

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: P547208

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-82-85-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: P547208
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-40-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

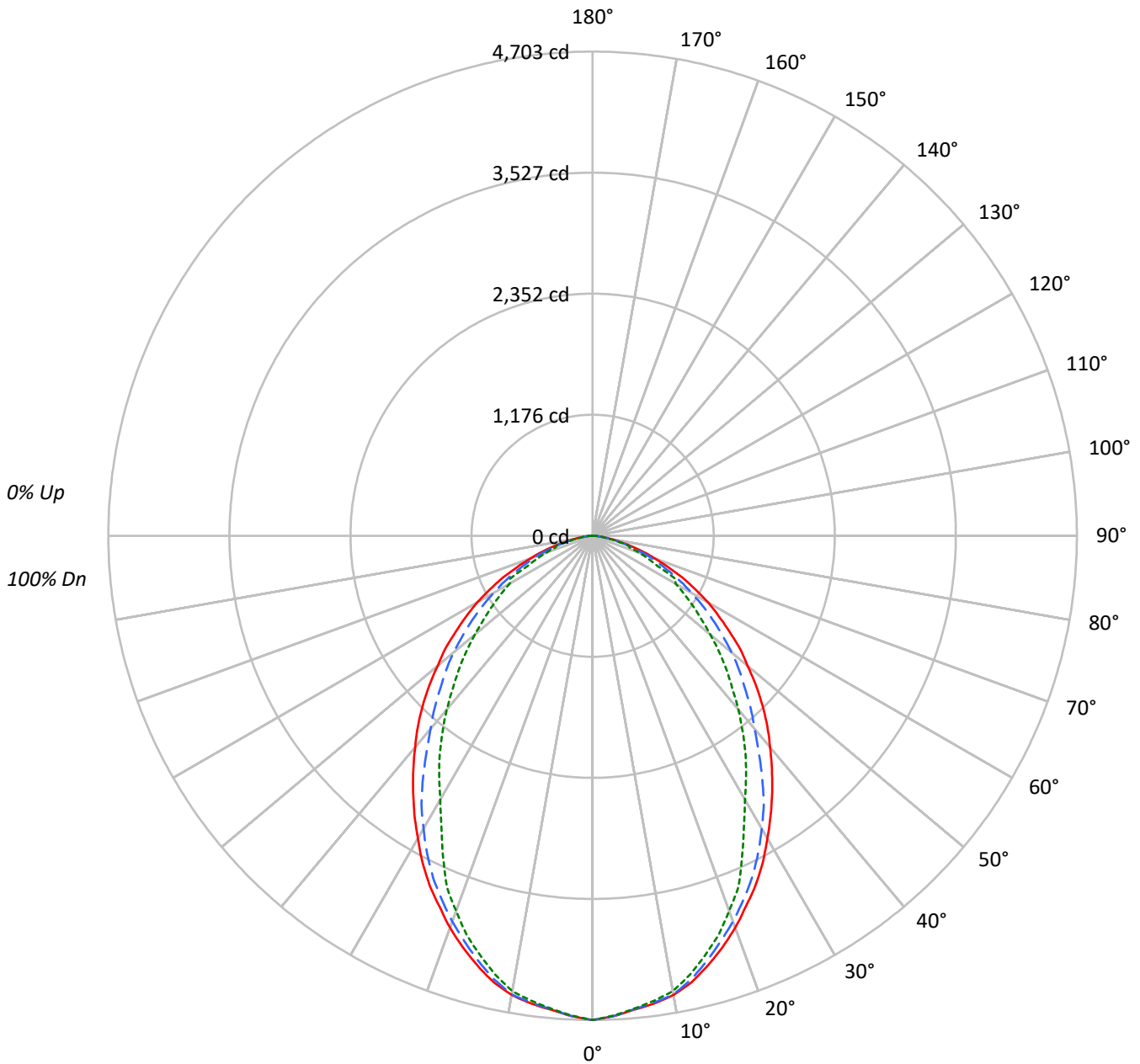
Lumens per Lamp: N/A
Luminaire Lumens: 9233.0 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	6328	6328	6328
5°	6242	6235	6227
10°	6188	6180	6136
15°	6021	5961	5877
20°	5800	5707	5551
25°	5562	5441	5101
30°	5271	5102	4595
35°	4992	4715	4251
40°	4708	4297	3868
45°	4438	3973	3497
50°	4109	3687	3118
55°	3801	3342	2793
60°	3482	2985	2502
65°	3064	2614	2216
70°	2524	2289	1882
75°	2007	1752	1837
80°	1348	1264	1179
85°	840	1007	1175



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	437.8	4.7
10°-20°	1201.5	13.0
20°-30°	1663.4	18.0
30°-40°	1773.7	19.2
40°-50°	1618.1	17.5
50°-60°	1267.7	13.7
60°-70°	826.2	8.9
70°-80°	366.0	4.0
80°-90°	78.6	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°	3302.7	35.8
0°-40°	5076.4	55.0
0°-60°	7962.2	86.2
0°-90°	9233.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9233.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4703	4703	4703	4703	4703	
5°	4622	4616	4616	4611	4611	439
15°	4323	4323	4279	4236	4219	1215
25°	3746	3724	3665	3534	3436	1720
35°	3039	3018	2871	2653	2588	1900
45°	2333	2284	2088	1914	1838	1797
55°	1620	1571	1424	1256	1191	1453
65°	962	908	821	837	696	948
75°	386	359	337	321	353	414
85°	54	60	65	71	76	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4703.2	4703.2	4703.2	4703.2	4703.2
2.5°	4670.5	4670.5	4670.5	4665.1	4665.1
5°	4621.6	4616.2	4616.2	4610.7	4610.7
7.5°	4583.5	4578.1	4572.7	4567.2	4556.4
10°	4529.2	4529.2	4523.7	4496.6	4491.1
12.5°	4442.2	4436.7	4415.0	4376.9	4366.1
15°	4322.6	4322.6	4279.1	4235.6	4219.3
17.5°	4192.1	4186.6	4132.3	4088.8	4067.0
20°	4050.7	4039.8	3985.5	3914.8	3876.7
22.5°	3893.0	3893.0	3827.8	3735.3	3697.3
25°	3746.2	3724.5	3664.7	3534.2	3436.3
27.5°	3577.7	3545.0	3479.8	3294.9	3180.8
30°	3392.8	3376.5	3284.1	3044.8	2957.8
32.5°	3218.8	3191.6	3093.8	2843.6	2773.0
35°	3039.4	3017.6	2870.8	2653.3	2588.1
37.5°	2860.0	2832.8	2647.9	2473.9	2392.4
40°	2680.5	2647.9	2446.7	2289.1	2202.1
42.5°	2512.0	2468.5	2272.7	2104.2	2006.3
45°	2332.6	2283.6	2087.9	1913.9	1837.8
47.5°	2153.1	2109.6	1930.2	1750.8	1663.8
50°	1962.8	1924.8	1761.6	1582.2	1489.8
52.5°	1805.1	1745.3	1587.7	1408.2	1332.1
55°	1620.3	1571.3	1424.5	1256.0	1190.7
57.5°	1451.7	1402.8	1266.9	1109.2	1054.8
60°	1294.1	1223.4	1109.2	973.3	929.8
62.5°	1120.1	1065.7	967.8	853.6	908.0
65°	962.4	908.0	821.0	837.3	696.0
67.5°	788.4	761.2	685.1	609.0	587.2
70°	641.6	609.0	581.8	500.2	478.5
72.5°	511.1	478.5	440.4	396.9	380.6
75°	386.0	358.9	337.1	320.8	353.4
77.5°	266.4	255.5	239.2	222.9	217.5
80°	174.0	168.6	163.1	157.7	152.2
82.5°	103.3	103.3	103.3	103.3	103.3
85°	54.4	59.8	65.2	70.7	76.1
87.5°	32.6	32.6	38.1	43.5	48.9
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)