

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: P547530

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-82-87-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: P547530
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-50-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

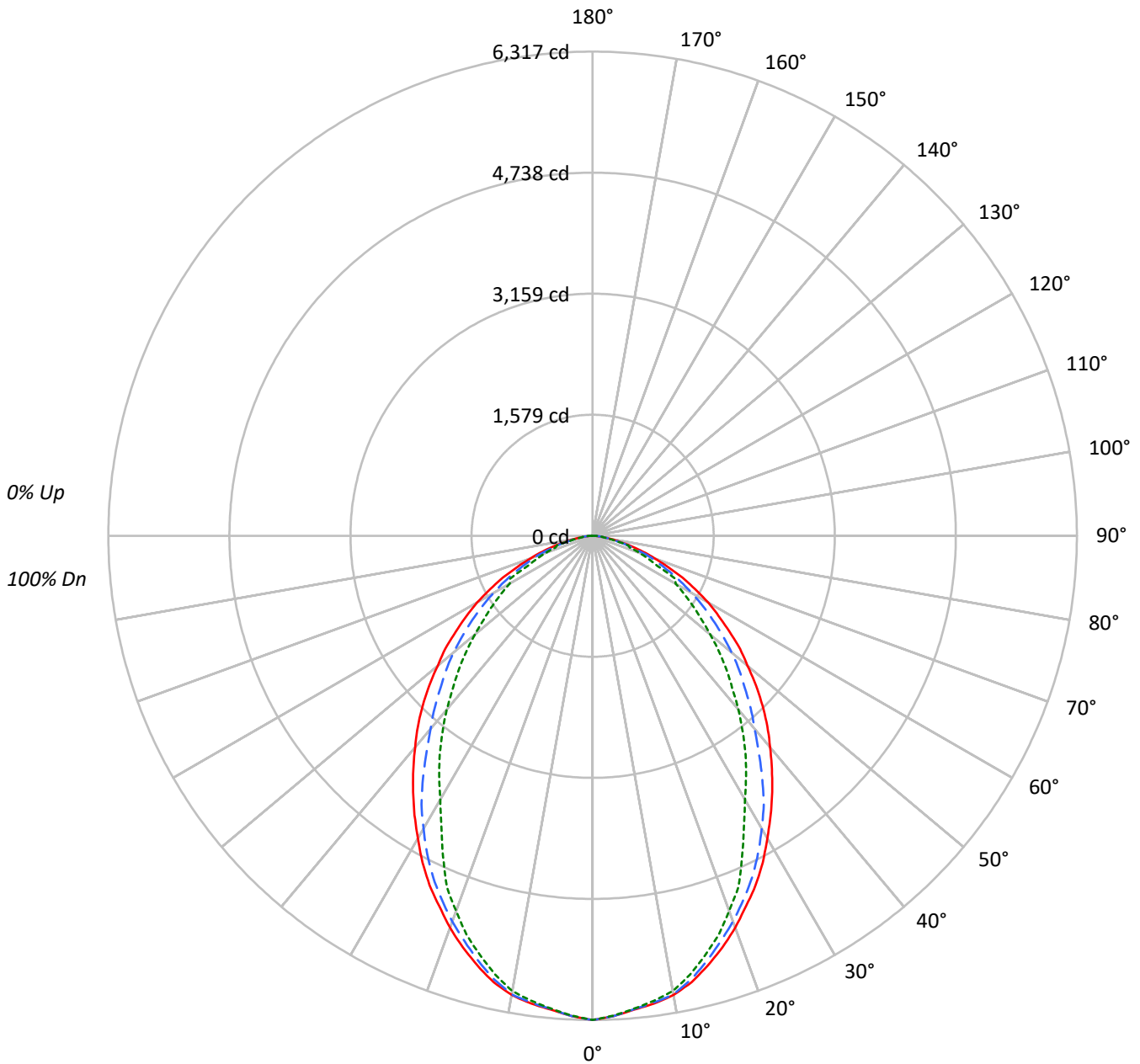
Lumens per Lamp: N/A
Luminaire Lumens: 12401.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	8499	8499	8499
5°	8384	8374	8364
10°	8311	8301	8241
15°	8087	8006	7894
20°	7790	7664	7455
25°	7470	7307	6852
30°	7080	6853	6172
35°	6705	6333	5710
40°	6324	5772	5195
45°	5961	5336	4697
50°	5518	4953	4189
55°	5105	4488	3752
60°	4677	4009	3360
65°	4115	3511	2976
70°	3390	3074	2528
75°	2695	2354	2468
80°	1811	1698	1585
85°	1127	1352	1578



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	588.0	4.7
10°-20°	1613.8	13.0
20°-30°	2234.2	18.0
30°-40°	2382.3	19.2
40°-50°	2173.3	17.5
50°-60°	1702.6	13.7
60°-70°	1109.7	8.9
70°-80°	491.6	4.0
80°-90°	105.6	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°	4435.9	35.8
0°-40°	6818.2	55.0
0°-60°	10694.1	86.2
0°-90°	12401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12401.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6317	6317	6317	6317	6317	
5°	6207	6200	6200	6193	6193	589
15°	5806	5806	5747	5689	5667	1632
25°	5032	5002	4922	4747	4615	2310
35°	4082	4053	3856	3564	3476	2552
45°	3133	3067	2804	2571	2468	2413
55°	2176	2110	1913	1687	1599	1952
65°	1293	1220	1103	1125	935	1274
75°	518	482	453	431	475	556
85°	73	80	88	95	102	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6316.9	6316.9	6316.9	6316.9	6316.9
2.5°	6273.1	6273.1	6273.1	6265.8	6265.8
5°	6207.4	6200.1	6200.1	6192.8	6192.8
7.5°	6156.2	6148.9	6141.6	6134.3	6119.7
10°	6083.2	6083.2	6075.9	6039.4	6032.1
12.5°	5966.4	5959.1	5929.9	5878.7	5864.1
15°	5805.7	5805.7	5747.3	5688.9	5667.0
17.5°	5630.4	5623.1	5550.1	5491.7	5462.5
20°	5440.6	5426.0	5352.9	5258.0	5206.9
22.5°	5228.8	5228.8	5141.2	5017.0	4965.9
25°	5031.6	5002.4	4922.1	4746.8	4615.4
27.5°	4805.2	4761.4	4673.8	4425.5	4272.1
30°	4556.9	4535.0	4410.9	4089.6	3972.7
32.5°	4323.2	4286.7	4155.3	3819.4	3724.4
35°	4082.3	4053.0	3855.9	3563.8	3476.1
37.5°	3841.3	3804.7	3556.5	3322.8	3213.2
40°	3600.3	3556.5	3286.3	3074.5	2957.6
42.5°	3373.9	3315.5	3052.6	2826.2	2694.7
45°	3132.9	3067.2	2804.3	2570.6	2468.3
47.5°	2891.9	2833.5	2592.5	2351.5	2234.7
50°	2636.3	2585.2	2366.1	2125.1	2001.0
52.5°	2424.5	2344.2	2132.4	1891.4	1789.2
55°	2176.2	2110.5	1913.3	1686.9	1599.3
57.5°	1949.8	1884.1	1701.5	1489.8	1416.7
60°	1738.1	1643.1	1489.8	1307.2	1248.8
62.5°	1504.4	1431.3	1299.9	1146.5	1219.6
65°	1292.6	1219.6	1102.7	1124.6	934.8
67.5°	1058.9	1022.4	920.2	817.9	788.7
70°	861.7	817.9	781.4	671.9	642.6
72.5°	686.5	642.6	591.5	533.1	511.2
75°	518.5	482.0	452.8	430.9	474.7
77.5°	357.8	343.2	321.3	299.4	292.1
80°	233.7	226.4	219.1	211.8	204.5
82.5°	138.8	138.8	138.8	138.8	138.8
85°	73.0	80.3	87.6	94.9	102.2
87.5°	43.8	43.8	51.1	58.4	65.7
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)