

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: P545818

Luminaire Tested: **FMR-12-4-LD4-1HI-35-UNV-80-87-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: P545818
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-12-4-LD4-1HI-35-UNV-80-87-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

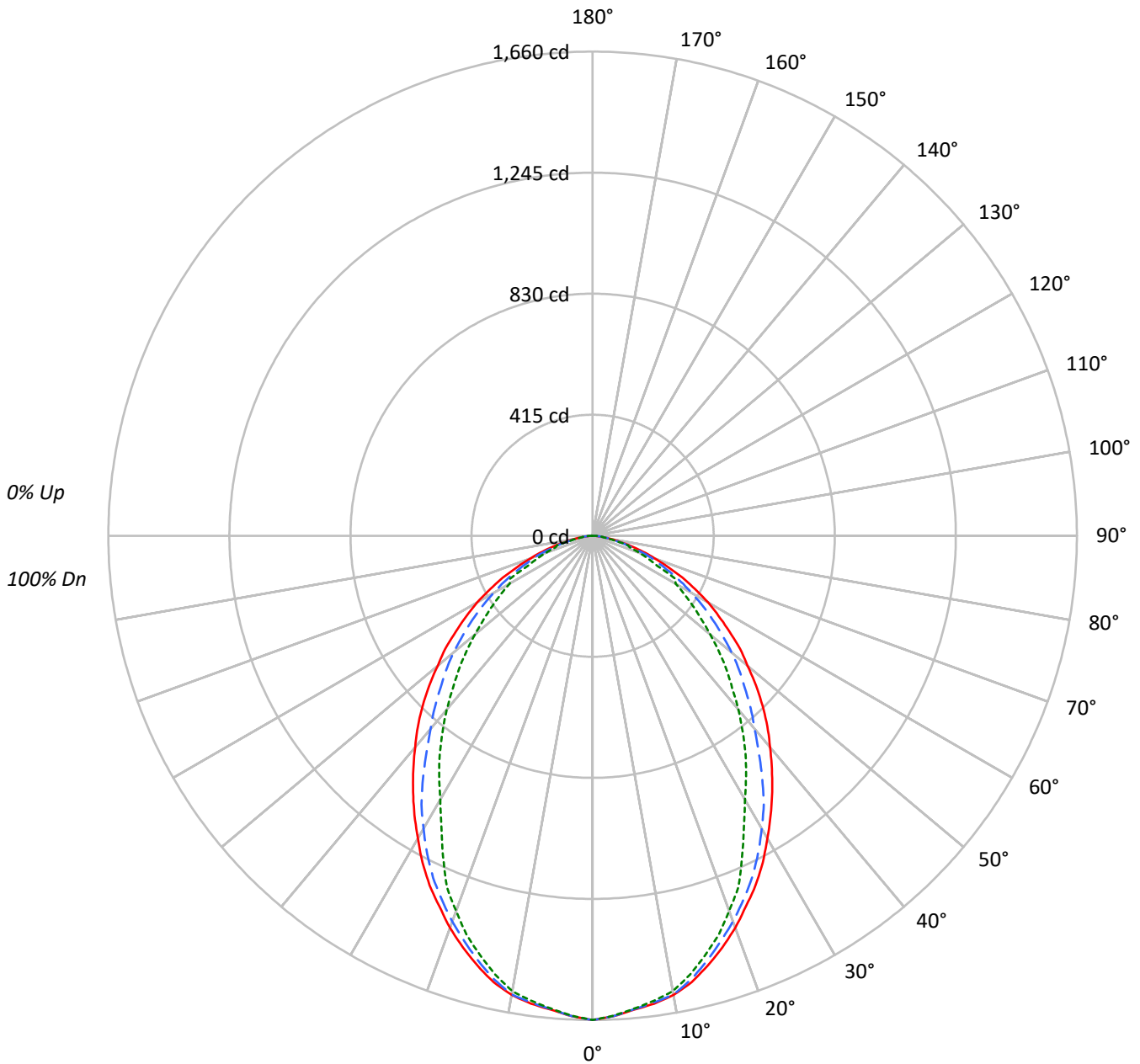
Lumens per Lamp: N/A
Luminaire Lumens: 3259.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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				20				
RC	80				70				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	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4467	4467	4467
5°	4407	4401	4396
10°	4368	4363	4332
15°	4250	4208	4149
20°	4094	4029	3919
25°	3926	3841	3601
30°	3721	3602	3244
35°	3524	3329	3001
40°	3324	3034	2731
45°	3133	2805	2469
50°	2900	2603	2202
55°	2683	2359	1972
60°	2458	2107	1766
65°	2163	1845	1564
70°	1782	1616	1329
75°	1417	1237	1297
80°	951	893	832
85°	593	710	831



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.5	4.7
10°-20°	424.1	13.0
20°-30°	587.1	18.0
30°-40°	626.1	19.2
40°-50°	571.2	17.5
50°-60°	447.4	13.7
60°-70°	291.6	8.9
70°-80°	129.2	4.0
80°-90°	27.7	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°	1165.8	35.8
0°-40°	1791.8	55.0
0°-60°	2810.4	86.2
0°-90°	3259.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3259.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1660	1660	1660	1660	1660	
5°	1631	1629	1629	1628	1628	155
15°	1526	1526	1510	1495	1489	429
25°	1322	1315	1294	1248	1213	607
35°	1073	1065	1013	937	914	671
45°	823	806	737	676	649	634
55°	572	555	503	443	420	513
65°	340	320	290	296	246	335
75°	136	127	119	113	125	146
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1660.1	1660.1	1660.1	1660.1	1660.1
2.5°	1648.6	1648.6	1648.6	1646.7	1646.7
5°	1631.3	1629.4	1629.4	1627.5	1627.5
7.5°	1617.9	1615.9	1614.0	1612.1	1608.3
10°	1598.7	1598.7	1596.8	1587.2	1585.2
12.5°	1568.0	1566.1	1558.4	1544.9	1541.1
15°	1525.7	1525.7	1510.4	1495.0	1489.3
17.5°	1479.7	1477.8	1458.6	1443.2	1435.5
20°	1429.8	1426.0	1406.8	1381.8	1368.4
22.5°	1374.1	1374.1	1351.1	1318.5	1305.0
25°	1322.3	1314.6	1293.5	1247.5	1212.9
27.5°	1262.8	1251.3	1228.3	1163.0	1122.7
30°	1197.6	1191.8	1159.2	1074.7	1044.0
32.5°	1136.2	1126.6	1092.0	1003.7	978.8
35°	1072.8	1065.1	1013.3	936.6	913.5
37.5°	1009.5	999.9	934.6	873.2	844.4
40°	946.2	934.6	863.6	808.0	777.3
42.5°	886.7	871.3	802.2	742.7	708.2
45°	823.3	806.1	737.0	675.6	648.7
47.5°	760.0	744.6	681.3	618.0	587.3
50°	692.8	679.4	621.8	558.5	525.9
52.5°	637.2	616.1	560.4	497.1	470.2
55°	571.9	554.6	502.8	443.3	420.3
57.5°	512.4	495.1	447.2	391.5	372.3
60°	456.8	431.8	391.5	343.5	328.2
62.5°	395.4	376.2	341.6	301.3	320.5
65°	339.7	320.5	289.8	295.6	245.7
67.5°	278.3	268.7	241.8	214.9	207.3
70°	226.5	214.9	205.4	176.6	168.9
72.5°	180.4	168.9	155.5	140.1	134.3
75°	136.3	126.7	119.0	113.2	124.7
77.5°	94.0	90.2	84.4	78.7	76.8
80°	61.4	59.5	57.6	55.7	53.7
82.5°	36.5	36.5	36.5	36.5	36.5
85°	19.2	21.1	23.0	24.9	26.9
87.5°	11.5	11.5	13.4	15.4	17.3
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)