

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: P546748

Luminaire Tested: **FMR-24-4-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: P546748
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-50-UNV-80-94-EDD
Description: 2X4 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

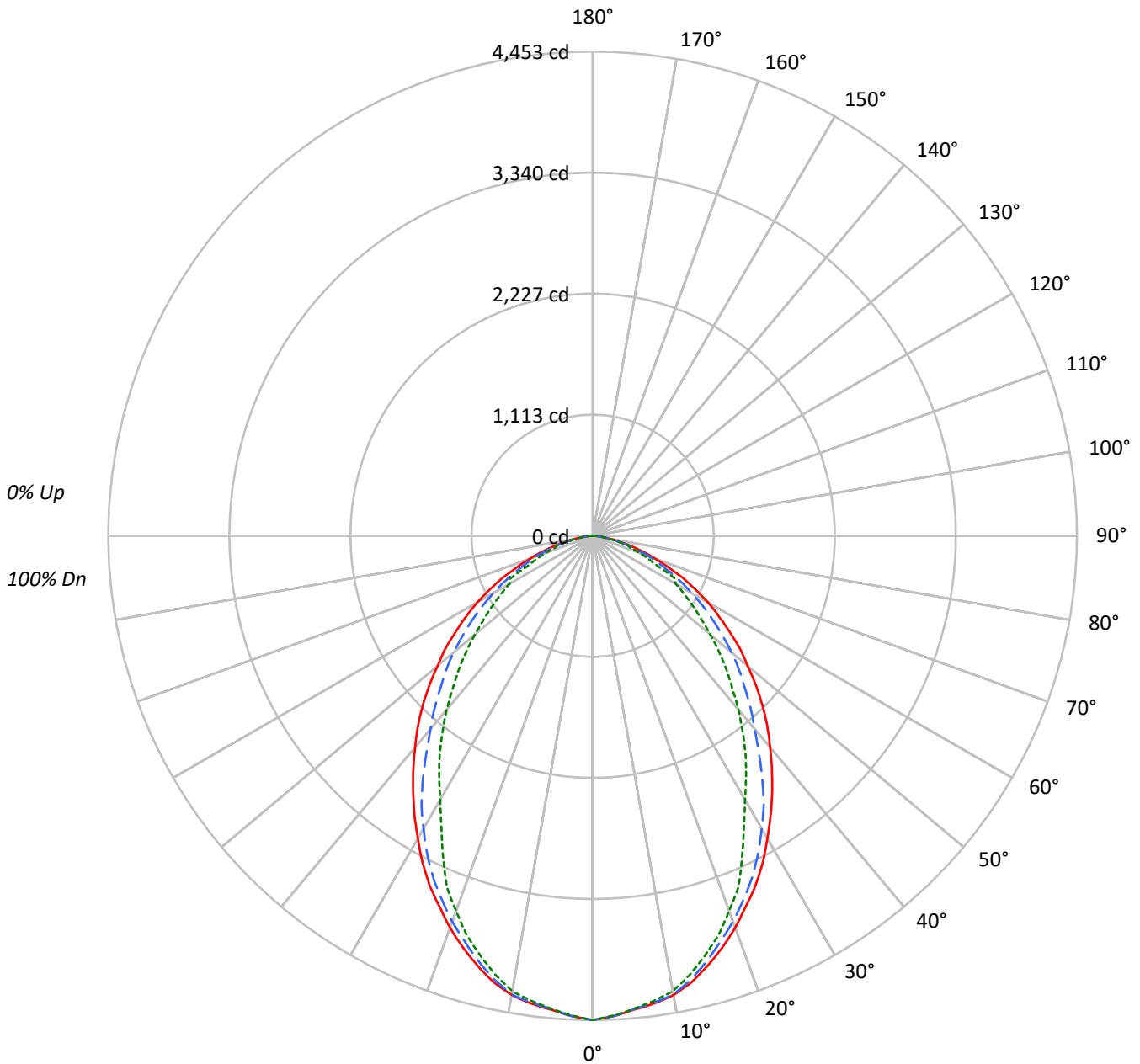
Lumens per Lamp: N/A
Luminaire Lumens: 8742.0 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5992	5992	5992
5°	5910	5903	5896
10°	5859	5852	5810
15°	5701	5644	5565
20°	5492	5403	5256
25°	5266	5151	4830
30°	4991	4831	4351
35°	4727	4465	4025
40°	4458	4069	3662
45°	4202	3761	3311
50°	3890	3491	2953
55°	3599	3164	2645
60°	3297	2826	2369
65°	2901	2475	2098
70°	2390	2167	1782
75°	1900	1659	1739
80°	1276	1196	1117
85°	795	954	1113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	414.5	4.7
10°-20°	1137.6	13.0
20°-30°	1574.9	18.0
30°-40°	1679.4	19.2
40°-50°	1532.1	17.5
50°-60°	1200.2	13.7
60°-70°	782.3	8.9
70°-80°	346.6	4.0
80°-90°	74.4	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°	3127.1	35.8
0°-40°	4806.4	55.0
0°-60°	7538.7	86.2
0°-90°	8742.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8742.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4453	4453	4453	4453	4453	
5°	4376	4371	4371	4366	4366	415
15°	4093	4093	4052	4010	3995	1151
25°	3547	3526	3470	3346	3254	1628
35°	2878	2857	2718	2512	2450	1799
45°	2208	2162	1977	1812	1740	1701
55°	1534	1488	1349	1189	1127	1376
65°	911	860	777	793	659	898
75°	366	340	319	304	335	392
85°	52	57	62	67	72	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4453.1	4453.1	4453.1	4453.1	4453.1
2.5°	4422.2	4422.2	4422.2	4417.0	4417.0
5°	4375.8	4370.7	4370.7	4365.5	4365.5
7.5°	4339.8	4334.7	4329.5	4324.4	4314.1
10°	4288.3	4288.3	4283.2	4257.4	4252.3
12.5°	4206.0	4200.8	4180.2	4144.2	4133.9
15°	4092.7	4092.7	4051.5	4010.3	3994.9
17.5°	3969.1	3964.0	3912.5	3871.3	3850.7
20°	3835.3	3825.0	3773.5	3706.6	3670.6
22.5°	3686.0	3686.0	3624.2	3536.7	3500.7
25°	3547.0	3526.4	3469.8	3346.2	3253.6
27.5°	3387.4	3356.5	3294.7	3119.7	3011.6
30°	3212.4	3196.9	3109.4	2882.9	2800.5
32.5°	3047.6	3021.9	2929.2	2692.4	2625.5
35°	2877.8	2857.2	2718.2	2512.2	2450.5
37.5°	2707.9	2682.1	2507.1	2342.4	2265.1
40°	2538.0	2507.1	2316.6	2167.3	2085.0
42.5°	2378.4	2337.2	2151.9	1992.3	1899.6
45°	2208.5	2162.2	1976.8	1812.1	1740.0
47.5°	2038.6	1997.4	1827.6	1657.7	1575.3
50°	1858.4	1822.4	1668.0	1498.1	1410.6
52.5°	1709.2	1652.5	1503.2	1333.3	1261.3
55°	1534.1	1487.8	1348.8	1189.2	1127.4
57.5°	1374.5	1328.2	1199.5	1050.2	998.7
60°	1225.2	1158.3	1050.2	921.5	880.3
62.5°	1060.5	1009.0	916.4	808.2	859.7
65°	911.2	859.7	777.4	792.8	658.9
67.5°	746.5	720.7	648.7	576.6	556.0
70°	607.5	576.6	550.8	473.6	453.0
72.5°	483.9	453.0	417.0	375.8	360.4
75°	365.5	339.8	319.2	303.7	334.6
77.5°	252.3	242.0	226.5	211.1	205.9
80°	164.7	159.6	154.4	149.3	144.1
82.5°	97.8	97.8	97.8	97.8	97.8
85°	51.5	56.6	61.8	66.9	72.1
87.5°	30.9	30.9	36.0	41.2	46.3
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)