

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: P547175

Luminaire Tested: **FMR-24-4-LD4-3STD-35-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: P547175
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-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

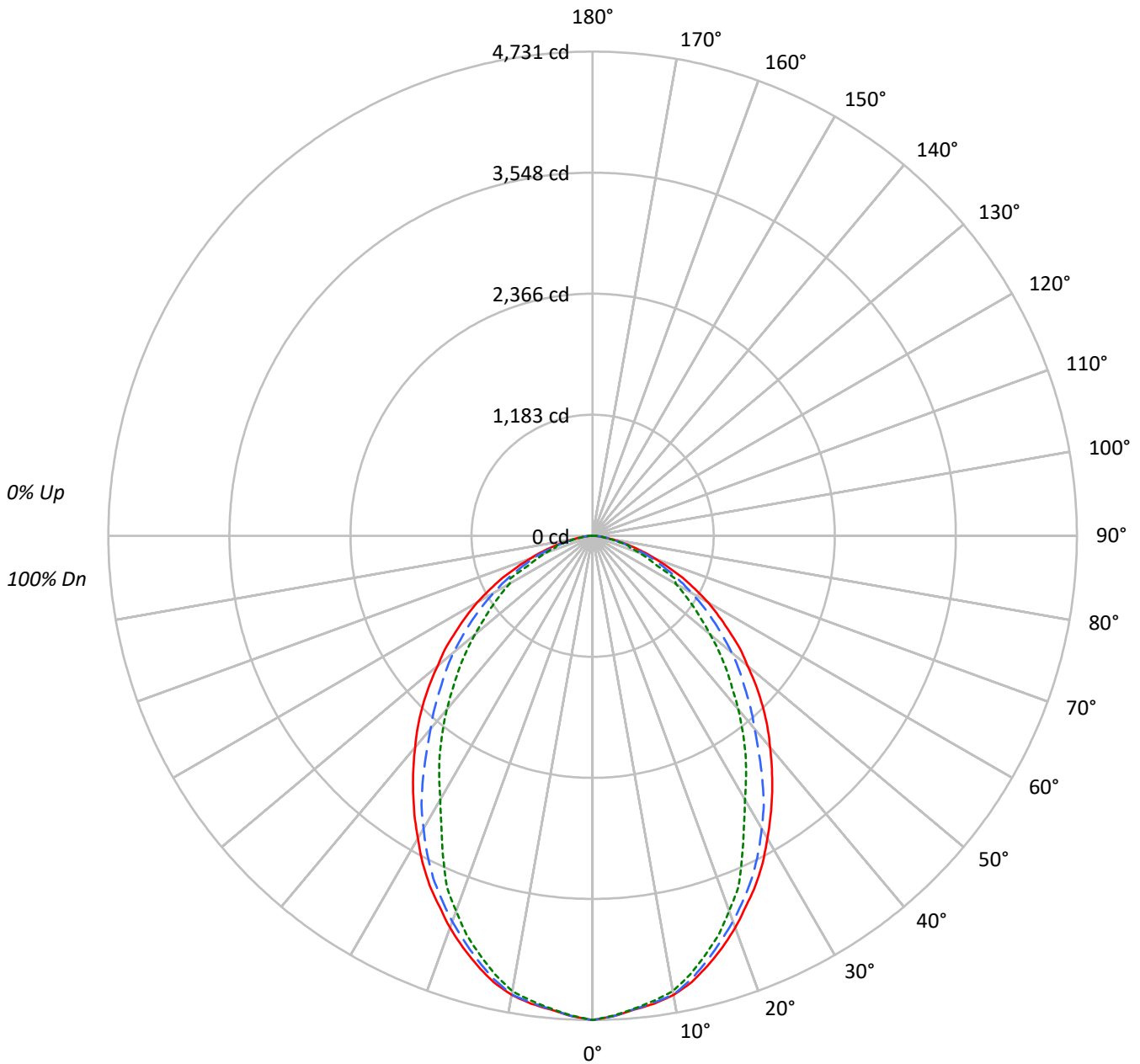
Lumens per Lamp: N/A
Luminaire Lumens: 9288.0 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (A_{in}): 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°	6366	6366	6366
5°	6279	6272	6264
10°	6225	6217	6173
15°	6057	5996	5912
20°	5834	5741	5584
25°	5595	5473	5132
30°	5303	5133	4623
35°	5022	4743	4276
40°	4736	4323	3891
45°	4465	3996	3518
50°	4133	3709	3137
55°	3823	3362	2810
60°	3503	3003	2517
65°	3082	2629	2229
70°	2539	2302	1893
75°	2019	1763	1848
80°	1356	1272	1186
85°	844	1013	1183



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	440.4	4.7
10°-20°	1208.7	13.0
20°-30°	1673.3	18.0
30°-40°	1784.2	19.2
40°-50°	1627.7	17.5
50°-60°	1275.2	13.7
60°-70°	831.1	8.9
70°-80°	368.2	4.0
80°-90°	79.1	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°	3322.4	35.8
0°-40°	5106.6	55.0
0°-60°	8009.6	86.2
0°-90°	9288.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9288.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4731	4731	4731	4731	4731	
5°	4649	4644	4644	4638	4638	441
15°	4348	4348	4305	4261	4244	1222
25°	3768	3747	3686	3555	3457	1730
35°	3058	3036	2888	2669	2604	1911
45°	2346	2297	2100	1925	1849	1807
55°	1630	1581	1433	1264	1198	1462
65°	968	913	826	842	700	954
75°	388	361	339	323	356	416
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°	4731.2	4731.2	4731.2	4731.2	4731.2
2.5°	4698.4	4698.4	4698.4	4692.9	4692.9
5°	4649.1	4643.7	4643.7	4638.2	4638.2
7.5°	4610.9	4605.4	4599.9	4594.4	4583.5
10°	4556.2	4556.2	4550.7	4523.3	4517.9
12.5°	4468.6	4463.2	4441.3	4403.0	4392.1
15°	4348.3	4348.3	4304.6	4260.8	4244.4
17.5°	4217.0	4211.6	4156.9	4113.1	4091.2
20°	4074.8	4063.9	4009.2	3938.1	3899.8
22.5°	3916.2	3916.2	3850.6	3757.6	3719.3
25°	3768.5	3746.7	3686.5	3555.2	3456.8
27.5°	3599.0	3566.2	3500.5	3314.6	3199.7
30°	3413.0	3396.6	3303.6	3063.0	2975.4
32.5°	3238.0	3210.6	3112.2	2860.6	2789.5
35°	3057.5	3035.6	2887.9	2669.2	2603.5
37.5°	2877.0	2849.6	2663.7	2488.7	2406.6
40°	2696.5	2663.7	2461.3	2302.7	2215.2
42.5°	2526.9	2483.2	2286.3	2116.7	2018.3
45°	2346.4	2297.2	2100.3	1925.3	1848.7
47.5°	2166.0	2122.2	1941.7	1761.2	1673.7
50°	1974.5	1936.2	1772.1	1591.6	1498.7
52.5°	1815.9	1755.7	1597.1	1416.6	1340.0
55°	1629.9	1580.7	1433.0	1263.5	1197.8
57.5°	1460.4	1411.2	1274.4	1115.8	1061.1
60°	1301.8	1230.7	1115.8	979.1	935.3
62.5°	1126.7	1072.0	973.6	858.7	913.4
65°	968.1	913.4	825.9	842.3	700.1
67.5°	793.1	765.7	689.2	612.6	590.7
70°	645.4	612.6	585.2	503.2	481.3
72.5°	514.1	481.3	443.0	399.3	382.9
75°	388.3	361.0	339.1	322.7	355.5
77.5°	268.0	257.1	240.7	224.3	218.8
80°	175.0	169.6	164.1	158.6	153.1
82.5°	103.9	103.9	103.9	103.9	103.9
85°	54.7	60.2	65.6	71.1	76.6
87.5°	32.8	32.8	38.3	43.8	49.2
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)