

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: P547150

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-82-97-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: P547150
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-50-UNV-82-97-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

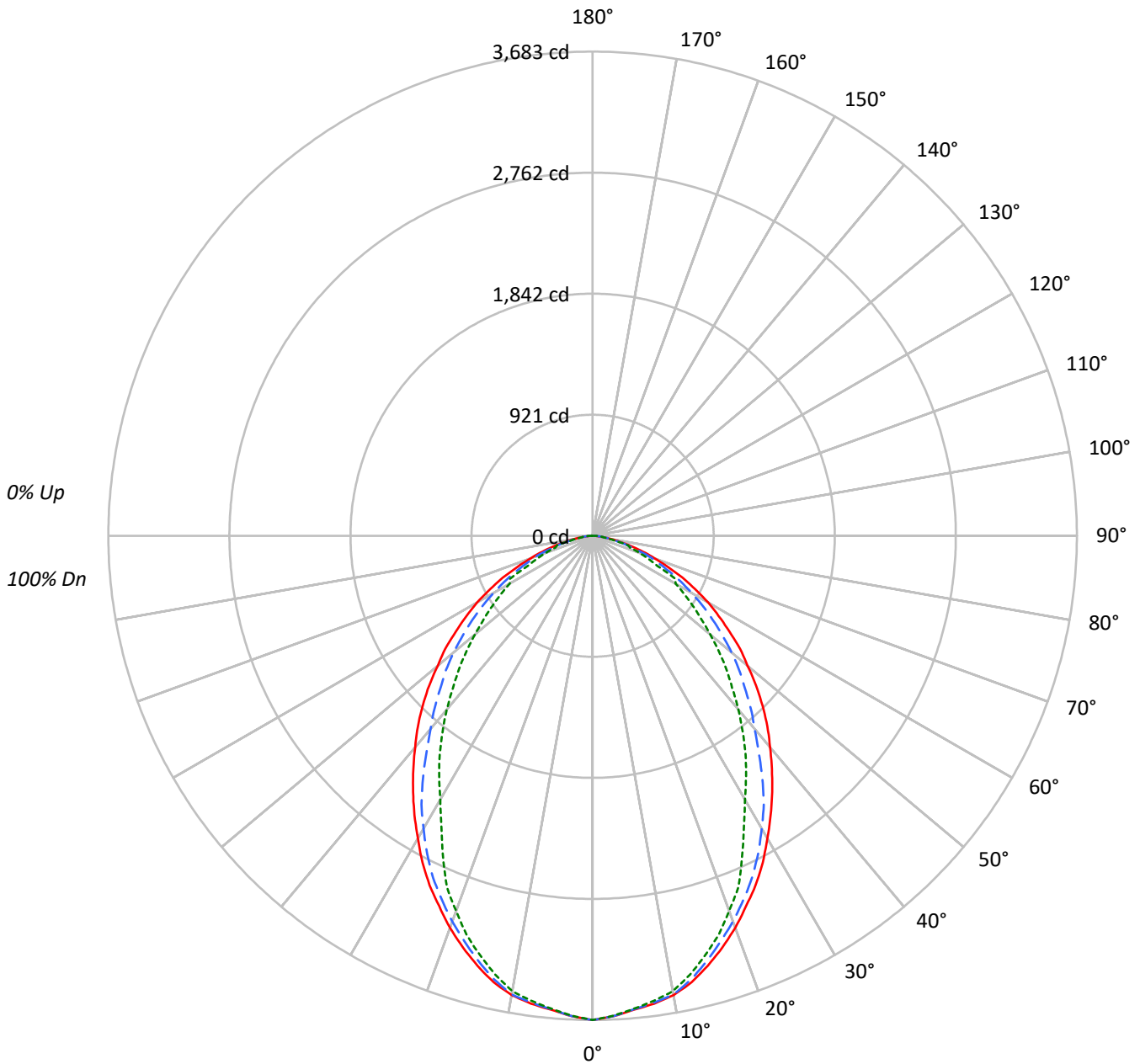
Lumens per Lamp: N/A
Luminaire Lumens: 7231.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4956	4956	4956
5°	4889	4883	4877
10°	4846	4840	4805
15°	4716	4668	4603
20°	4542	4469	4347
25°	4356	4261	3995
30°	4128	3996	3599
35°	3910	3693	3329
40°	3687	3366	3029
45°	3476	3111	2739
50°	3218	2888	2442
55°	2977	2617	2188
60°	2727	2338	1960
65°	2400	2047	1735
70°	1977	1792	1474
75°	1572	1372	1439
80°	1056	989	924
85°	658	789	920



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.9	4.7
10°-20°	941.0	13.0
20°-30°	1302.7	18.0
30°-40°	1389.1	19.2
40°-50°	1267.3	17.5
50°-60°	992.8	13.7
60°-70°	647.1	8.9
70°-80°	286.7	4.0
80°-90°	61.5	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°	2586.6	35.8
0°-40°	3975.7	55.0
0°-60°	6235.7	86.2
0°-90°	7231.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7231.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3683	3683	3683	3683	3683	
5°	3620	3615	3615	3611	3611	344
15°	3385	3385	3351	3317	3304	952
25°	2934	2917	2870	2768	2691	1347
35°	2380	2363	2248	2078	2027	1488
45°	1827	1788	1635	1499	1439	1407
55°	1269	1231	1116	984	933	1138
65°	754	711	643	656	545	743
75°	302	281	264	251	277	324
85°	43	47	51	55	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3683.4	3683.4	3683.4	3683.4	3683.4
2.5°	3657.8	3657.8	3657.8	3653.6	3653.6
5°	3619.5	3615.2	3615.2	3611.0	3611.0
7.5°	3589.7	3585.4	3581.2	3576.9	3568.4
10°	3547.1	3547.1	3542.9	3521.6	3517.3
12.5°	3479.0	3474.7	3457.7	3427.9	3419.4
15°	3385.3	3385.3	3351.2	3317.2	3304.4
17.5°	3283.1	3278.8	3236.3	3202.2	3185.2
20°	3172.4	3163.9	3121.3	3065.9	3036.1
22.5°	3048.9	3048.9	2997.8	2925.4	2895.6
25°	2933.9	2916.9	2870.1	2767.9	2691.2
27.5°	2801.9	2776.4	2725.3	2580.5	2491.1
30°	2657.1	2644.4	2572.0	2384.6	2316.5
32.5°	2520.9	2499.6	2422.9	2227.1	2171.7
35°	2380.4	2363.3	2248.3	2078.0	2026.9
37.5°	2239.8	2218.5	2073.8	1937.5	1873.6
40°	2099.3	2073.8	1916.2	1792.7	1724.6
42.5°	1967.3	1933.2	1779.9	1647.9	1571.3
45°	1826.8	1788.5	1635.2	1498.9	1439.3
47.5°	1686.3	1652.2	1511.7	1371.2	1303.0
50°	1537.2	1507.4	1379.7	1239.1	1166.8
52.5°	1413.7	1366.9	1243.4	1102.9	1043.3
55°	1269.0	1230.6	1115.7	983.7	932.6
57.5°	1136.9	1098.6	992.2	868.7	826.1
60°	1013.5	958.1	868.7	762.2	728.2
62.5°	877.2	834.6	758.0	668.5	711.1
65°	753.7	711.1	643.0	655.8	545.1
67.5°	617.4	596.2	536.5	476.9	459.9
70°	502.5	476.9	455.6	391.8	374.7
72.5°	400.3	374.7	344.9	310.9	298.1
75°	302.3	281.0	264.0	251.2	276.8
77.5°	208.7	200.1	187.4	174.6	170.3
80°	136.3	132.0	127.7	123.5	119.2
82.5°	80.9	80.9	80.9	80.9	80.9
85°	42.6	46.8	51.1	55.4	59.6
87.5°	25.5	25.5	29.8	34.1	38.3
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)