

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: P547072

Luminaire Tested: **FMR-24-4-LD4-3LO-35-UNV-81-85-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: P547072
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-LD4-3LO-35-UNV-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

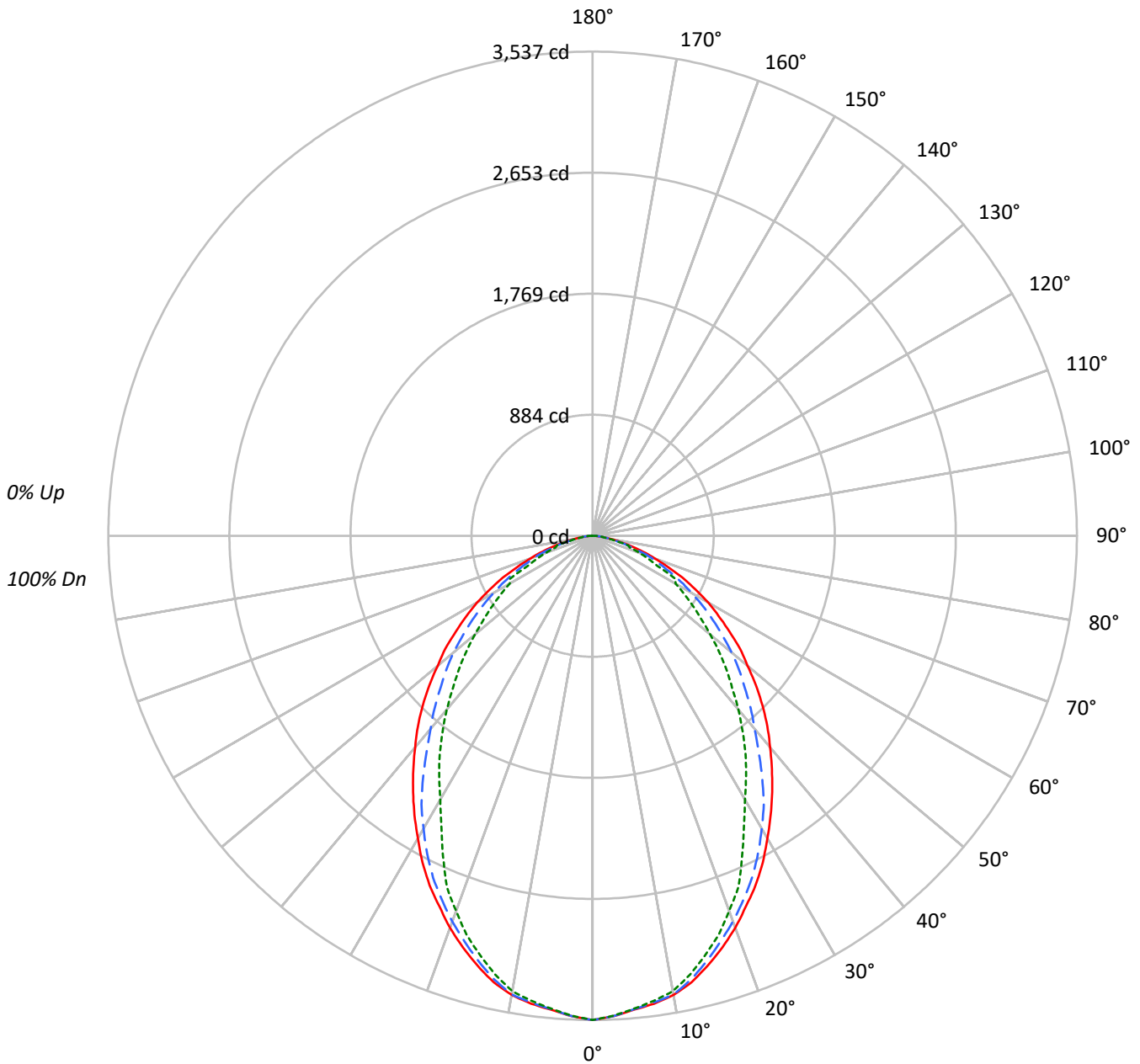
Lumens per Lamp: N/A
Luminaire Lumens: 6944.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	4759	4759	4759
5°	4695	4689	4684
10°	4654	4648	4615
15°	4528	4483	4420
20°	4362	4292	4175
25°	4183	4092	3837
30°	3964	3837	3456
35°	3755	3546	3197
40°	3541	3232	2909
45°	3338	2988	2630
50°	3090	2773	2345
55°	2859	2513	2101
60°	2619	2245	1882
65°	2304	1966	1666
70°	1898	1721	1416
75°	1509	1318	1382
80°	1014	951	887
85°	631	758	883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.3	4.7
10°-20°	903.6	13.0
20°-30°	1251.0	18.0
30°-40°	1334.0	19.2
40°-50°	1217.0	17.5
50°-60°	953.4	13.7
60°-70°	621.4	8.9
70°-80°	275.3	4.0
80°-90°	59.1	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°	2483.9	35.8
0°-40°	3817.9	55.0
0°-60°	5988.2	86.2
0°-90°	6944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3537	3537	3537	3537	3537	
5°	3476	3472	3472	3468	3468	330
15°	3251	3251	3218	3186	3173	914
25°	2818	2801	2756	2658	2584	1294
35°	2286	2270	2159	1996	1946	1429
45°	1754	1718	1570	1439	1382	1351
55°	1219	1182	1071	945	896	1093
65°	724	683	618	630	523	713
75°	290	270	254	241	266	311
85°	41	45	49	53	57	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3537.2	3537.2	3537.2	3537.2	3537.2
2.5°	3512.6	3512.6	3512.6	3508.6	3508.6
5°	3475.8	3471.8	3471.8	3467.7	3467.7
7.5°	3447.2	3443.1	3439.0	3435.0	3426.8
10°	3406.3	3406.3	3402.2	3381.8	3377.7
12.5°	3340.9	3336.8	3320.5	3291.8	3283.6
15°	3250.9	3250.9	3218.2	3185.5	3173.2
17.5°	3152.8	3148.7	3107.8	3075.1	3058.7
20°	3046.5	3038.3	2997.4	2944.2	2915.6
22.5°	2927.9	2927.9	2878.8	2809.3	2780.7
25°	2817.5	2801.1	2756.1	2658.0	2584.4
27.5°	2690.7	2666.2	2617.1	2478.1	2392.2
30°	2551.7	2539.4	2469.9	2290.0	2224.5
32.5°	2420.8	2400.4	2326.8	2138.7	2085.5
35°	2285.9	2269.5	2159.1	1995.5	1946.5
37.5°	2150.9	2130.5	1991.5	1860.6	1799.3
40°	2016.0	1991.5	1840.2	1721.6	1656.1
42.5°	1889.2	1856.5	1709.3	1582.5	1508.9
45°	1754.3	1717.5	1570.3	1439.4	1382.2
47.5°	1619.3	1586.6	1451.7	1316.7	1251.3
50°	1476.2	1447.6	1324.9	1190.0	1120.4
52.5°	1357.6	1312.6	1194.1	1059.1	1001.9
55°	1218.6	1181.8	1071.4	944.6	895.5
57.5°	1091.8	1055.0	952.8	834.2	793.3
60°	973.2	920.1	834.2	732.0	699.3
62.5°	842.4	801.5	727.9	642.0	682.9
65°	723.8	682.9	617.5	629.7	523.4
67.5°	592.9	572.5	515.2	458.0	441.6
70°	482.5	458.0	437.5	376.2	359.9
72.5°	384.4	359.9	331.2	298.5	286.2
75°	290.3	269.9	253.5	241.3	265.8
77.5°	200.4	192.2	179.9	167.7	163.6
80°	130.9	126.8	122.7	118.6	114.5
82.5°	77.7	77.7	77.7	77.7	77.7
85°	40.9	45.0	49.1	53.2	57.2
87.5°	24.5	24.5	28.6	32.7	36.8
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)