

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: P545618

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-93-87-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: P545618
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-93-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

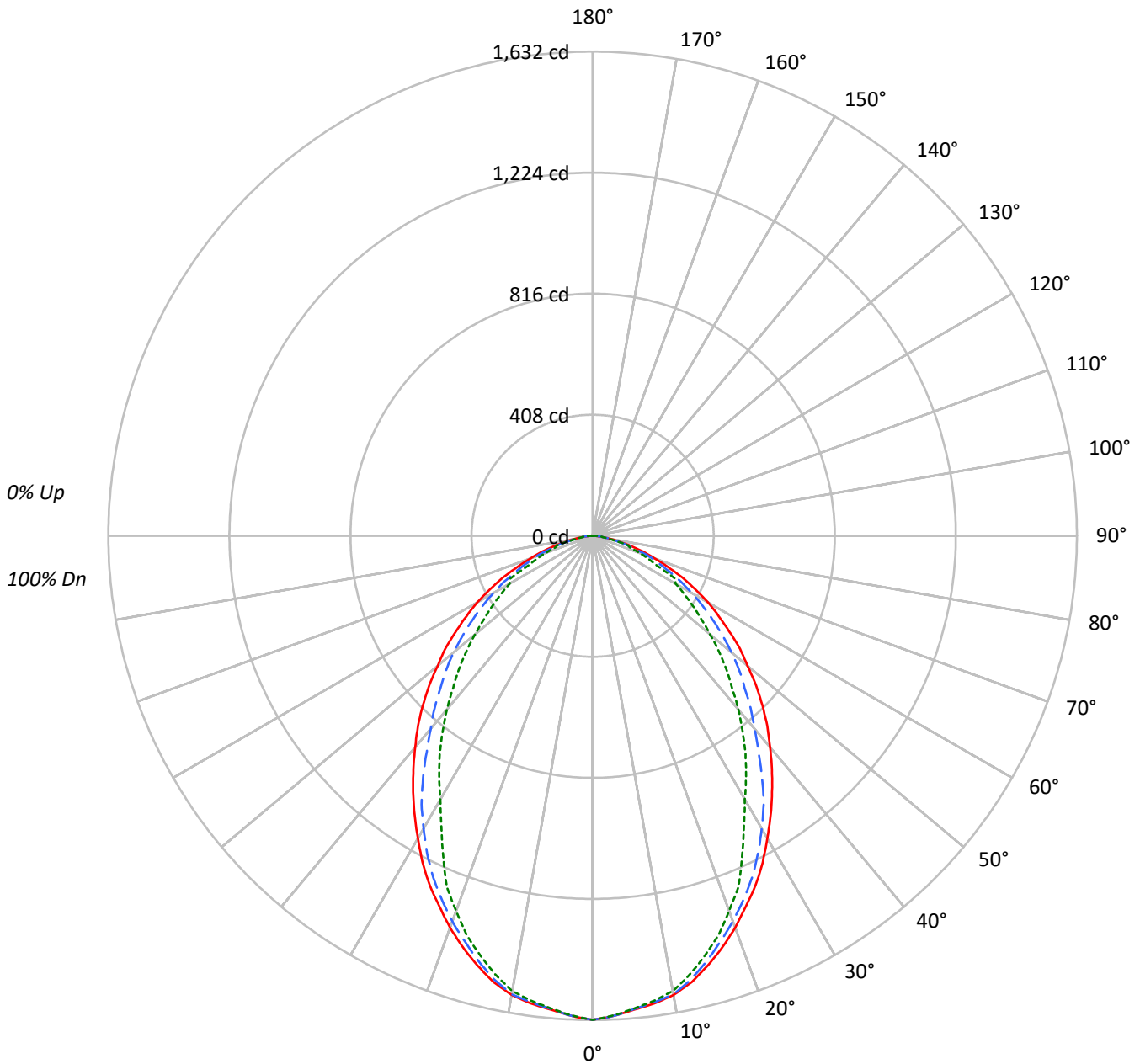
Lumens per Lamp: N/A
Luminaire Lumens: 3203.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	8781	8781	8781
5°	8662	8652	8641
10°	8587	8576	8514
15°	8355	8271	8155
20°	8048	7919	7703
25°	7717	7549	7079
30°	7315	7080	6377
35°	6928	6543	5899
40°	6533	5963	5367
45°	6159	5513	4852
50°	5701	5117	4327
55°	5274	4637	3876
60°	4832	4142	3471
65°	4252	3627	3074
70°	3503	3175	2612
75°	2784	2431	2549
80°	1872	1754	1636
85°	1167	1396	1630



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.9	4.7
10°-20°	416.8	13.0
20°-30°	577.0	18.0
30°-40°	615.3	19.2
40°-50°	561.3	17.5
50°-60°	439.8	13.7
60°-70°	286.6	8.9
70°-80°	127.0	4.0
80°-90°	27.2	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°	1145.7	35.8
0°-40°	1761.0	55.0
0°-60°	2762.1	86.2
0°-90°	3203.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3203.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1632	1632	1632	1632	1632	
5°	1603	1601	1601	1600	1600	152
15°	1500	1500	1484	1469	1464	422
25°	1300	1292	1271	1226	1192	597
35°	1054	1047	996	920	898	659
45°	809	792	724	664	638	623
55°	562	545	494	436	413	504
65°	334	315	285	290	241	329
75°	134	124	117	111	123	144
85°	19	21	23	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1631.6	1631.6	1631.6	1631.6	1631.6
2.5°	1620.2	1620.2	1620.2	1618.4	1618.4
5°	1603.3	1601.4	1601.4	1599.5	1599.5
7.5°	1590.1	1588.2	1586.3	1584.4	1580.6
10°	1571.2	1571.2	1569.3	1559.9	1558.0
12.5°	1541.0	1539.1	1531.6	1518.4	1514.6
15°	1499.5	1499.5	1484.4	1469.4	1463.7
17.5°	1454.3	1452.4	1433.5	1418.4	1410.9
20°	1405.2	1401.4	1382.6	1358.1	1344.9
22.5°	1350.5	1350.5	1327.9	1295.8	1282.6
25°	1299.6	1292.0	1271.3	1226.0	1192.1
27.5°	1241.1	1229.8	1207.2	1143.0	1103.4
30°	1177.0	1171.3	1139.3	1056.3	1026.1
32.5°	1116.6	1107.2	1073.2	986.5	962.0
35°	1054.4	1046.8	995.9	920.5	897.8
37.5°	992.1	982.7	918.6	858.2	829.9
40°	929.9	918.6	848.8	794.1	763.9
42.5°	871.4	856.3	788.4	730.0	696.0
45°	809.2	792.2	724.3	663.9	637.5
47.5°	746.9	731.8	669.6	607.4	577.2
50°	680.9	667.7	611.1	548.9	516.8
52.5°	626.2	605.5	550.8	488.5	462.1
55°	562.1	545.1	494.2	435.7	413.1
57.5°	503.6	486.6	439.5	384.8	365.9
60°	448.9	424.4	384.8	337.6	322.5
62.5°	388.6	369.7	335.7	296.1	315.0
65°	333.9	315.0	284.8	290.5	241.4
67.5°	273.5	264.1	237.7	211.3	203.7
70°	222.6	211.3	201.8	173.5	166.0
72.5°	177.3	166.0	152.8	137.7	132.0
75°	133.9	124.5	116.9	111.3	122.6
77.5°	92.4	88.7	83.0	77.3	75.4
80°	60.4	58.5	56.6	54.7	52.8
82.5°	35.8	35.8	35.8	35.8	35.8
85°	18.9	20.7	22.6	24.5	26.4
87.5°	11.3	11.3	13.2	15.1	17.0
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)