

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: P547193

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-80-86-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: P547193
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-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

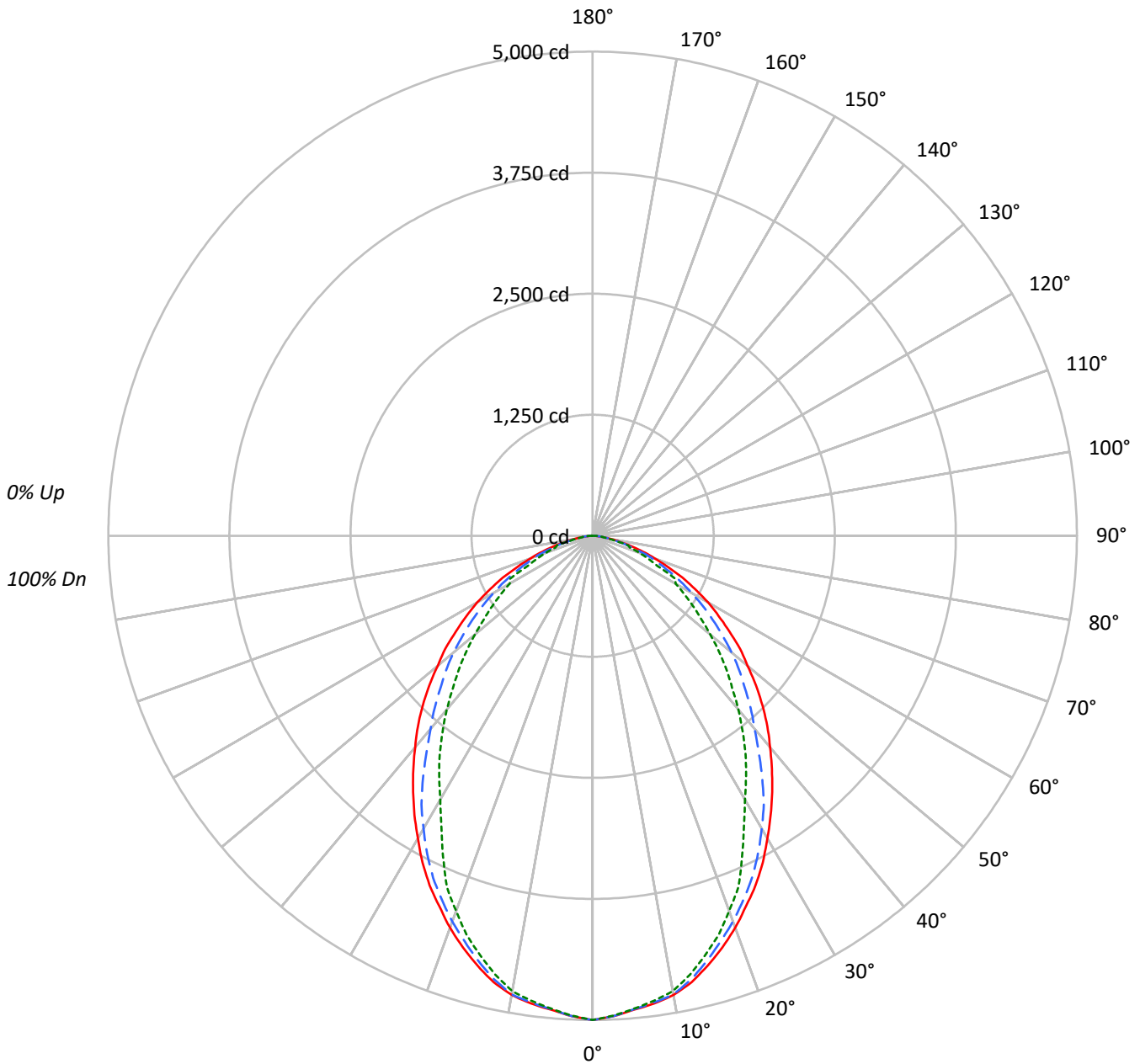
Lumens per Lamp: N/A
Luminaire Lumens: 9816.0 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P547193

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-80-86-EDD

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°	6728	6728	6728
5°	6636	6628	6621
10°	6579	6571	6523
15°	6401	6337	6248
20°	6166	6067	5901
25°	5913	5784	5424
30°	5604	5424	4886
35°	5308	5013	4519
40°	5005	4569	4112
45°	4719	4224	3718
50°	4368	3920	3315
55°	4041	3553	2970
60°	3702	3173	2660
65°	3257	2779	2356
70°	2683	2433	2001
75°	2133	1863	1953
80°	1433	1344	1254
85°	892	1071	1249



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	465.4	4.7
10°-20°	1277.4	13.0
20°-30°	1768.4	18.0
30°-40°	1885.7	19.2
40°-50°	1720.3	17.5
50°-60°	1347.7	13.7
60°-70°	878.4	8.9
70°-80°	389.1	4.0
80°-90°	83.5	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°	3511.3	35.8
0°-40°	5396.9	55.0
0°-60°	8464.9	86.2
0°-90°	9816.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9816.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5000	5000	5000	5000	5000	
5°	4913	4908	4908	4902	4902	466
15°	4596	4596	4549	4503	4486	1292
25°	3983	3960	3896	3757	3653	1828
35°	3231	3208	3052	2821	2752	2020
45°	2480	2428	2220	2035	1954	1910
55°	1723	1671	1514	1335	1266	1545
65°	1023	965	873	890	740	1008
75°	410	382	358	341	376	440
85°	58	64	69	75	81	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5000.1	5000.1	5000.1	5000.1	5000.1
2.5°	4965.5	4965.5	4965.5	4959.7	4959.7
5°	4913.4	4907.7	4907.7	4901.9	4901.9
7.5°	4873.0	4867.2	4861.4	4855.6	4844.1
10°	4815.2	4815.2	4809.4	4780.5	4774.7
12.5°	4722.7	4716.9	4693.8	4653.3	4641.7
15°	4595.5	4595.5	4549.3	4503.0	4485.7
17.5°	4456.8	4451.0	4393.2	4346.9	4323.8
20°	4306.5	4294.9	4237.1	4162.0	4121.5
22.5°	4138.8	4138.8	4069.5	3971.2	3930.7
25°	3982.8	3959.6	3896.1	3757.3	3653.3
27.5°	3803.6	3768.9	3699.5	3503.0	3381.6
30°	3607.0	3589.7	3491.4	3237.1	3144.6
32.5°	3422.1	3393.2	3289.1	3023.2	2948.1
35°	3231.3	3208.2	3052.1	2820.9	2751.5
37.5°	3040.5	3011.6	2815.1	2630.1	2543.4
40°	2849.8	2815.1	2601.2	2433.6	2341.1
42.5°	2670.6	2624.4	2416.3	2237.1	2133.0
45°	2479.8	2427.8	2219.7	2034.7	1953.8
47.5°	2289.1	2242.8	2052.1	1861.3	1768.8
50°	2086.8	2046.3	1872.9	1682.1	1583.9
52.5°	1919.1	1855.5	1687.9	1497.2	1416.2
55°	1722.6	1670.6	1514.5	1335.3	1265.9
57.5°	1543.4	1491.4	1346.9	1179.2	1121.4
60°	1375.8	1300.6	1179.2	1034.7	988.5
62.5°	1190.8	1133.0	1028.9	907.5	965.3
65°	1023.1	965.3	872.9	890.2	739.9
67.5°	838.2	809.3	728.3	647.4	624.3
70°	682.1	647.4	618.5	531.8	508.7
72.5°	543.4	508.7	468.2	422.0	404.6
75°	410.4	381.5	358.4	341.0	375.7
77.5°	283.2	271.7	254.3	237.0	231.2
80°	185.0	179.2	173.4	167.6	161.9
82.5°	109.8	109.8	109.8	109.8	109.8
85°	57.8	63.6	69.4	75.1	80.9
87.5°	34.7	34.7	40.5	46.2	52.0
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)