

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: P545600

Luminaire Tested: **FMR-12-2-LD4-2HI-50-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: P545600
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-12-2-LD4-2HI-50-UNV-81-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

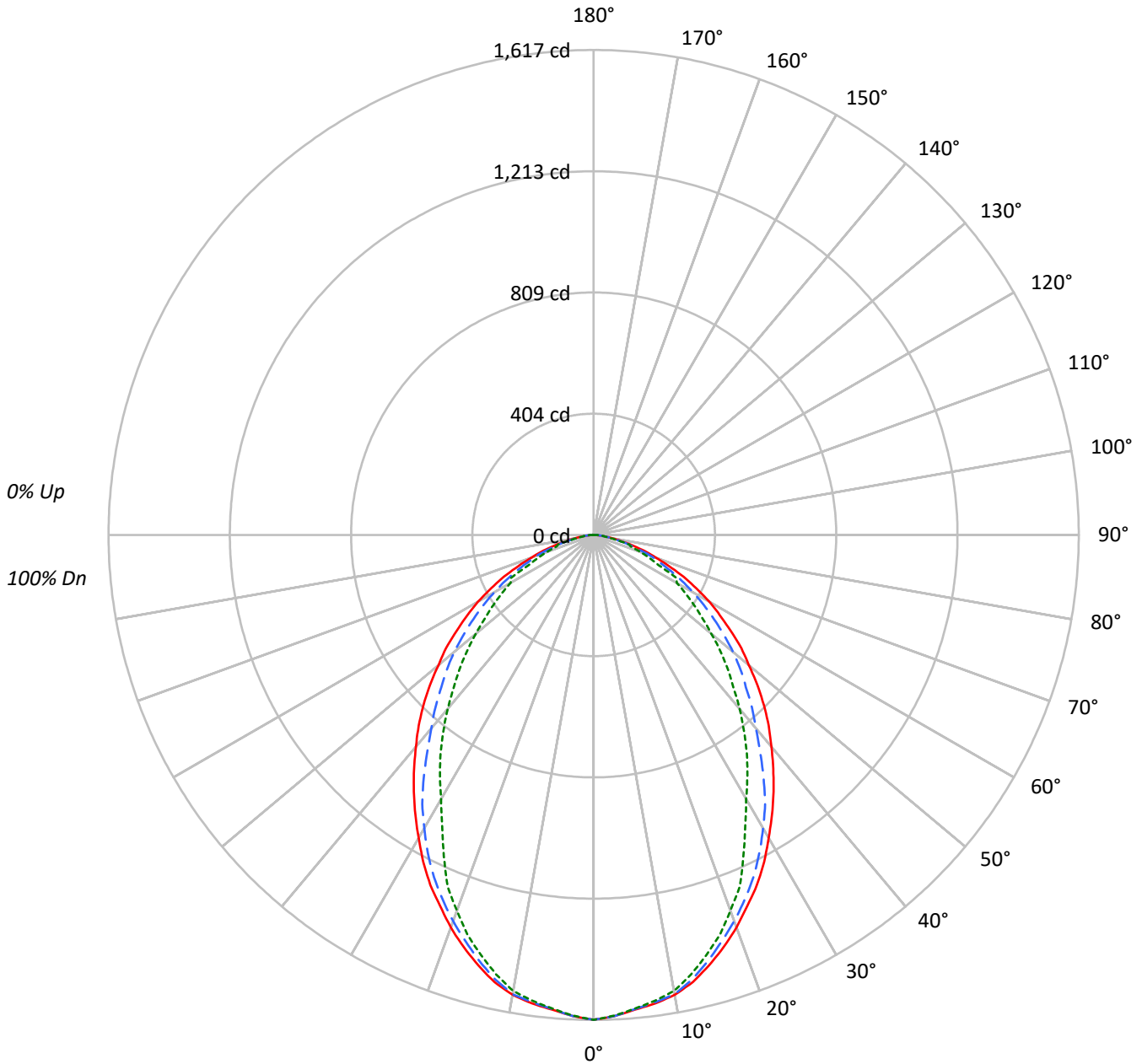
Lumens per Lamp: N/A
Luminaire Lumens: 3174.0 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	8702	8702	8702
5°	8584	8573	8563
10°	8509	8499	8437
15°	8280	8196	8081
20°	7975	7847	7633
25°	7647	7481	7015
30°	7248	7016	6319
35°	6865	6484	5845
40°	6474	5909	5318
45°	6103	5463	4809
50°	5650	5071	4288
55°	5226	4595	3841
60°	4789	4104	3440
65°	4213	3594	3046
70°	3471	3147	2589
75°	2759	2410	2527
80°	1853	1739	1621
85°	1155	1383	1618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.5	4.7
10°-20°	413.0	13.0
20°-30°	571.8	18.0
30°-40°	609.7	19.2
40°-50°	556.3	17.5
50°-60°	435.8	13.7
60°-70°	284.0	8.9
70°-80°	125.8	4.0
80°-90°	27.0	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°	1135.4	35.8
0°-40°	1745.1	55.0
0°-60°	2737.1	86.2
0°-90°	3174.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3174.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1617	1617	1617	1617	1617	
5°	1589	1587	1587	1585	1585	151
15°	1486	1486	1471	1456	1450	418
25°	1288	1280	1260	1215	1181	591
35°	1045	1037	987	912	890	653
45°	802	785	718	658	632	618
55°	557	540	490	432	409	500
65°	331	312	282	288	239	326
75°	133	123	116	110	122	142
85°	19	21	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1616.8	1616.8	1616.8	1616.8	1616.8
2.5°	1605.6	1605.6	1605.6	1603.7	1603.7
5°	1588.8	1586.9	1586.9	1585.0	1585.0
7.5°	1575.7	1573.8	1571.9	1570.1	1566.3
10°	1557.0	1557.0	1555.1	1545.8	1543.9
12.5°	1527.1	1525.2	1517.7	1504.6	1500.9
15°	1486.0	1486.0	1471.0	1456.0	1450.4
17.5°	1441.1	1439.2	1420.5	1405.6	1398.1
20°	1392.5	1388.8	1370.1	1345.8	1332.7
22.5°	1338.3	1338.3	1315.9	1284.1	1271.0
25°	1287.8	1280.4	1259.8	1214.9	1181.3
27.5°	1229.9	1218.7	1196.2	1132.7	1093.4
30°	1166.3	1160.7	1129.0	1046.7	1016.8
32.5°	1106.5	1097.2	1063.5	977.6	953.3
35°	1044.8	1037.4	986.9	912.1	889.7
37.5°	983.2	973.8	910.3	850.5	822.4
40°	921.5	910.3	841.1	786.9	757.0
42.5°	863.5	848.6	781.3	723.4	689.7
45°	801.9	785.0	717.7	657.9	631.8
47.5°	740.2	725.2	663.5	601.9	572.0
50°	674.8	661.7	605.6	543.9	512.1
52.5°	620.5	600.0	545.8	484.1	457.9
55°	557.0	540.2	489.7	431.8	409.3
57.5°	499.1	482.2	435.5	381.3	362.6
60°	444.9	420.6	381.3	334.6	319.6
62.5°	385.0	366.3	332.7	293.5	312.1
65°	330.8	312.1	282.2	287.8	239.2
67.5°	271.0	261.7	235.5	209.3	201.9
70°	220.6	209.3	200.0	172.0	164.5
72.5°	175.7	164.5	151.4	136.4	130.8
75°	132.7	123.4	115.9	110.3	121.5
77.5°	91.6	87.8	82.2	76.6	74.8
80°	59.8	57.9	56.1	54.2	52.3
82.5°	35.5	35.5	35.5	35.5	35.5
85°	18.7	20.6	22.4	24.3	26.2
87.5°	11.2	11.2	13.1	15.0	16.8
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)