

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: P547510

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-93-97-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: P547510
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-LD4-4STD-40-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

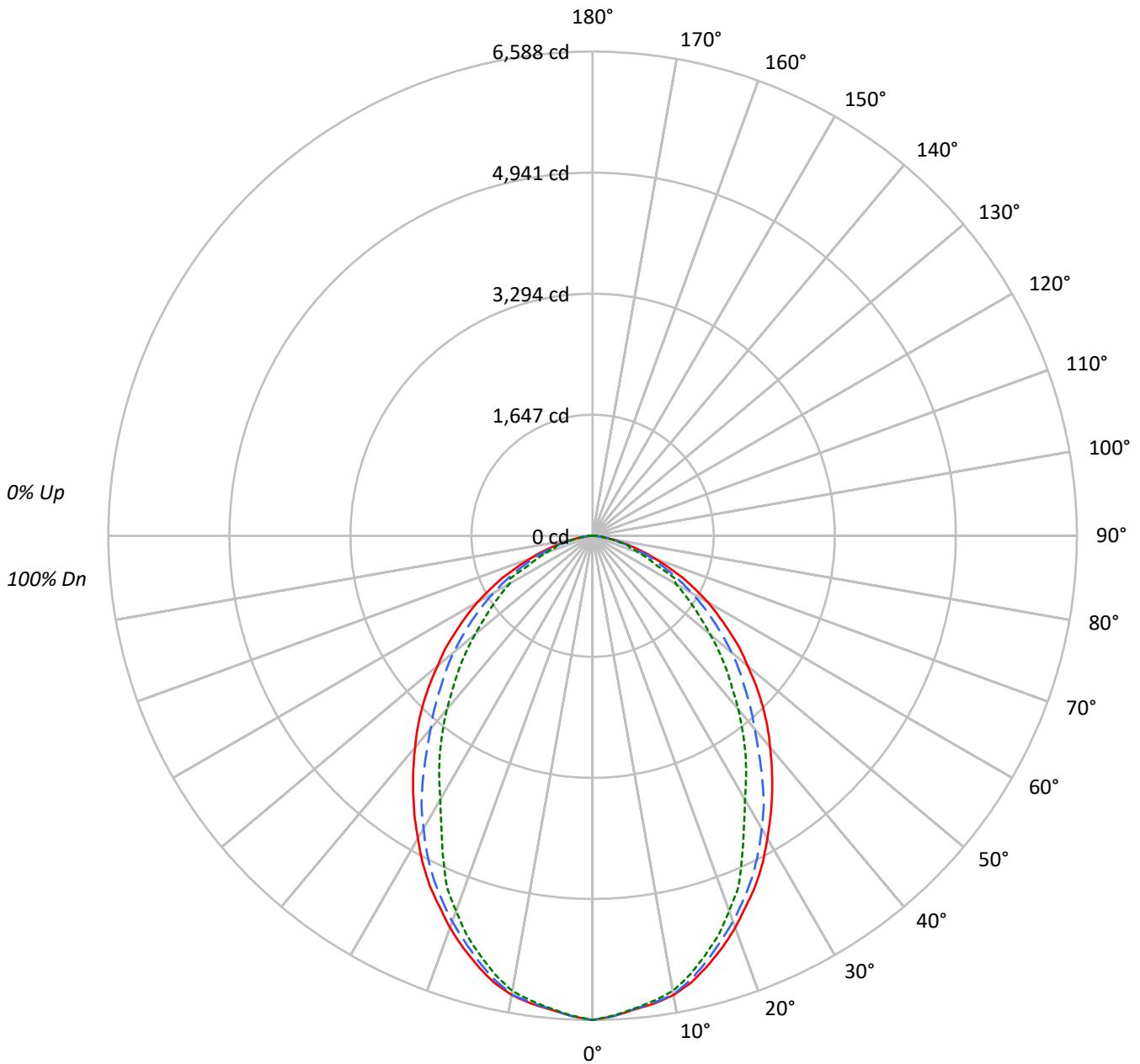
Lumens per Lamp: N/A
Luminaire Lumens: 12933.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	8864	8864	8864
5°	8744	8733	8723
10°	8668	8657	8595
15°	8434	8349	8232
20°	8124	7993	7775
25°	7790	7621	7146
30°	7384	7147	6437
35°	6993	6605	5955
40°	6595	6020	5418
45°	6217	5565	4898
50°	5755	5165	4368
55°	5324	4681	3913
60°	4878	4181	3504
65°	4292	3661	3104
70°	3535	3206	2637
75°	2811	2455	2573
80°	1888	1771	1652
85°	1176	1411	1646



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	613.2	4.7
10°-20°	1683.0	13.0
20°-30°	2330.0	18.0
30°-40°	2484.5	19.2
40°-50°	2266.5	17.5
50°-60°	1775.7	13.7
60°-70°	1157.3	8.9
70°-80°	512.7	4.0
80°-90°	110.1	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°	4626.2	35.8
0°-40°	7110.7	55.0
0°-60°	11152.9	86.2
0°-90°	12933.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12933.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6588	6588	6588	6588	6588	
5°	6474	6466	6466	6458	6458	615
15°	6055	6055	5994	5933	5910	1702
25°	5248	5217	5133	4950	4813	2409
35°	4257	4227	4021	3717	3625	2662
45°	3267	3199	2925	2681	2574	2517
55°	2270	2201	1995	1759	1668	2036
65°	1348	1272	1150	1173	975	1328
75°	541	503	472	449	495	580
85°	76	84	91	99	107	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6587.9	6587.9	6587.9	6587.9	6587.9
2.5°	6542.2	6542.2	6542.2	6534.6	6534.6
5°	6473.7	6466.0	6466.0	6458.4	6458.4
7.5°	6420.3	6412.7	6405.1	6397.5	6382.3
10°	6344.2	6344.2	6336.6	6298.5	6290.9
12.5°	6222.3	6214.7	6184.2	6130.9	6115.7
15°	6054.8	6054.8	5993.8	5932.9	5910.1
17.5°	5872.0	5864.4	5788.2	5727.3	5696.8
20°	5674.0	5658.7	5582.6	5483.6	5430.3
22.5°	5453.1	5453.1	5361.7	5232.2	5178.9
25°	5247.5	5217.0	5133.2	4950.4	4813.4
27.5°	5011.4	4965.7	4874.3	4615.3	4455.4
30°	4752.4	4729.6	4600.1	4265.0	4143.1
32.5°	4508.7	4470.6	4333.5	3983.2	3884.2
35°	4257.4	4226.9	4021.3	3716.6	3625.2
37.5°	4006.1	3968.0	3709.0	3465.3	3351.1
40°	3754.7	3709.0	3427.2	3206.4	3084.5
42.5°	3518.6	3457.7	3183.5	2947.4	2810.3
45°	3267.3	3198.7	2924.6	2680.9	2574.2
47.5°	3016.0	2955.0	2703.7	2452.4	2330.5
50°	2749.4	2696.1	2467.6	2216.3	2086.8
52.5°	2528.5	2444.8	2223.9	1972.6	1865.9
55°	2269.6	2201.0	1995.4	1759.3	1667.9
57.5°	2033.5	1964.9	1774.5	1553.7	1477.5
60°	1812.6	1713.6	1553.7	1363.3	1302.3
62.5°	1568.9	1492.7	1355.7	1195.7	1271.9
65°	1348.0	1271.9	1150.0	1172.9	974.9
67.5°	1104.3	1066.2	959.6	853.0	822.5
70°	898.7	853.0	814.9	700.7	670.2
72.5°	715.9	670.2	616.9	556.0	533.1
75°	540.7	502.7	472.2	449.3	495.0
77.5°	373.2	358.0	335.1	312.3	304.6
80°	243.7	236.1	228.5	220.9	213.2
82.5°	144.7	144.7	144.7	144.7	144.7
85°	76.2	83.8	91.4	99.0	106.6
87.5°	45.7	45.7	53.3	60.9	68.5
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)