

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: P547237

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-81-96-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: P547237
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-50-UNV-81-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

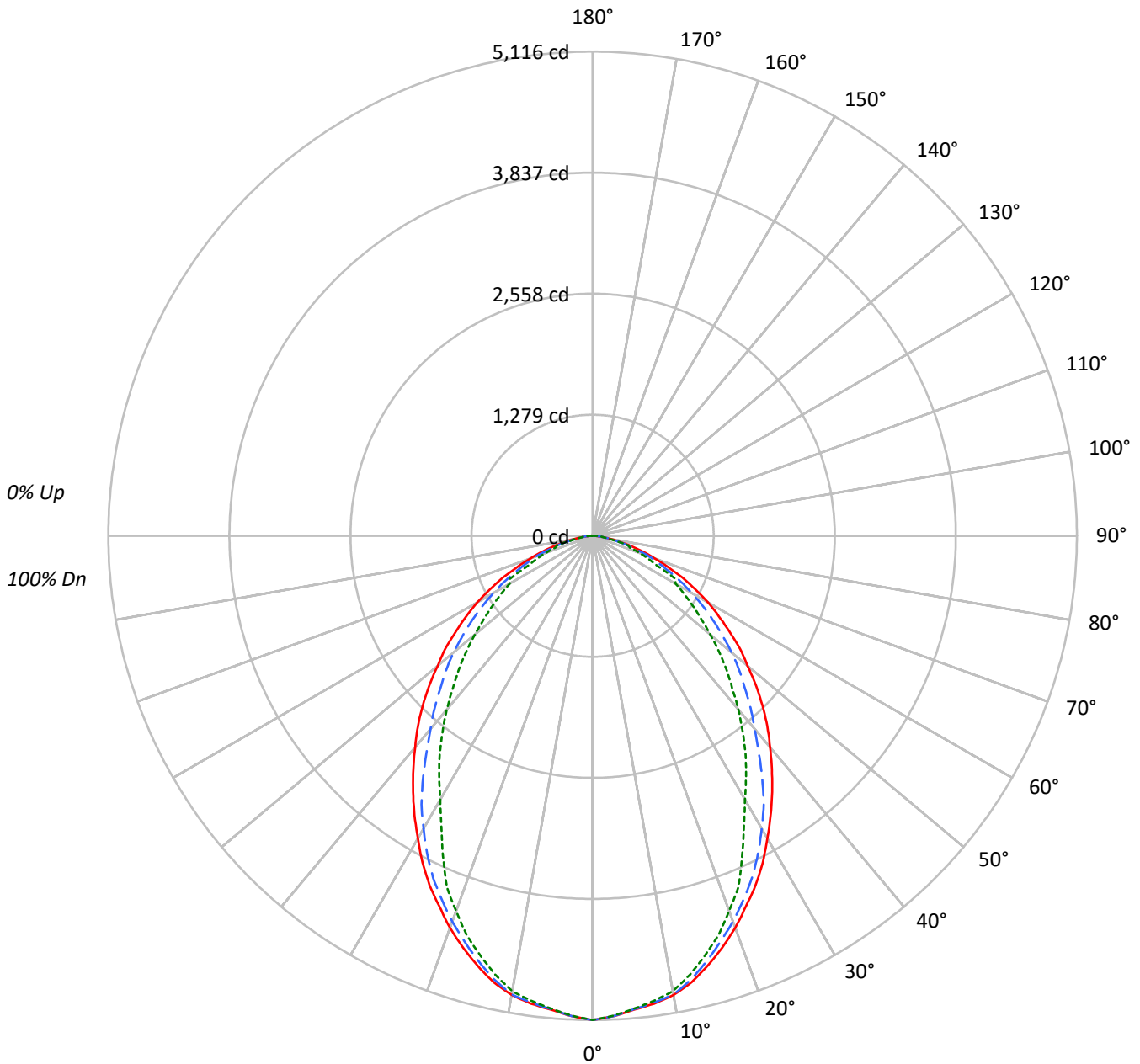
Lumens per Lamp: N/A
Luminaire Lumens: 10044.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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°	6884	6884	6884
5°	6790	6782	6774
10°	6731	6723	6675
15°	6550	6484	6394
20°	6309	6208	6038
25°	6050	5918	5550
30°	5734	5550	4999
35°	5431	5130	4624
40°	5122	4675	4207
45°	4828	4322	3804
50°	4469	4011	3392
55°	4135	3635	3039
60°	3788	3247	2722
65°	3333	2843	2410
70°	2746	2490	2048
75°	2183	1906	1999
80°	1467	1375	1283
85°	912	1096	1278



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	476.3	4.7
10°-20°	1307.0	13.0
20°-30°	1809.5	18.0
30°-40°	1929.5	19.2
40°-50°	1760.2	17.5
50°-60°	1379.0	13.7
60°-70°	898.8	8.9
70°-80°	398.2	4.0
80°-90°	85.5	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°	3592.8	35.8
0°-40°	5522.3	55.0
0°-60°	8661.5	86.2
0°-90°	10044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10044.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5116	5116	5116	5116	5116	
5°	5028	5022	5022	5016	5016	477
15°	4702	4702	4655	4608	4590	1322
25°	4075	4052	3987	3845	3738	1871
35°	3306	3283	3123	2886	2815	2067
45°	2537	2484	2271	2082	1999	1955
55°	1763	1709	1550	1366	1295	1581
65°	1047	988	893	911	757	1032
75°	420	390	367	349	384	450
85°	59	65	71	77	83	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5116.3	5116.3	5116.3	5116.3	5116.3
2.5°	5080.8	5080.8	5080.8	5074.9	5074.9
5°	5027.6	5021.6	5021.6	5015.7	5015.7
7.5°	4986.2	4980.2	4974.3	4968.4	4956.6
10°	4927.0	4927.0	4921.1	4891.5	4885.6
12.5°	4832.4	4826.5	4802.8	4761.4	4749.6
15°	4702.2	4702.2	4654.9	4607.6	4589.9
17.5°	4560.3	4554.4	4495.2	4447.9	4424.3
20°	4406.5	4394.7	4335.5	4258.6	4217.2
22.5°	4235.0	4235.0	4164.0	4063.4	4022.0
25°	4075.3	4051.6	3986.6	3844.6	3738.1
27.5°	3891.9	3856.4	3785.5	3584.4	3460.1
30°	3690.8	3673.1	3572.5	3312.3	3217.6
32.5°	3501.5	3472.0	3365.5	3093.4	3016.5
35°	3306.4	3282.7	3123.0	2886.4	2815.4
37.5°	3111.2	3081.6	2880.5	2691.2	2602.5
40°	2916.0	2880.5	2661.6	2490.1	2395.5
42.5°	2732.6	2685.3	2472.4	2289.0	2182.6
45°	2537.4	2484.2	2271.3	2082.0	1999.2
47.5°	2342.3	2294.9	2099.7	1904.6	1809.9
50°	2135.2	2093.8	1916.4	1721.2	1620.6
52.5°	1963.7	1898.6	1727.1	1531.9	1449.1
55°	1762.6	1709.4	1549.7	1366.3	1295.3
57.5°	1579.2	1526.0	1378.1	1206.6	1147.5
60°	1407.7	1330.8	1206.6	1058.7	1011.4
62.5°	1218.4	1159.3	1052.8	928.6	987.8
65°	1046.9	987.8	893.1	910.9	757.1
67.5°	857.6	828.1	745.3	662.5	638.8
70°	697.9	662.5	632.9	544.2	520.5
72.5°	556.0	520.5	479.1	431.8	414.0
75°	419.9	390.4	366.7	349.0	384.5
77.5°	289.8	278.0	260.3	242.5	236.6
80°	189.3	183.4	177.4	171.5	165.6
82.5°	112.4	112.4	112.4	112.4	112.4
85°	59.1	65.1	71.0	76.9	82.8
87.5°	35.5	35.5	41.4	47.3	53.2
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)