

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: P547168

Luminaire Tested: **FMR-24-4-LD4-3STD-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: P547168
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-LD4-3STD-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

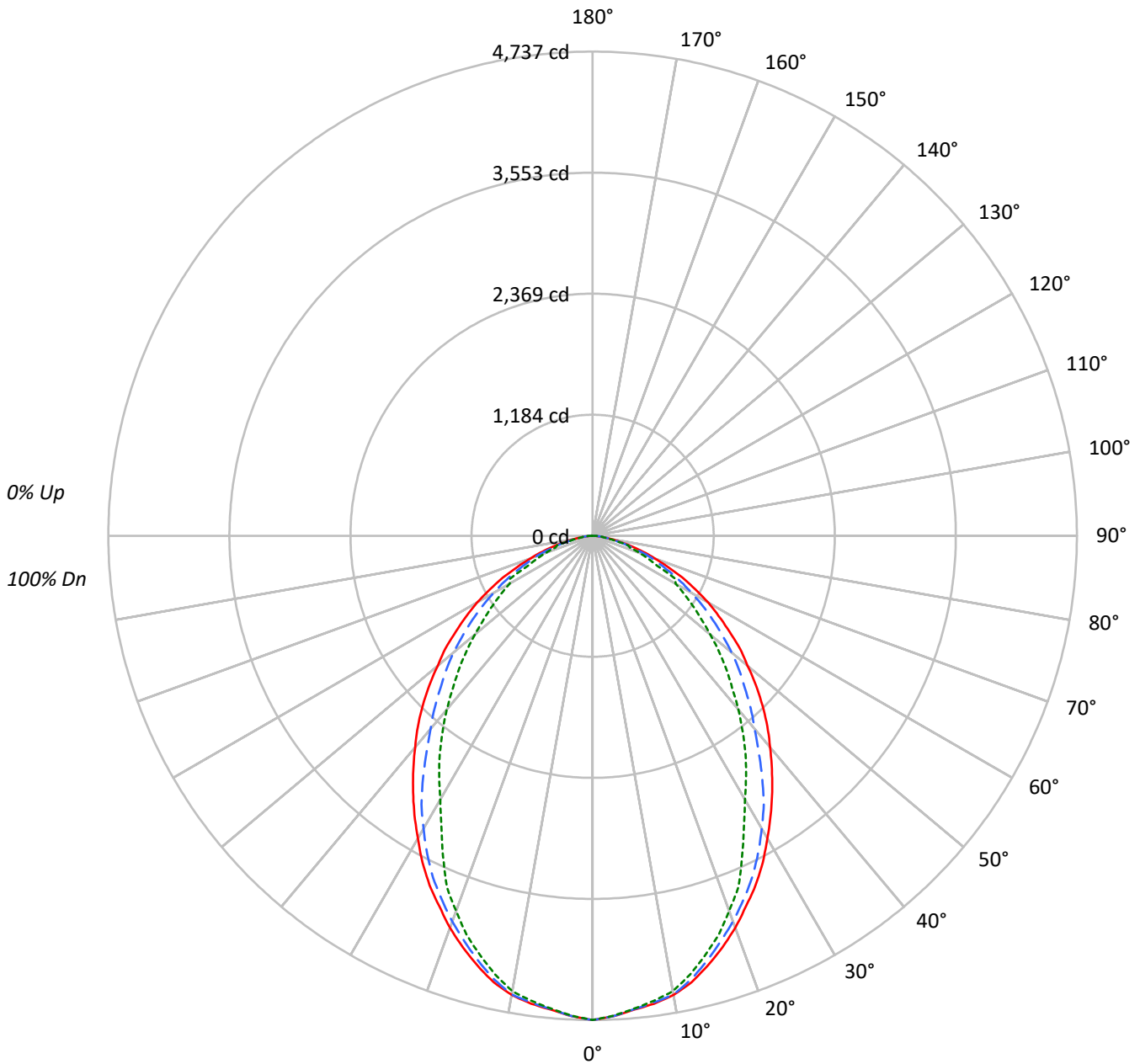
Lumens per Lamp: N/A
Luminaire Lumens: 9300.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6374	6374	6374
5°	6287	6280	6273
10°	6233	6225	6180
15°	6065	6004	5920
20°	5842	5748	5591
25°	5602	5480	5138
30°	5309	5139	4629
35°	5028	4750	4282
40°	4742	4329	3896
45°	4471	4002	3522
50°	4138	3714	3141
55°	3828	3366	2814
60°	3507	3006	2520
65°	3086	2633	2232
70°	2542	2305	1896
75°	2021	1765	1851
80°	1358	1273	1188
85°	846	1014	1184



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	441.0	4.7
10°-20°	1210.2	13.0
20°-30°	1675.5	18.0
30°-40°	1786.5	19.2
40°-50°	1629.9	17.5
50°-60°	1276.9	13.7
60°-70°	832.2	8.9
70°-80°	368.7	4.0
80°-90°	79.2	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°	3326.7	35.8
0°-40°	5113.2	55.0
0°-60°	8019.9	86.2
0°-90°	9300.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9300.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4737	4737	4737	4737	4737	
5°	4655	4650	4650	4644	4644	442
15°	4354	4354	4310	4266	4250	1224
25°	3773	3752	3691	3560	3461	1732
35°	3061	3040	2892	2673	2607	1914
45°	2350	2300	2103	1928	1851	1810
55°	1632	1583	1435	1265	1199	1464
65°	969	915	827	843	701	955
75°	389	362	340	323	356	417
85°	55	60	66	71	77	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4737.3	4737.3	4737.3	4737.3	4737.3
2.5°	4704.4	4704.4	4704.4	4699.0	4699.0
5°	4655.1	4649.7	4649.7	4644.2	4644.2
7.5°	4616.8	4611.3	4605.9	4600.4	4589.4
10°	4562.0	4562.0	4556.6	4529.2	4523.7
12.5°	4474.4	4468.9	4447.0	4408.7	4397.7
15°	4353.9	4353.9	4310.1	4266.3	4249.9
17.5°	4222.5	4217.0	4162.2	4118.4	4096.5
20°	4080.1	4069.1	4014.4	3943.2	3904.8
22.5°	3921.3	3921.3	3855.6	3762.5	3724.1
25°	3773.4	3751.5	3691.3	3559.8	3461.2
27.5°	3603.6	3570.8	3505.1	3318.8	3203.8
30°	3417.4	3401.0	3307.9	3066.9	2979.3
32.5°	3242.2	3214.8	3116.2	2864.3	2793.1
35°	3061.4	3039.5	2891.7	2672.6	2606.9
37.5°	2880.7	2853.3	2667.1	2491.9	2409.7
40°	2700.0	2667.1	2464.5	2305.7	2218.0
42.5°	2530.2	2486.4	2289.2	2119.5	2020.9
45°	2349.5	2300.2	2103.0	1927.8	1851.1
47.5°	2168.8	2124.9	1944.2	1763.5	1675.9
50°	1977.1	1938.7	1774.4	1593.7	1500.6
52.5°	1818.2	1758.0	1599.2	1418.5	1341.8
55°	1632.0	1582.7	1434.9	1265.1	1199.4
57.5°	1462.3	1413.0	1276.1	1117.2	1062.5
60°	1303.4	1232.2	1117.2	980.3	936.5
62.5°	1128.2	1073.4	974.8	859.8	914.6
65°	969.4	914.6	827.0	843.4	701.0
67.5°	794.1	766.7	690.1	613.4	591.5
70°	646.2	613.4	586.0	503.9	481.9
72.5°	514.8	481.9	443.6	399.8	383.4
75°	388.8	361.5	339.6	323.1	356.0
77.5°	268.4	257.4	241.0	224.5	219.1
80°	175.3	169.8	164.3	158.8	153.3
82.5°	104.1	104.1	104.1	104.1	104.1
85°	54.8	60.2	65.7	71.2	76.7
87.5°	32.9	32.9	38.3	43.8	49.3
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)