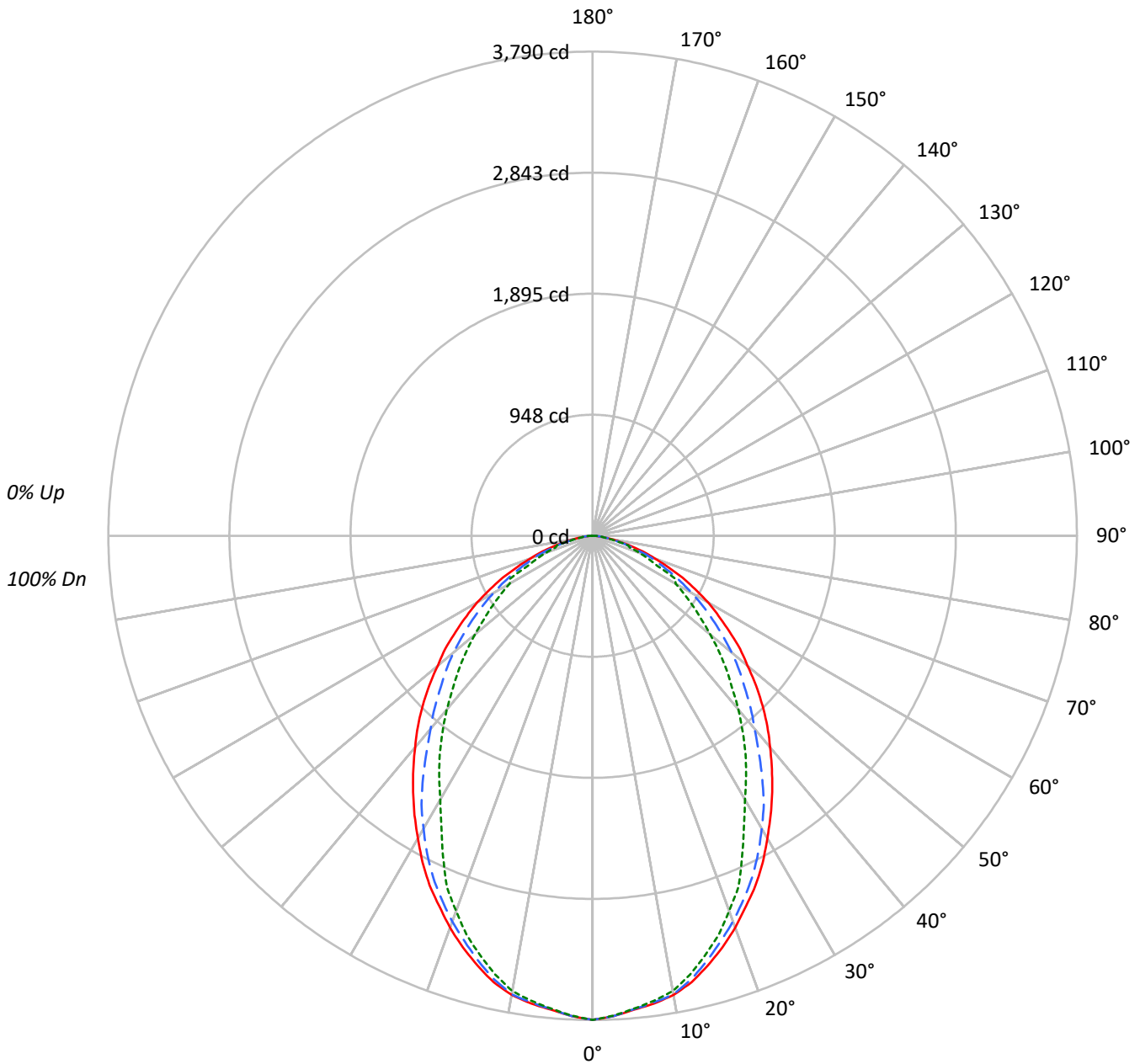
Lumens per Lamp: N/A
Luminaire Lumens: 7440.0 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	10198	10198	10198
5°	10060	10048	10036
10°	9973	9961	9889
15°	9704	9606	9472
20°	9347	9197	8946
25°	8963	8768	8222
30°	8495	8223	7406
35°	8046	7599	6851
40°	7588	6926	6233
45°	7153	6403	5636
50°	6622	5943	5026
55°	6125	5385	4502
60°	5612	4810	4032
65°	4938	4213	3571
70°	4068	3688	3034
75°	3235	2824	2961
80°	2173	2036	1901
85°	1352	1624	1893



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.8	4.7
10°-20°	968.2	13.0
20°-30°	1340.4	18.0
30°-40°	1429.2	19.2
40°-50°	1303.9	17.5
50°-60°	1021.5	13.7
60°-70°	665.8	8.9
70°-80°	295.0	4.0
80°-90°	63.3	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°	2661.3	35.8
0°-40°	4090.6	55.0
0°-60°	6416.0	86.2
0°-90°	7440.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7440.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3790	3790	3790	3790	3790	
5°	3724	3720	3720	3715	3715	354
15°	3483	3483	3448	3413	3400	979
25°	3019	3001	2953	2848	2769	1386
35°	2449	2432	2313	2138	2086	1531
45°	1880	1840	1682	1542	1481	1448
55°	1306	1266	1148	1012	960	1171
65°	776	732	662	675	561	764
75°	311	289	272	258	285	333
85°	44	48	53	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3789.8	3789.8	3789.8	3789.8	3789.8
2.5°	3763.5	3763.5	3763.5	3759.2	3759.2
5°	3724.1	3719.7	3719.7	3715.4	3715.4
7.5°	3693.4	3689.1	3684.7	3680.3	3671.5
10°	3649.6	3649.6	3645.3	3623.3	3619.0
12.5°	3579.5	3575.2	3557.6	3527.0	3518.2
15°	3483.1	3483.1	3448.1	3413.0	3399.9
17.5°	3378.0	3373.6	3329.8	3294.7	3277.2
20°	3264.1	3255.3	3211.5	3154.5	3123.9
22.5°	3137.0	3137.0	3084.4	3010.0	2979.3
25°	3018.7	3001.2	2953.0	2847.9	2769.0
27.5°	2882.9	2856.6	2804.0	2655.1	2563.1
30°	2733.9	2720.8	2646.3	2453.5	2383.4
32.5°	2593.7	2571.8	2493.0	2291.4	2234.5
35°	2449.2	2431.6	2313.3	2138.1	2085.5
37.5°	2304.6	2282.7	2133.7	1993.5	1927.8
40°	2160.0	2133.7	1971.6	1844.5	1774.4
42.5°	2024.2	1989.1	1831.4	1695.6	1616.7
45°	1879.6	1840.2	1682.4	1542.2	1480.9
47.5°	1735.0	1699.9	1555.4	1410.8	1340.7
50°	1581.7	1551.0	1419.5	1275.0	1200.5
52.5°	1454.6	1406.4	1279.3	1134.8	1073.4
55°	1305.6	1266.2	1147.9	1012.1	959.5
57.5°	1169.8	1130.4	1020.8	893.8	850.0
60°	1042.8	985.8	893.8	784.3	749.2
62.5°	902.6	858.7	779.9	687.9	731.7
65°	775.5	731.7	661.6	674.7	560.8
67.5°	635.3	613.4	552.0	490.7	473.2
70°	517.0	490.7	468.8	403.1	385.6
72.5°	411.8	385.6	354.9	319.8	306.7
75°	311.1	289.2	271.6	258.5	284.8
77.5°	214.7	205.9	192.8	179.6	175.3
80°	140.2	135.8	131.4	127.1	122.7
82.5°	83.2	83.2	83.2	83.2	83.2
85°	43.8	48.2	52.6	57.0	61.3
87.5°	26.3	26.3	30.7	35.1	39.4
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)