

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: P545730

Luminaire Tested: **FMR-12-2-LD4-2STD-35-UNV-81-87-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: P545730
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-LD4-2STD-35-UNV-81-87-EDD
Description: 1X2 FMR TROFFER WITH .156 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

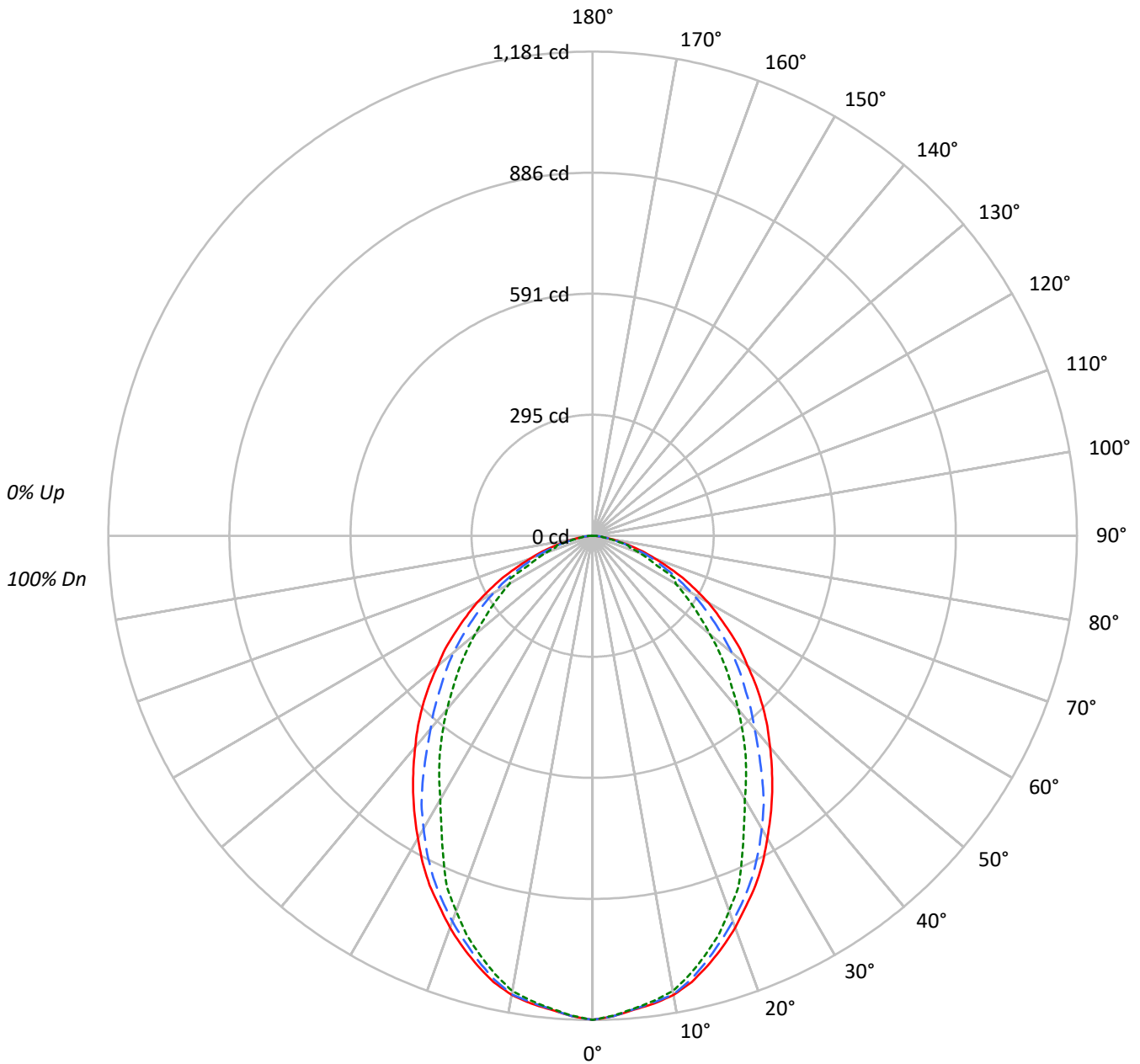
Lumens per Lamp: N/A
Luminaire Lumens: 2318.0 lumens
Efficiency: N/A
Efficacy: 69.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6355	6355	6355
5°	6269	6261	6254
10°	6214	6207	6162
15°	6047	5986	5902
20°	5825	5731	5574
25°	5585	5463	5123
30°	5294	5124	4615
35°	5014	4735	4269
40°	4728	4316	3884
45°	4457	3990	3512
50°	4126	3703	3131
55°	3817	3355	2805
60°	3497	2998	2512
65°	3077	2625	2225
70°	2535	2299	1890
75°	2015	1759	1844
80°	1354	1271	1184
85°	846	1013	1179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	4.7
10°-20°	301.6	13.0
20°-30°	417.6	18.0
30°-40°	445.3	19.2
40°-50°	406.2	17.5
50°-60°	318.3	13.7
60°-70°	207.4	8.9
70°-80°	91.9	4.0
80°-90°	19.7	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°	829.2	35.8
0°-40°	1274.5	55.0
0°-60°	1999.0	86.2
0°-90°	2318.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2318.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1160	1159	1159	1158	1158	110
15°	1085	1085	1074	1063	1059	305
25°	940	935	920	887	863	432
35°	763	758	721	666	650	477
45°	586	573	524	480	461	451
55°	407	394	358	315	299	365
65°	242	228	206	210	175	238
75°	97	90	85	80	89	104
85°	14	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1180.8	1180.8	1180.8	1180.8	1180.8
2.5°	1172.6	1172.6	1172.6	1171.2	1171.2
5°	1160.3	1158.9	1158.9	1157.6	1157.6
7.5°	1150.7	1149.4	1148.0	1146.6	1143.9
10°	1137.1	1137.1	1135.7	1128.9	1127.5
12.5°	1115.2	1113.9	1108.4	1098.9	1096.1
15°	1085.2	1085.2	1074.3	1063.4	1059.3
17.5°	1052.4	1051.1	1037.4	1026.5	1021.0
20°	1017.0	1014.2	1000.6	982.8	973.3
22.5°	977.4	977.4	961.0	937.8	928.2
25°	940.5	935.1	920.0	887.3	862.7
27.5°	898.2	890.0	873.6	827.2	798.5
30°	851.8	847.7	824.5	764.4	742.6
32.5°	808.1	801.3	776.7	713.9	696.2
35°	763.1	757.6	720.7	666.1	649.8
37.5°	718.0	711.2	664.8	621.1	600.6
40°	673.0	664.8	614.3	574.7	552.8
42.5°	630.6	619.7	570.6	528.3	503.7
45°	585.6	573.3	524.2	480.5	461.4
47.5°	540.6	529.6	484.6	439.5	417.7
50°	492.8	483.2	442.3	397.2	374.0
52.5°	453.2	438.2	398.6	353.5	334.4
55°	406.8	394.5	357.6	315.3	298.9
57.5°	364.5	352.2	318.1	278.5	264.8
60°	324.9	307.1	278.5	244.3	233.4
62.5°	281.2	267.5	243.0	214.3	228.0
65°	241.6	228.0	206.1	210.2	174.7
67.5°	197.9	191.1	172.0	152.9	147.4
70°	161.1	152.9	146.1	125.6	120.1
72.5°	128.3	120.1	110.6	99.6	95.6
75°	96.9	90.1	84.6	80.5	88.7
77.5°	66.9	64.2	60.1	56.0	54.6
80°	43.7	42.3	41.0	39.6	38.2
82.5°	25.9	25.9	25.9	25.9	25.9
85°	13.7	15.0	16.4	17.7	19.1
87.5°	8.2	8.2	9.6	10.9	12.3
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)