

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: P546888

Luminaire Tested: **FMR-24-4-LD4-2STD-35-UNV-82-85-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: P546888
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-LD4-2STD-35-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 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

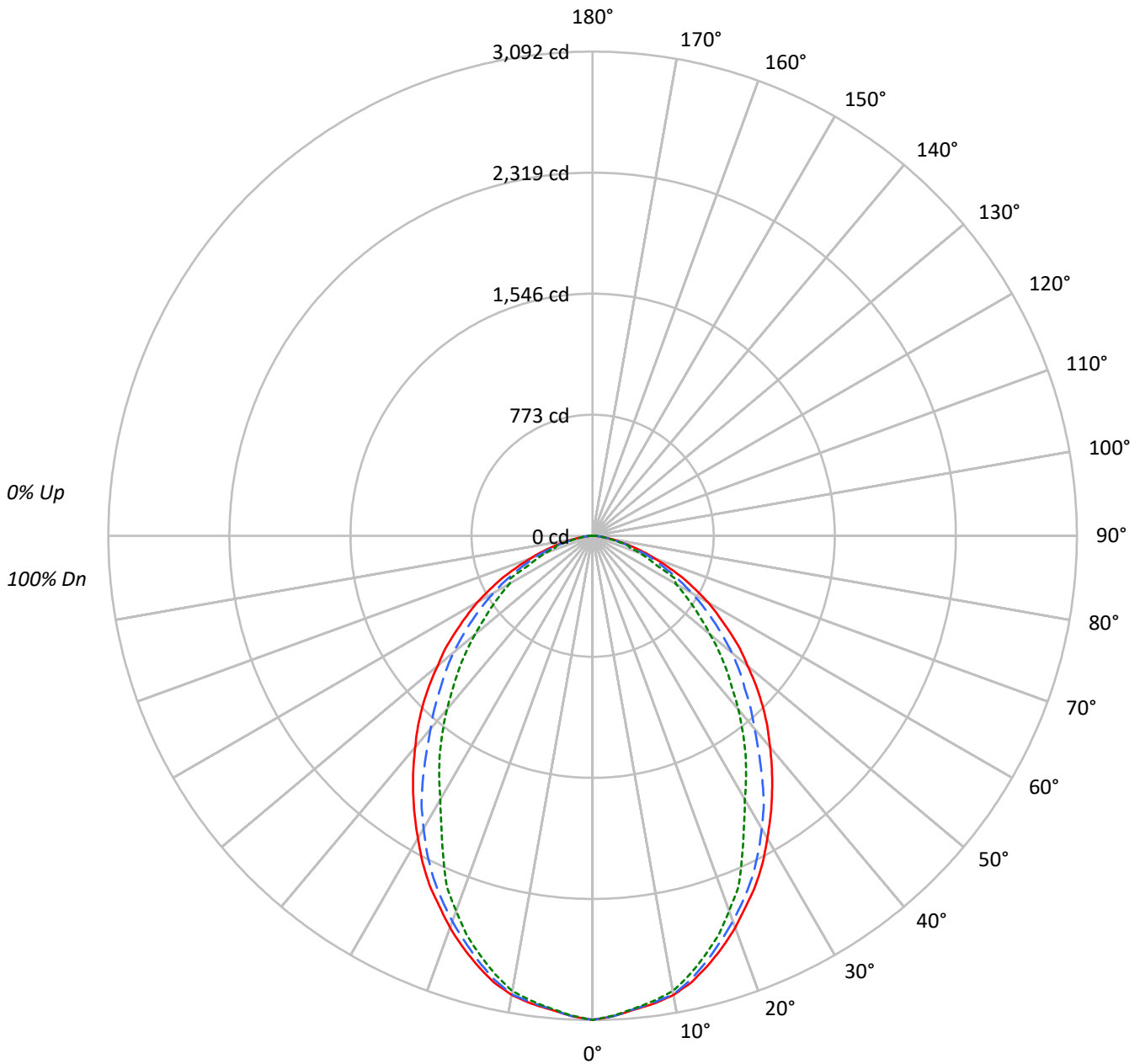
Lumens per Lamp: N/A
Luminaire Lumens: 6069.0 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4160	4160	4160
5°	4103	4098	4093
10°	4067	4063	4033
15°	3958	3918	3863
20°	3812	3751	3649
25°	3656	3576	3353
30°	3465	3354	3021
35°	3281	3099	2794
40°	3095	2825	2542
45°	2917	2611	2299
50°	2701	2424	2050
55°	2498	2197	1836
60°	2289	1962	1644
65°	2014	1718	1457
70°	1659	1504	1237
75°	1319	1152	1208
80°	886	831	776
85°	551	662	772



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.8	4.7
10°-20°	789.8	13.0
20°-30°	1093.4	18.0
30°-40°	1165.9	19.2
40°-50°	1063.6	17.5
50°-60°	833.3	13.7
60°-70°	543.1	8.9
70°-80°	240.6	4.0
80°-90°	51.7	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°	2170.9	35.8
0°-40°	3336.8	55.0
0°-60°	5233.7	86.2
0°-90°	6069.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6069.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3092	3092	3092	3092	3092	
5°	3038	3034	3034	3031	3031	288
15°	2841	2841	2813	2784	2773	799
25°	2462	2448	2409	2323	2259	1131
35°	1998	1984	1887	1744	1701	1249
45°	1533	1501	1372	1258	1208	1181
55°	1065	1033	936	826	783	955
65°	633	597	540	550	458	623
75°	254	236	222	211	232	272
85°	36	39	43	46	50	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3091.5	3091.5	3091.5	3091.5	3091.5
2.5°	3070.0	3070.0	3070.0	3066.4	3066.4
5°	3037.9	3034.3	3034.3	3030.7	3030.7
7.5°	3012.8	3009.3	3005.7	3002.1	2995.0
10°	2977.1	2977.1	2973.5	2955.7	2952.1
12.5°	2919.9	2916.3	2902.0	2877.0	2869.9
15°	2841.3	2841.3	2812.7	2784.1	2773.4
17.5°	2755.5	2751.9	2716.2	2687.6	2673.3
20°	2662.6	2655.4	2619.7	2573.2	2548.2
22.5°	2558.9	2558.9	2516.1	2455.3	2430.3
25°	2462.5	2448.2	2408.8	2323.1	2258.7
27.5°	2351.7	2330.2	2287.3	2165.8	2090.8
30°	2230.1	2219.4	2158.7	2001.4	1944.2
32.5°	2115.8	2097.9	2033.6	1869.2	1822.7
35°	1997.8	1983.5	1887.0	1744.1	1701.2
37.5°	1879.9	1862.0	1740.5	1626.1	1572.5
40°	1762.0	1740.5	1608.3	1504.6	1447.5
42.5°	1651.2	1622.6	1493.9	1383.1	1318.8
45°	1533.2	1501.1	1372.4	1258.0	1208.0
47.5°	1415.3	1386.7	1268.8	1150.8	1093.6
50°	1290.2	1265.2	1158.0	1040.0	979.3
52.5°	1186.6	1147.2	1043.6	925.7	875.6
55°	1065.0	1032.9	936.4	825.6	782.7
57.5°	954.2	922.1	832.7	729.1	693.3
60°	850.6	804.1	729.1	639.7	611.1
62.5°	736.2	700.5	636.2	561.1	596.8
65°	632.6	596.8	539.7	550.4	457.5
67.5°	518.2	500.4	450.3	400.3	386.0
70°	421.7	400.3	382.4	328.8	314.5
72.5°	336.0	314.5	289.5	260.9	250.2
75°	253.8	235.9	221.6	210.9	232.3
77.5°	175.1	168.0	157.3	146.5	143.0
80°	114.4	110.8	107.2	103.6	100.1
82.5°	67.9	67.9	67.9	67.9	67.9
85°	35.7	39.3	42.9	46.5	50.0
87.5°	21.4	21.4	25.0	28.6	32.2
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)