

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: P546671

Luminaire Tested: **FMR-24-4-LD4-1STD-50-UNV-93-84-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: P546671
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-LD4-1STD-50-UNV-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

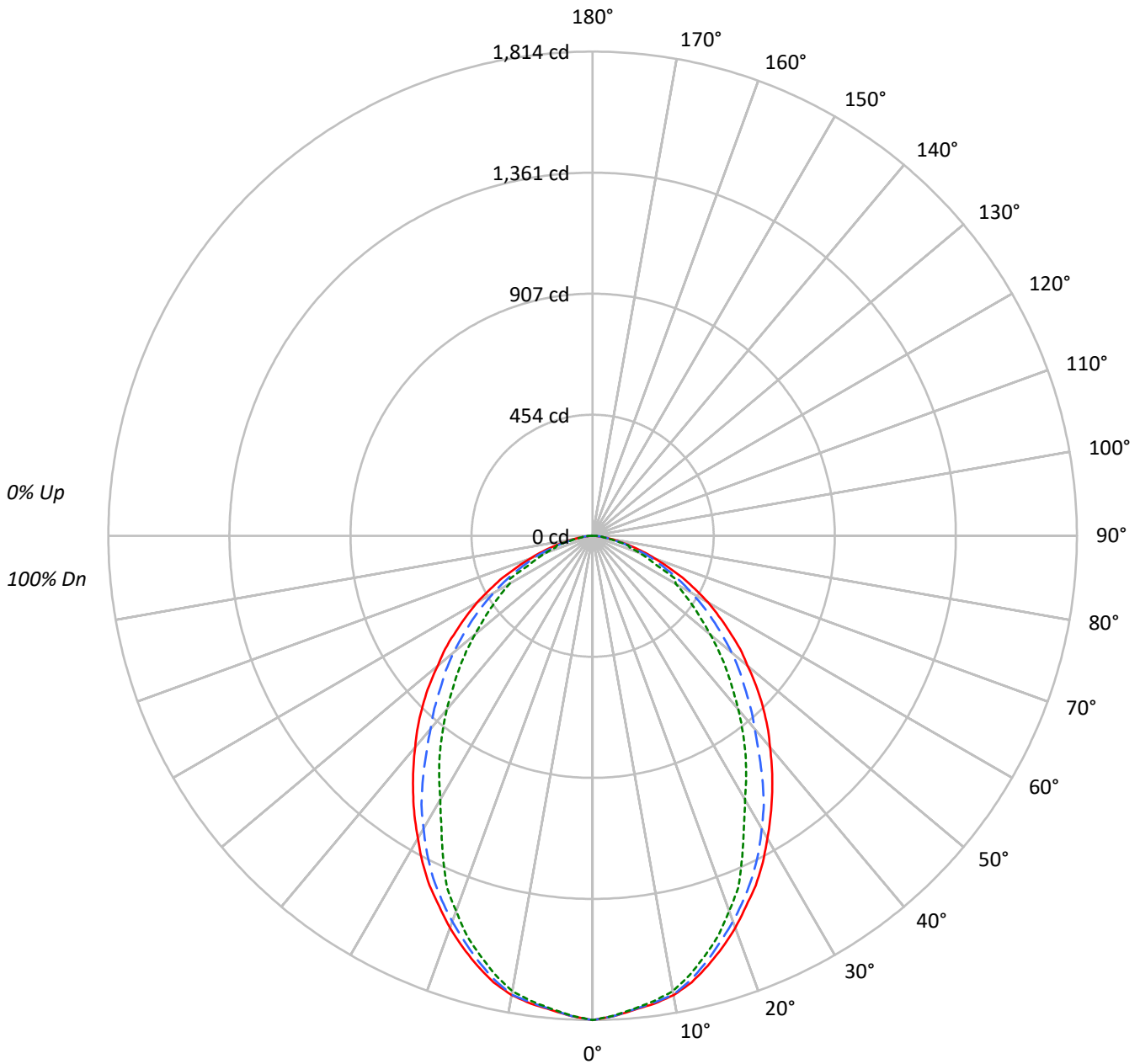
Lumens per Lamp: N/A
Luminaire Lumens: 3562.0 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	2441	2441	2441
5°	2408	2405	2402
10°	2387	2384	2367
15°	2323	2299	2267
20°	2238	2202	2141
25°	2146	2099	1968
30°	2034	1968	1773
35°	1926	1819	1640
40°	1816	1658	1492
45°	1712	1533	1349
50°	1585	1423	1203
55°	1466	1289	1078
60°	1343	1151	965
65°	1182	1008	855
70°	974	883	726
75°	774	676	709
80°	520	487	455
85°	324	389	454



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.9	4.7
10°-20°	463.5	13.0
20°-30°	641.7	18.0
30°-40°	684.3	19.2
40°-50°	624.3	17.5
50°-60°	489.0	13.7
60°-70°	318.7	8.9
70°-80°	141.2	4.0
80°-90°	30.3	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°	1274.2	35.8
0°-40°	1958.4	55.0
0°-60°	3071.7	86.2
0°-90°	3562.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3562.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1814	1814	1814	1814	1814	
5°	1783	1781	1781	1779	1779	169
15°	1668	1668	1651	1634	1628	469
25°	1445	1437	1414	1363	1326	664
35°	1173	1164	1108	1024	998	733
45°	900	881	806	738	709	693
55°	625	606	550	484	459	561
65°	371	350	317	323	268	366
75°	149	138	130	124	136	160
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1814.4	1814.4	1814.4	1814.4	1814.4
2.5°	1801.8	1801.8	1801.8	1799.8	1799.8
5°	1783.0	1780.9	1780.9	1778.8	1778.8
7.5°	1768.3	1766.2	1764.1	1762.0	1757.8
10°	1747.3	1747.3	1745.2	1734.7	1732.6
12.5°	1713.7	1711.7	1703.3	1688.6	1684.4
15°	1667.6	1667.6	1650.8	1634.0	1627.7
17.5°	1617.3	1615.2	1594.2	1577.4	1569.0
20°	1562.7	1558.5	1537.6	1510.3	1495.6
22.5°	1501.9	1501.9	1476.7	1441.1	1426.4
25°	1445.3	1436.9	1413.8	1363.4	1325.7
27.5°	1380.2	1367.6	1342.5	1271.2	1227.1
30°	1308.9	1302.6	1267.0	1174.7	1141.1
32.5°	1241.8	1231.3	1193.5	1097.1	1069.8
35°	1172.6	1164.2	1107.5	1023.6	998.5
37.5°	1103.3	1092.9	1021.5	954.4	922.9
40°	1034.1	1021.5	943.9	883.1	849.5
42.5°	969.1	952.3	876.8	811.8	774.0
45°	899.9	881.0	805.5	738.4	709.0
47.5°	830.7	813.9	744.7	675.4	641.9
50°	757.2	742.6	679.6	610.4	574.7
52.5°	696.4	673.3	612.5	543.3	513.9
55°	625.1	606.2	549.6	484.5	459.4
57.5°	560.1	541.2	488.7	427.9	406.9
60°	499.2	472.0	427.9	375.5	358.7
62.5°	432.1	411.1	373.4	329.3	350.3
65°	371.3	350.3	316.7	323.0	268.5
67.5°	304.2	293.7	264.3	234.9	226.5
70°	247.5	234.9	224.4	193.0	184.6
72.5°	197.2	184.6	169.9	153.1	146.8
75°	148.9	138.4	130.1	123.8	136.3
77.5°	102.8	98.6	92.3	86.0	83.9
80°	67.1	65.0	62.9	60.8	58.7
82.5°	39.9	39.9	39.9	39.9	39.9
85°	21.0	23.1	25.2	27.3	29.4
87.5°	12.6	12.6	14.7	16.8	18.9
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)