

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: P546919

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-82-84-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: P546919
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-40-UNV-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

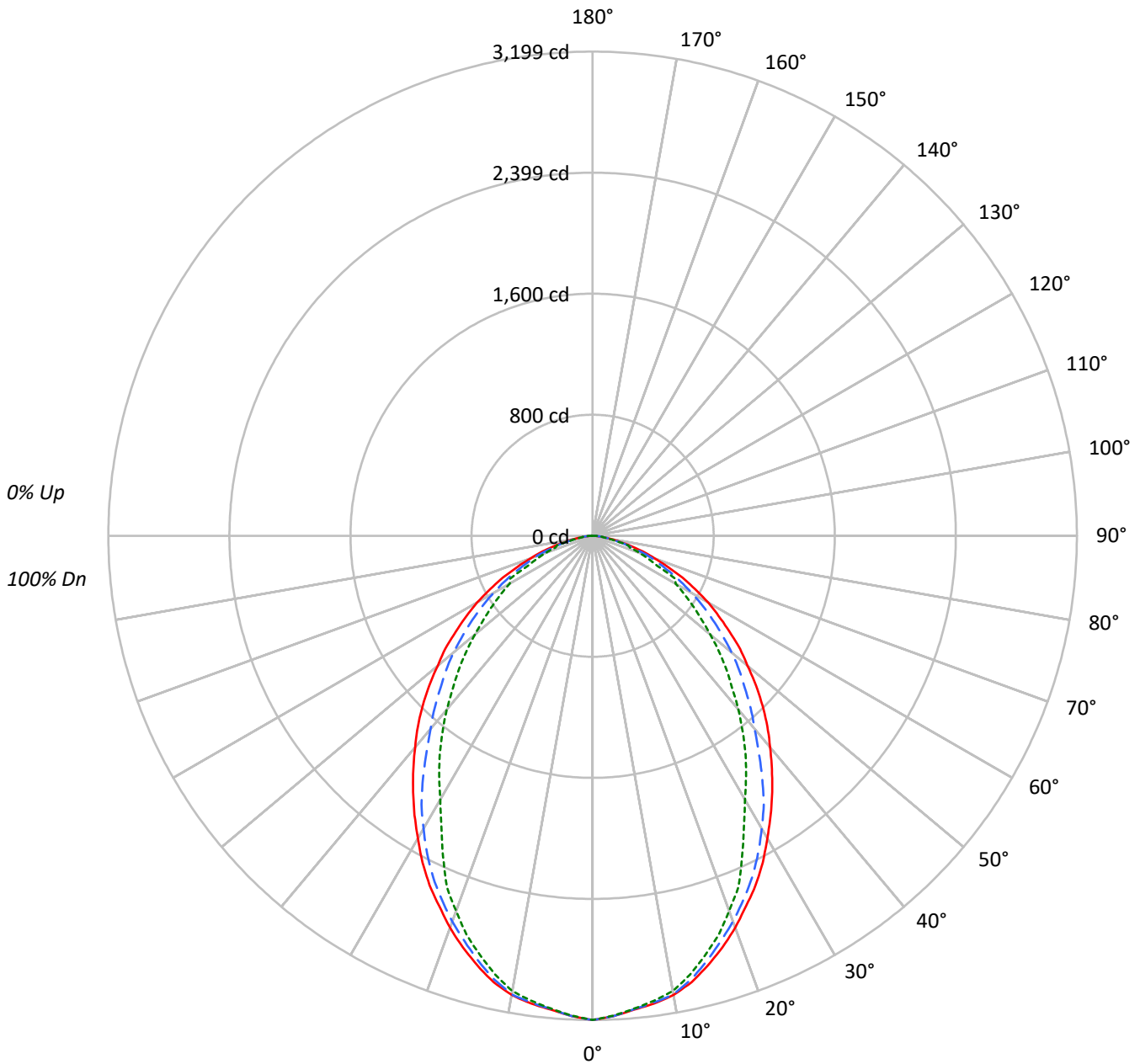
Lumens per Lamp: N/A
Luminaire Lumens: 6280.0 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4304	4304	4304
5°	4246	4241	4236
10°	4209	4204	4173
15°	4095	4054	3997
20°	3945	3881	3775
25°	3783	3700	3470
30°	3585	3470	3126
35°	3396	3207	2891
40°	3202	2923	2631
45°	3019	2702	2379
50°	2795	2508	2121
55°	2585	2273	1900
60°	2369	2030	1702
65°	2084	1778	1507
70°	1717	1557	1280
75°	1365	1192	1250
80°	917	859	802
85°	571	685	800



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.8	4.7
10°-20°	817.2	13.0
20°-30°	1131.4	18.0
30°-40°	1206.4	19.2
40°-50°	1100.6	17.5
50°-60°	862.2	13.7
60°-70°	561.9	8.9
70°-80°	249.0	4.0
80°-90°	53.5	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°	2246.4	35.8
0°-40°	3452.8	55.0
0°-60°	5415.6	86.2
0°-90°	6280.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6280.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3199	3199	3199	3199	3199	
5°	3144	3140	3140	3136	3136	298
15°	2940	2940	2910	2881	2870	827
25°	2548	2533	2493	2404	2337	1170
35°	2067	2052	1953	1805	1760	1292
45°	1586	1553	1420	1302	1250	1222
55°	1102	1069	969	854	810	988
65°	655	618	558	570	473	645
75°	263	244	229	218	240	281
85°	37	41	44	48	52	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3198.9	3198.9	3198.9	3198.9	3198.9
2.5°	3176.8	3176.8	3176.8	3173.1	3173.1
5°	3143.5	3139.8	3139.8	3136.1	3136.1
7.5°	3117.6	3113.9	3110.2	3106.5	3099.1
10°	3080.6	3080.6	3076.9	3058.4	3054.7
12.5°	3021.4	3017.7	3002.9	2977.1	2969.7
15°	2940.1	2940.1	2910.5	2880.9	2869.8
17.5°	2851.3	2847.6	2810.6	2781.1	2766.3
20°	2755.2	2747.8	2710.8	2662.7	2636.8
22.5°	2647.9	2647.9	2603.5	2540.7	2514.8
25°	2548.1	2533.3	2492.6	2403.8	2337.3
27.5°	2433.4	2411.2	2366.9	2241.1	2163.5
30°	2307.7	2296.6	2233.7	2071.0	2011.8
32.5°	2189.3	2170.8	2104.3	1934.2	1886.1
35°	2067.3	2052.5	1952.7	1804.7	1760.3
37.5°	1945.3	1926.8	1801.0	1682.7	1627.2
40°	1823.2	1801.0	1664.2	1556.9	1497.8
42.5°	1708.6	1679.0	1545.9	1431.2	1364.6
45°	1586.5	1553.2	1420.1	1301.8	1250.0
47.5°	1464.5	1434.9	1312.9	1190.8	1131.7
50°	1335.1	1309.2	1198.2	1076.2	1013.3
52.5°	1227.8	1187.1	1079.9	957.8	906.1
55°	1102.1	1068.8	968.9	854.3	809.9
57.5°	987.4	954.1	861.7	754.4	717.5
60°	880.2	832.1	754.4	662.0	632.4
62.5°	761.8	724.8	658.3	580.6	617.6
65°	654.6	617.6	558.4	569.5	473.4
67.5°	536.2	517.7	466.0	414.2	399.4
70°	436.4	414.2	395.7	340.2	325.4
72.5°	347.6	325.4	299.6	270.0	258.9
75°	262.6	244.1	229.3	218.2	240.4
77.5°	181.2	173.8	162.7	151.6	147.9
80°	118.3	114.6	110.9	107.2	103.5
82.5°	70.3	70.3	70.3	70.3	70.3
85°	37.0	40.7	44.4	48.1	51.8
87.5°	22.2	22.2	25.9	29.6	33.3
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)