

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: P547192

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-80-85-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: P547192
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-LD4-3STD-40-UNV-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

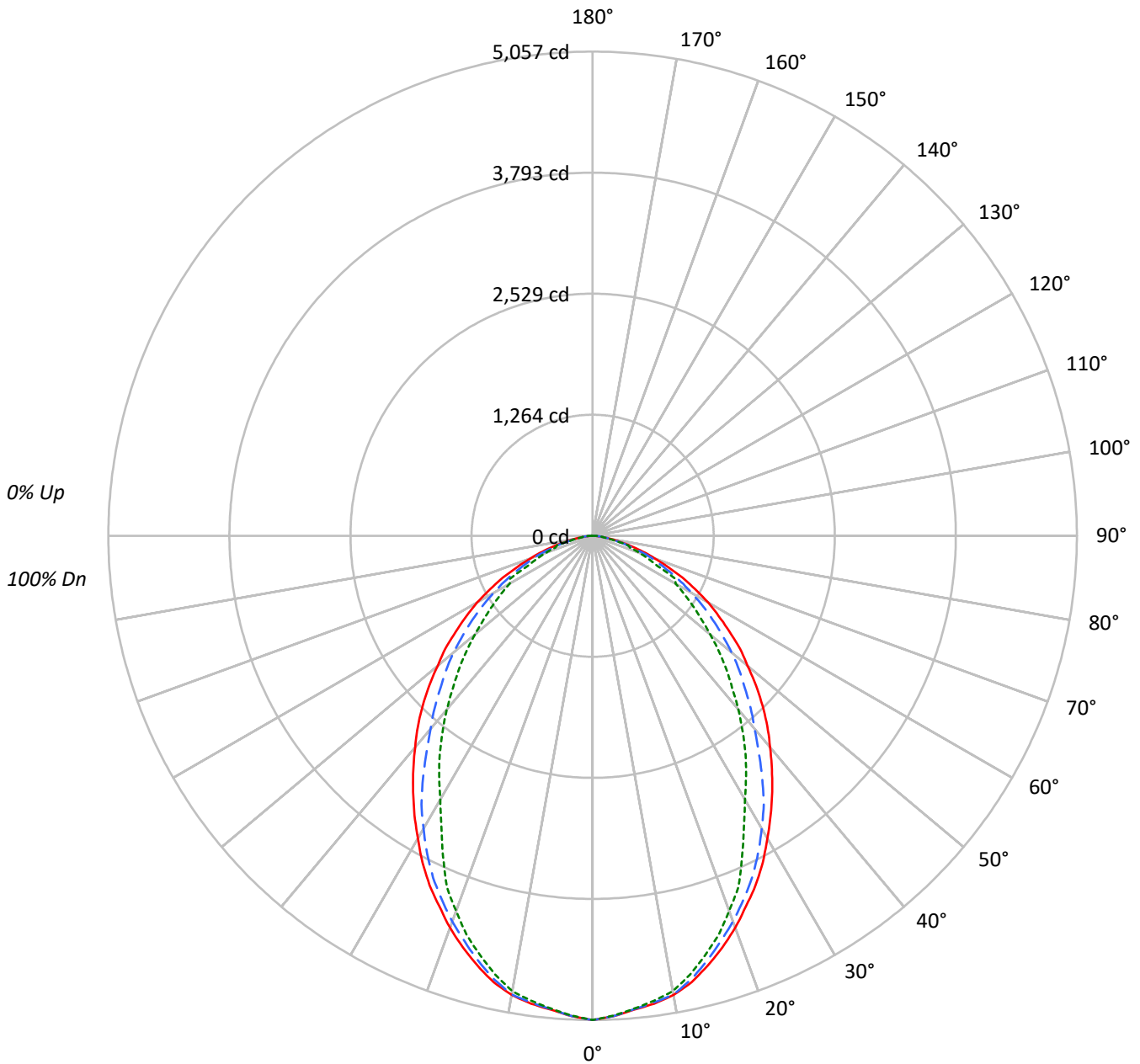
Lumens per Lamp: N/A
Luminaire Lumens: 9928.0 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6804	6804	6804
5°	6712	6704	6696
10°	6654	6646	6598
15°	6474	6409	6320
20°	6237	6136	5969
25°	5980	5850	5486
30°	5668	5486	4941
35°	5368	5070	4571
40°	5063	4621	4159
45°	4772	4272	3760
50°	4418	3965	3353
55°	4087	3593	3004
60°	3744	3210	2690
65°	3294	2811	2382
70°	2714	2461	2024
75°	2158	1884	1975
80°	1450	1359	1268
85°	903	1084	1264



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	470.8	4.7
10°-20°	1292.0	13.0
20°-30°	1788.6	18.0
30°-40°	1907.2	19.2
40°-50°	1739.9	17.5
50°-60°	1363.1	13.7
60°-70°	888.4	8.9
70°-80°	393.6	4.0
80°-90°	84.5	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°	3551.3	35.8
0°-40°	5458.5	55.0
0°-60°	8561.5	86.2
0°-90°	9928.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9928.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5057	5057	5057	5057	5057	
5°	4970	4964	4964	4958	4958	472
15°	4648	4648	4601	4554	4537	1307
25°	4028	4005	3940	3800	3695	1849
35°	3268	3245	3087	2853	2783	2043
45°	2508	2456	2245	2058	1976	1932
55°	1742	1690	1532	1350	1280	1563
65°	1035	976	883	900	748	1020
75°	415	386	362	345	380	445
85°	58	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5057.2	5057.2	5057.2	5057.2	5057.2
2.5°	5022.1	5022.1	5022.1	5016.3	5016.3
5°	4969.5	4963.6	4963.6	4957.8	4957.8
7.5°	4928.6	4922.7	4916.9	4911.0	4899.3
10°	4870.1	4870.1	4864.3	4835.0	4829.2
12.5°	4776.6	4770.7	4747.3	4706.4	4694.7
15°	4647.9	4647.9	4601.2	4554.4	4536.9
17.5°	4507.6	4501.8	4443.3	4396.5	4373.2
20°	4355.6	4343.9	4285.5	4209.5	4168.5
22.5°	4186.1	4186.1	4115.9	4016.5	3975.6
25°	4028.2	4004.8	3940.5	3800.2	3695.0
27.5°	3847.0	3811.9	3741.7	3543.0	3420.2
30°	3648.2	3630.7	3531.3	3274.0	3180.5
32.5°	3461.1	3431.9	3326.6	3057.7	2981.7
35°	3268.2	3244.8	3086.9	2853.1	2782.9
37.5°	3075.2	3046.0	2847.2	2660.1	2572.4
40°	2882.3	2847.2	2630.9	2461.4	2367.8
42.5°	2701.1	2654.3	2443.8	2262.6	2157.3
45°	2508.1	2455.5	2245.0	2058.0	1976.1
47.5°	2315.2	2268.4	2075.5	1882.6	1789.0
50°	2110.6	2069.6	1894.3	1701.3	1601.9
52.5°	1941.0	1876.7	1707.2	1514.2	1432.4
55°	1742.2	1689.6	1531.8	1350.5	1280.4
57.5°	1561.0	1508.4	1362.2	1192.7	1134.2
60°	1391.5	1315.5	1192.7	1046.5	999.7
62.5°	1204.4	1145.9	1040.7	917.9	976.4
65°	1034.8	976.4	882.8	900.4	748.3
67.5°	847.7	818.5	736.7	654.8	631.4
70°	689.9	654.8	625.6	537.9	514.5
72.5°	549.6	514.5	473.6	426.8	409.3
75°	415.1	385.9	362.5	344.9	380.0
77.5°	286.5	274.8	257.2	239.7	233.9
80°	187.1	181.2	175.4	169.5	163.7
82.5°	111.1	111.1	111.1	111.1	111.1
85°	58.5	64.3	70.2	76.0	81.9
87.5°	35.1	35.1	40.9	46.8	52.6
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)