

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: P546383

Luminaire Tested: **FMR-12-4-LD4-2STD-50-UNV-93-84-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: P546383
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-12-4-LD4-2STD-50-UNV-93-84-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

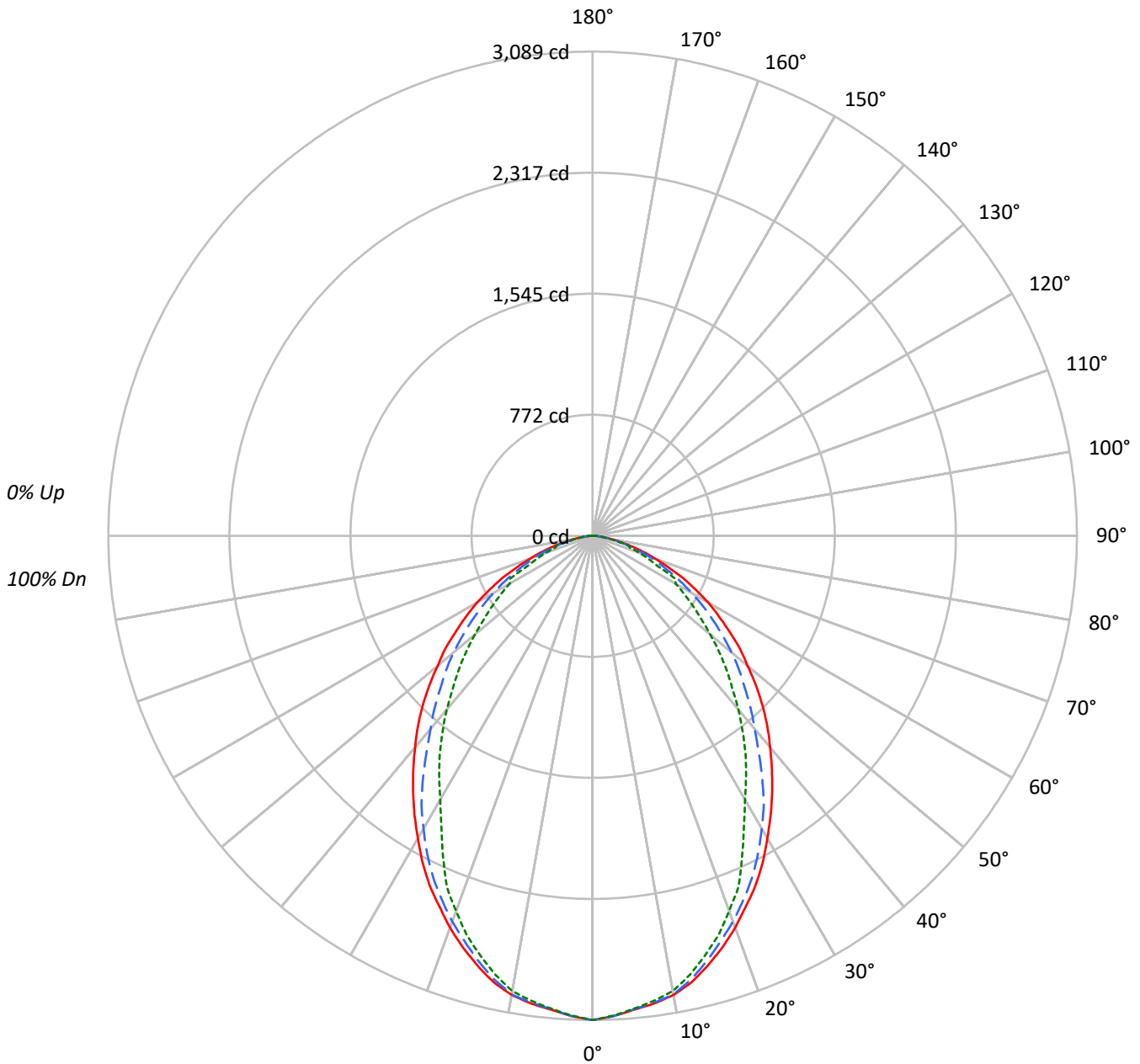
Lumens per Lamp: N/A
Luminaire Lumens: 6064.0 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	8312	8312	8312
5°	8199	8190	8180
10°	8128	8119	8060
15°	7909	7830	7720
20°	7619	7496	7291
25°	7305	7146	6701
30°	6924	6702	6036
35°	6558	6194	5584
40°	6184	5645	5081
45°	5830	5219	4593
50°	5397	4844	4096
55°	4993	4389	3669
60°	4574	3921	3286
65°	4025	3433	2911
70°	3316	3006	2472
75°	2636	2302	2413
80°	1771	1660	1550
85°	1102	1325	1544



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.5	4.7
10°-20°	789.1	13.0
20°-30°	1092.5	18.0
30°-40°	1164.9	19.2
40°-50°	1062.7	17.5
50°-60°	832.6	13.7
60°-70°	542.6	8.9
70°-80°	240.4	4.0
80°-90°	51.6	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°	2169.1	35.8
0°-40°	3334.0	55.0
0°-60°	5229.4	86.2
0°-90°	6064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3089	3089	3089	3089	3089	
5°	3035	3032	3032	3028	3028	288
15°	2839	2839	2810	2782	2771	798
25°	2460	2446	2407	2321	2257	1130
35°	1996	1982	1886	1743	1700	1248
45°	1532	1500	1371	1257	1207	1180
55°	1064	1032	936	825	782	954
65°	632	596	539	550	457	623
75°	254	236	221	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°	3088.9	3088.9	3088.9	3088.9	3088.9
2.5°	3067.5	3067.5	3067.5	3063.9	3063.9
5°	3035.4	3031.8	3031.8	3028.2	3028.2
7.5°	3010.4	3006.8	3003.2	2999.6	2992.5
10°	2974.6	2974.6	2971.1	2953.2	2949.7
12.5°	2917.5	2913.9	2899.7	2874.7	2867.5
15°	2839.0	2839.0	2810.4	2781.8	2771.1
17.5°	2753.2	2749.7	2714.0	2685.4	2671.1
20°	2660.4	2653.3	2617.5	2571.1	2546.1
22.5°	2556.8	2556.8	2514.0	2453.3	2428.3
25°	2460.4	2446.1	2406.9	2321.2	2256.9
27.5°	2349.7	2328.3	2285.4	2164.0	2089.0
30°	2228.3	2217.6	2156.9	1999.8	1942.6
32.5°	2114.0	2096.2	2031.9	1867.6	1821.2
35°	1996.2	1981.9	1885.5	1742.7	1699.8
37.5°	1878.3	1860.5	1739.1	1624.8	1571.2
40°	1760.5	1739.1	1607.0	1503.4	1446.3
42.5°	1649.8	1621.2	1492.7	1382.0	1317.7
45°	1532.0	1499.8	1371.3	1257.0	1207.0
47.5°	1414.1	1385.6	1267.7	1149.9	1092.7
50°	1289.1	1264.1	1157.0	1039.2	978.5
52.5°	1185.6	1146.3	1042.7	924.9	874.9
55°	1064.2	1032.0	935.6	824.9	782.1
57.5°	953.5	921.3	832.0	728.5	692.8
60°	849.9	803.5	728.5	639.2	610.6
62.5°	735.6	699.9	635.6	560.6	596.4
65°	632.1	596.4	539.2	549.9	457.1
67.5°	517.8	499.9	449.9	400.0	385.7
70°	421.4	400.0	382.1	328.5	314.2
72.5°	335.7	314.2	289.3	260.7	250.0
75°	253.5	235.7	221.4	210.7	232.1
77.5°	175.0	167.8	157.1	146.4	142.8
80°	114.3	110.7	107.1	103.6	100.0
82.5°	67.8	67.8	67.8	67.8	67.8
85°	35.7	39.3	42.9	46.4	50.0
87.5°	21.4	21.4	25.0	28.6	32.1
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)