

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: P545552

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-93-85-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: P545552
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-35-UNV-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

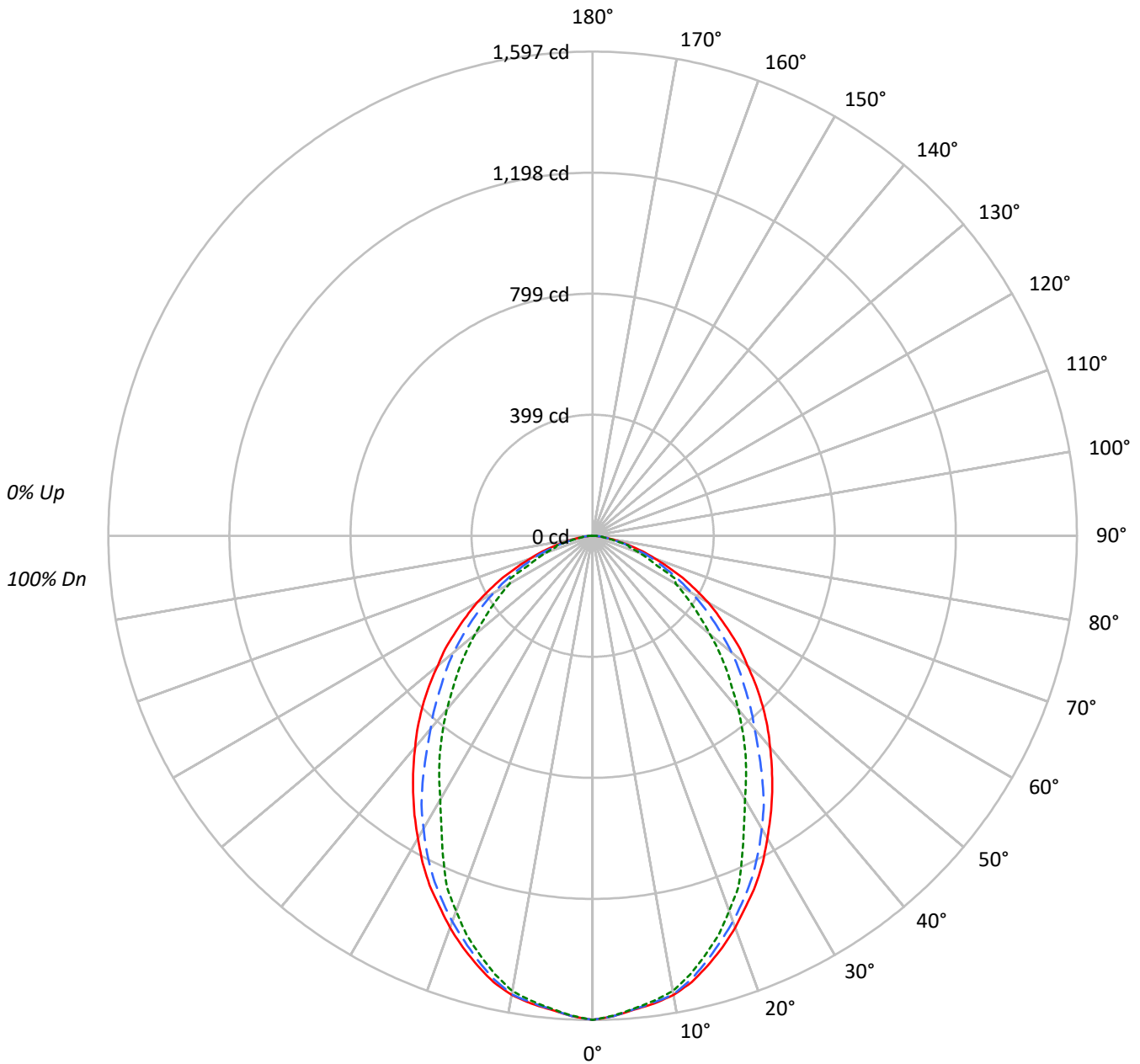
Lumens per Lamp: N/A
Luminaire Lumens: 3135.0 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (A_{in}): 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				
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8594	8594	8594
5°	8478	8468	8458
10°	8405	8394	8334
15°	8178	8095	7982
20°	7877	7750	7539
25°	7554	7389	6929
30°	7159	6930	6241
35°	6780	6405	5774
40°	6395	5837	5253
45°	6028	5396	4749
50°	5580	5009	4235
55°	5163	4539	3794
60°	4730	4054	3398
65°	4162	3550	3009
70°	3427	3108	2557
75°	2726	2381	2495
80°	1832	1717	1602
85°	1142	1371	1593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.7	4.7
10°-20°	408.0	13.0
20°-30°	564.8	18.0
30°-40°	602.2	19.2
40°-50°	549.4	17.5
50°-60°	430.4	13.7
60°-70°	280.5	8.9
70°-80°	124.3	4.0
80°-90°	26.7	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°	1121.4	35.8
0°-40°	1723.7	55.0
0°-60°	2703.5	86.2
0°-90°	3135.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3135.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1597	1597	1597	1597	1597	
5°	1569	1567	1567	1566	1566	149
15°	1468	1468	1453	1438	1433	413
25°	1272	1265	1244	1200	1167	584
35°	1032	1025	975	901	879	645
45°	792	775	709	650	624	610
55°	550	534	484	426	404	493
65°	327	308	279	284	236	322
75°	131	122	114	109	120	140
85°	18	20	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1596.9	1596.9	1596.9	1596.9	1596.9
2.5°	1585.9	1585.9	1585.9	1584.0	1584.0
5°	1569.2	1567.4	1567.4	1565.5	1565.5
7.5°	1556.3	1554.5	1552.6	1550.8	1547.1
10°	1537.9	1537.9	1536.0	1526.8	1524.9
12.5°	1508.3	1506.5	1499.1	1486.2	1482.5
15°	1467.7	1467.7	1452.9	1438.2	1432.6
17.5°	1423.4	1421.5	1403.1	1388.3	1380.9
20°	1375.4	1371.7	1353.2	1329.2	1316.3
22.5°	1321.8	1321.8	1299.7	1268.3	1255.4
25°	1272.0	1264.6	1244.3	1200.0	1166.8
27.5°	1214.8	1203.7	1181.5	1118.8	1080.0
30°	1152.0	1146.5	1115.1	1033.8	1004.3
32.5°	1092.9	1083.7	1050.5	965.5	941.5
35°	1032.0	1024.6	974.8	900.9	878.8
37.5°	971.1	961.8	899.1	840.0	812.3
40°	910.2	899.1	830.8	777.2	747.7
42.5°	852.9	838.2	771.7	714.5	681.2
45°	792.0	775.4	708.9	649.8	624.0
47.5°	731.1	716.3	655.4	594.5	564.9
50°	666.5	653.5	598.2	537.2	505.8
52.5°	612.9	592.6	539.1	478.2	452.3
55°	550.2	533.5	483.7	426.5	404.3
57.5°	492.9	476.3	430.2	376.6	358.2
60°	439.4	415.4	376.6	330.5	315.7
62.5°	380.3	361.8	328.6	289.8	308.3
65°	326.8	308.3	278.8	284.3	236.3
67.5°	267.7	258.5	232.6	206.8	199.4
70°	217.8	206.8	197.5	169.8	162.5
72.5°	173.5	162.5	149.5	134.8	129.2
75°	131.1	121.8	114.5	108.9	120.0
77.5°	90.5	86.8	81.2	75.7	73.8
80°	59.1	57.2	55.4	53.5	51.7
82.5°	35.1	35.1	35.1	35.1	35.1
85°	18.5	20.3	22.2	24.0	25.8
87.5°	11.1	11.1	12.9	14.8	16.6
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)