

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: P546442

Luminaire Tested: **FMR-24-4-LD4-1HI-35-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: P546442
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-LD4-1HI-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

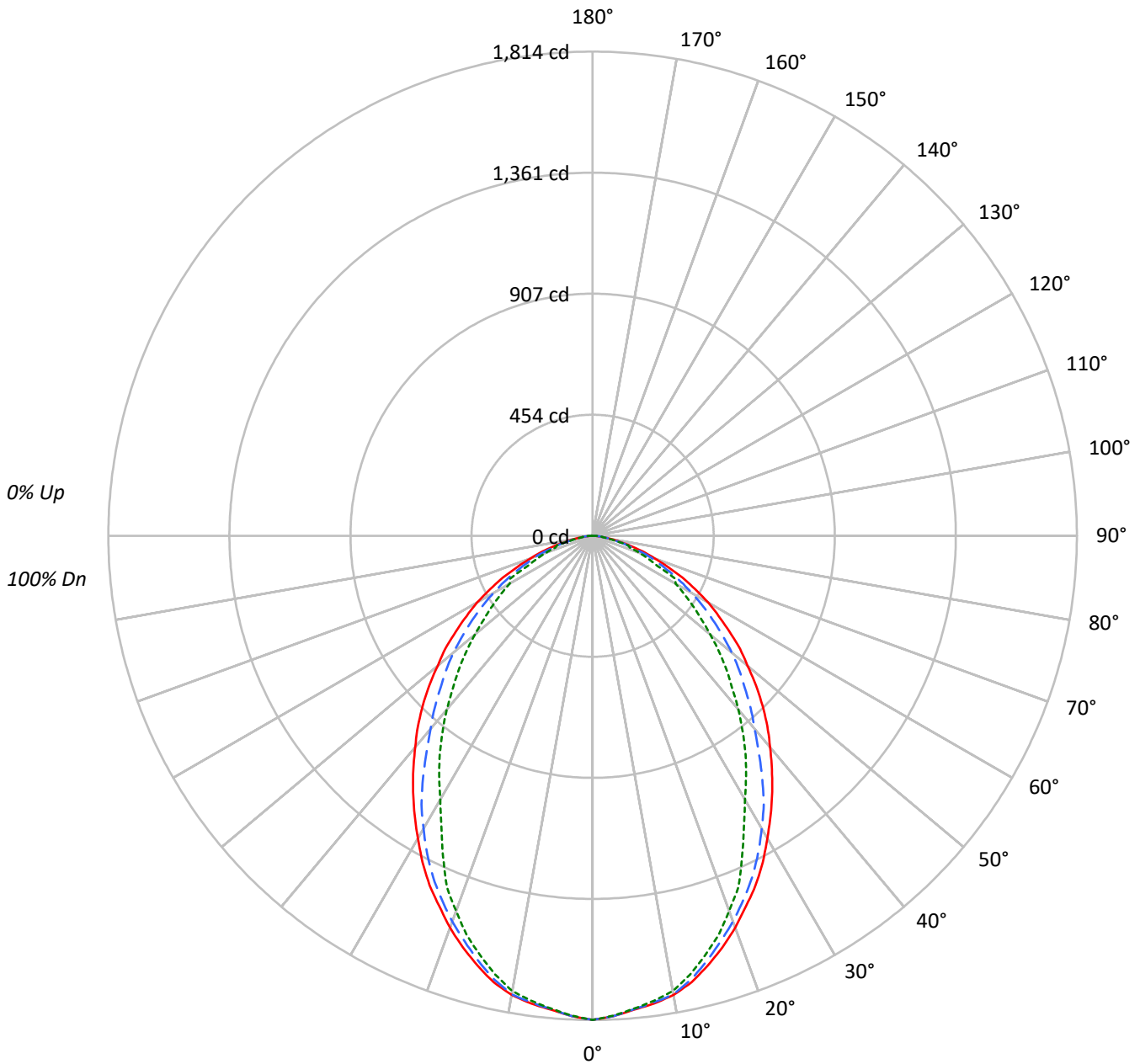
Lumens per Lamp: N/A
Luminaire Lumens: 3561.0 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	2441	2441	2441
5°	2407	2405	2402
10°	2387	2384	2366
15°	2322	2299	2267
20°	2237	2201	2141
25°	2145	2098	1968
30°	2033	1968	1772
35°	1925	1819	1640
40°	1816	1658	1492
45°	1712	1532	1349
50°	1585	1422	1203
55°	1466	1289	1077
60°	1343	1151	965
65°	1182	1008	855
70°	973	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°	463.4	13.0
20°-30°	641.6	18.0
30°-40°	684.1	19.2
40°-50°	624.1	17.5
50°-60°	488.9	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°	1273.8	35.8
0°-40°	1957.9	55.0
0°-60°	3070.8	86.2
0°-90°	3561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3561.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1814	1814	1814	1814	1814	
5°	1782	1780	1780	1778	1778	169
15°	1667	1667	1650	1634	1627	469
25°	1445	1436	1413	1363	1325	663
35°	1172	1164	1107	1023	998	733
45°	900	881	805	738	709	693
55°	625	606	549	484	459	560
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°	1813.9	1813.9	1813.9	1813.9	1813.9
2.5°	1801.3	1801.3	1801.3	1799.2	1799.2
5°	1782.5	1780.4	1780.4	1778.3	1778.3
7.5°	1767.8	1765.7	1763.6	1761.5	1757.3
10°	1746.8	1746.8	1744.7	1734.2	1732.1
12.5°	1713.3	1711.2	1702.8	1688.1	1683.9
15°	1667.1	1667.1	1650.4	1633.6	1627.3
17.5°	1616.8	1614.7	1593.7	1577.0	1568.6
20°	1562.3	1558.1	1537.1	1509.9	1495.2
22.5°	1501.5	1501.5	1476.3	1440.7	1426.0
25°	1444.8	1436.5	1413.4	1363.1	1325.3
27.5°	1379.8	1367.3	1342.1	1270.8	1226.8
30°	1308.5	1302.3	1266.6	1174.3	1140.8
32.5°	1241.4	1231.0	1193.2	1096.7	1069.5
35°	1172.2	1163.8	1107.2	1023.3	998.2
37.5°	1103.0	1092.5	1021.3	954.1	922.7
40°	1033.8	1021.3	943.7	882.8	849.3
42.5°	968.8	952.0	876.6	811.5	773.8
45°	899.6	880.8	805.3	738.2	708.8
47.5°	830.4	813.6	744.4	675.2	641.7
50°	757.0	742.3	679.4	610.2	574.6
52.5°	696.2	673.1	612.3	543.1	513.8
55°	624.9	606.0	549.4	484.4	459.2
57.5°	559.9	541.0	488.6	427.8	406.8
60°	499.1	471.8	427.8	375.4	358.6
62.5°	432.0	411.0	373.3	329.2	350.2
65°	371.2	350.2	316.7	322.9	268.4
67.5°	304.1	293.6	264.2	234.9	226.5
70°	247.4	234.9	224.4	192.9	184.5
72.5°	197.1	184.5	169.9	153.1	146.8
75°	148.9	138.4	130.0	123.7	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°	39.8	39.8	39.8	39.8	39.8
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)