

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: P546490

Luminaire Tested: **FMR-24-4-LD4-1HI-50-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: P546490
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-50-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

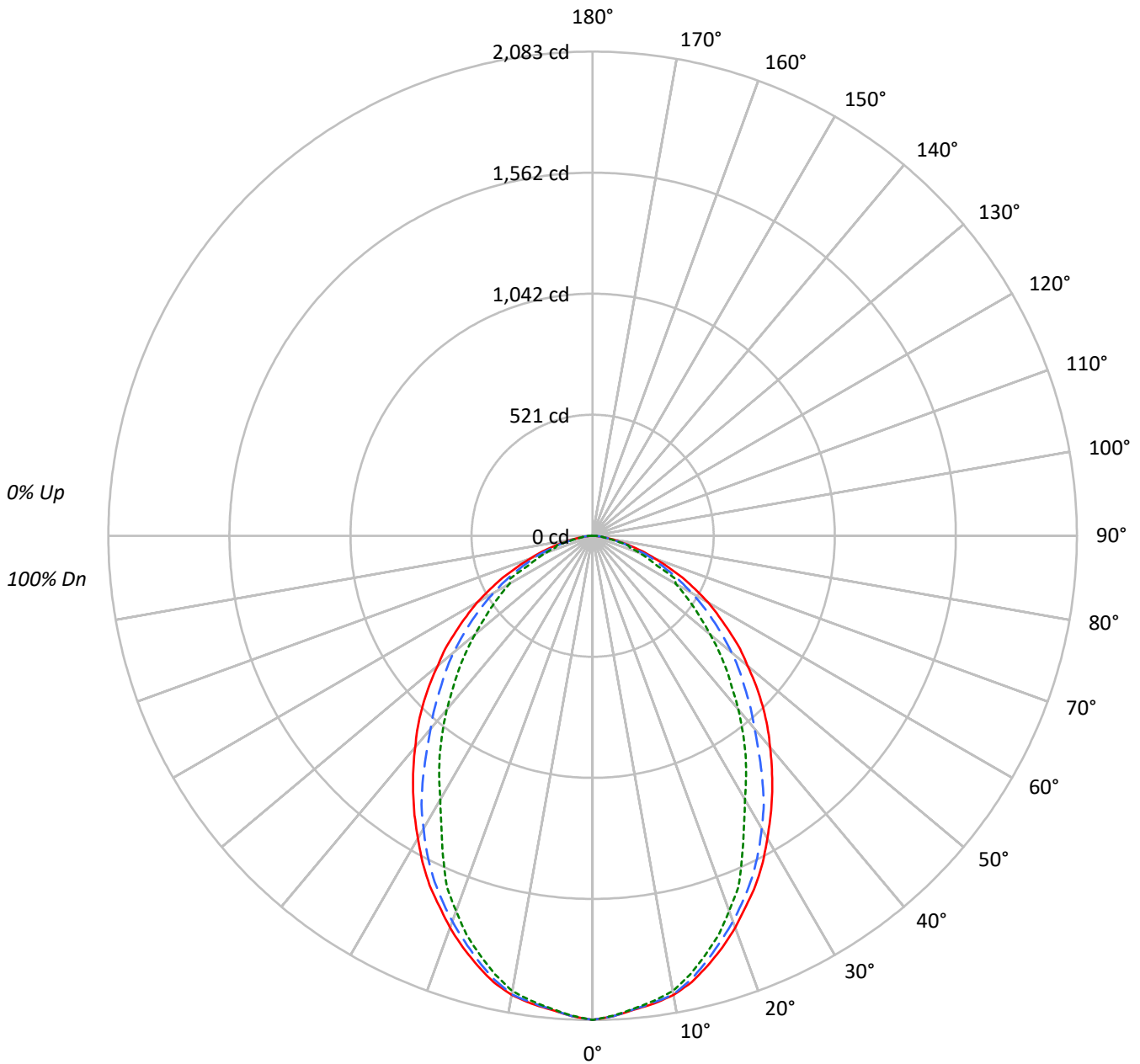
Lumens per Lamp: N/A
Luminaire Lumens: 4089.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2803	2803	2803
5°	2764	2761	2758
10°	2740	2737	2717
15°	2667	2640	2603
20°	2569	2527	2458
25°	2463	2409	2259
30°	2334	2260	2035
35°	2211	2088	1883
40°	2085	1903	1713
45°	1966	1760	1549
50°	1820	1633	1381
55°	1683	1480	1237
60°	1542	1322	1108
65°	1357	1158	981
70°	1118	1014	834
75°	889	776	814
80°	597	559	522
85°	372	446	520



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.9	4.7
10°-20°	532.1	13.0
20°-30°	736.7	18.0
30°-40°	785.5	19.2
40°-50°	716.6	17.5
50°-60°	561.4	13.7
60°-70°	365.9	8.9
70°-80°	162.1	4.0
80°-90°	34.8	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°	1462.7	35.8
0°-40°	2248.2	55.0
0°-60°	3526.2	86.2
0°-90°	4089.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4089.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2083	2083	2083	2083	2083	
5°	2047	2044	2044	2042	2042	194
15°	1914	1914	1895	1876	1869	538
25°	1659	1649	1623	1565	1522	762
35°	1346	1336	1271	1175	1146	842
45°	1033	1011	925	848	814	796
55°	718	696	631	556	527	644
65°	426	402	364	371	308	420
75°	171	159	149	142	156	183
85°	24	26	29	31	34	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2082.9	2082.9	2082.9	2082.9	2082.9
2.5°	2068.4	2068.4	2068.4	2066.0	2066.0
5°	2046.8	2044.4	2044.4	2041.9	2041.9
7.5°	2029.9	2027.5	2025.1	2022.7	2017.9
10°	2005.8	2005.8	2003.4	1991.4	1989.0
12.5°	1967.3	1964.9	1955.3	1938.4	1933.6
15°	1914.3	1914.3	1895.1	1875.8	1868.6
17.5°	1856.5	1854.1	1830.0	1810.8	1801.2
20°	1793.9	1789.1	1765.0	1733.7	1716.9
22.5°	1724.1	1724.1	1695.2	1654.3	1637.4
25°	1659.1	1649.4	1623.0	1565.2	1521.8
27.5°	1584.4	1570.0	1541.1	1459.2	1408.7
30°	1502.6	1495.3	1454.4	1348.5	1309.9
32.5°	1425.5	1413.5	1370.1	1259.4	1228.1
35°	1346.0	1336.4	1271.4	1175.1	1146.2
37.5°	1266.6	1254.5	1172.7	1095.6	1059.5
40°	1187.1	1172.7	1083.6	1013.7	975.2
42.5°	1112.5	1093.2	1006.5	931.9	888.5
45°	1033.0	1011.3	924.7	847.6	813.9
47.5°	953.6	934.3	854.8	775.4	736.8
50°	869.3	852.4	780.2	700.7	659.8
52.5°	799.4	773.0	703.1	623.7	589.9
55°	717.6	695.9	630.9	556.2	527.3
57.5°	642.9	621.3	561.1	491.2	467.1
60°	573.1	541.8	491.2	431.0	411.8
62.5°	496.0	472.0	428.6	378.0	402.1
65°	426.2	402.1	363.6	370.8	308.2
67.5°	349.2	337.1	303.4	269.7	260.1
70°	284.1	269.7	257.7	221.5	211.9
72.5°	226.3	211.9	195.0	175.8	168.6
75°	171.0	158.9	149.3	142.1	156.5
77.5°	118.0	113.2	106.0	98.7	96.3
80°	77.1	74.6	72.2	69.8	67.4
82.5°	45.8	45.8	45.8	45.8	45.8
85°	24.1	26.5	28.9	31.3	33.7
87.5°	14.4	14.4	16.9	19.3	21.7
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)