

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: P545759

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-81-84-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: P545759
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-40-UNV-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

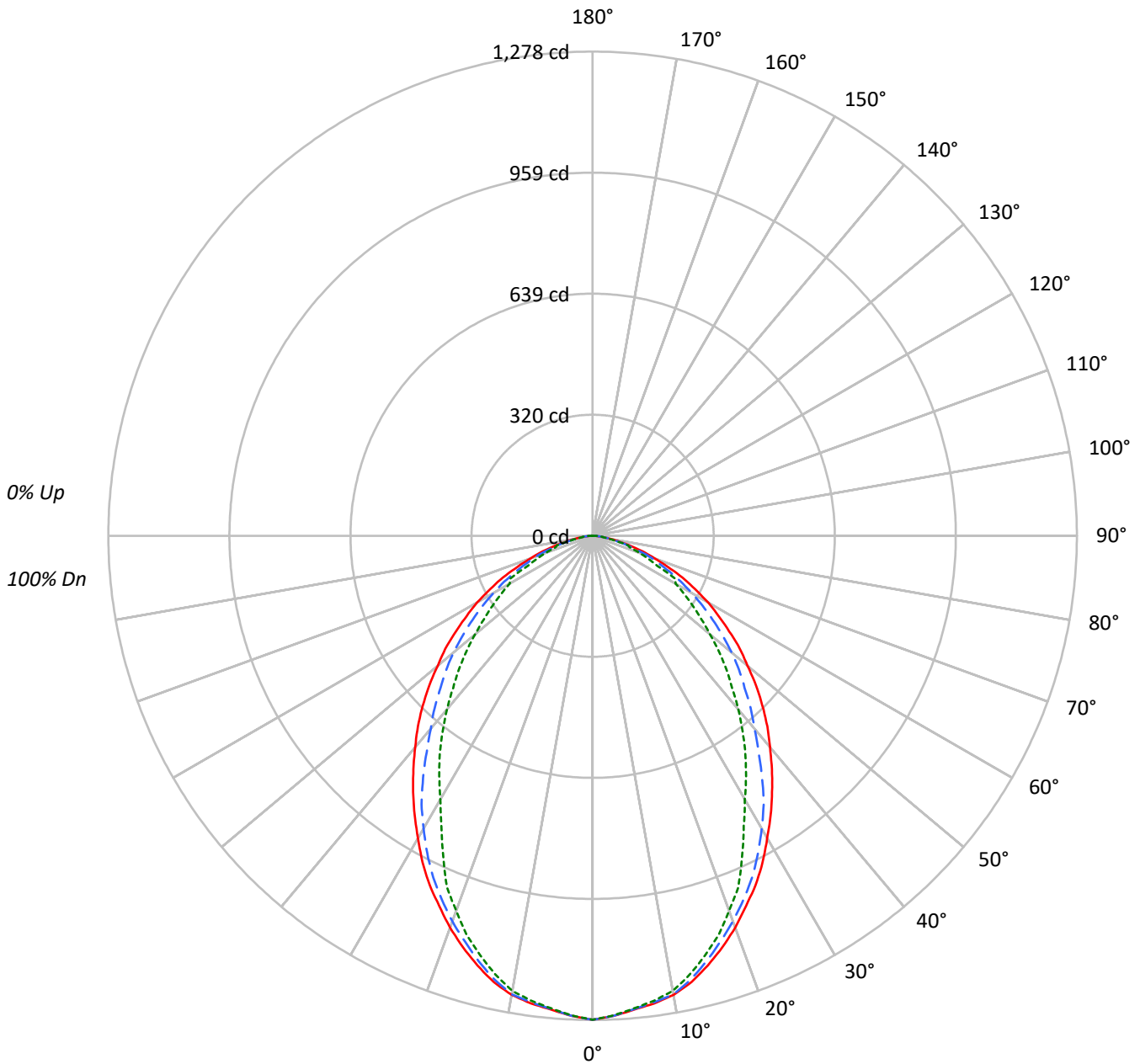
Lumens per Lamp: N/A
Luminaire Lumens: 2508.0 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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				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°	6875	6875	6875
5°	6782	6774	6766
10°	6724	6715	6667
15°	6542	6476	6386
20°	6302	6200	6031
25°	6043	5911	5543
30°	5727	5544	4993
35°	5424	5123	4619
40°	5115	4669	4203
45°	4822	4316	3800
50°	4464	4006	3388
55°	4130	3631	3035
60°	3784	3243	2719
65°	3329	2840	2407
70°	2743	2486	2046
75°	2181	1905	1996
80°	1466	1373	1283
85°	914	1093	1278



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.9	4.7
10°-20°	326.4	13.0
20°-30°	451.8	18.0
30°-40°	481.8	19.2
40°-50°	439.5	17.5
50°-60°	344.3	13.7
60°-70°	224.4	8.9
70°-80°	99.4	4.0
80°-90°	21.4	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°	897.1	35.8
0°-40°	1378.9	55.0
0°-60°	2162.8	86.2
0°-90°	2508.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2508.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1278	1278	1278	1278	1278	
5°	1255	1254	1254	1252	1252	119
15°	1174	1174	1162	1150	1146	330
25°	1018	1012	995	960	933	467
35°	826	820	780	721	703	516
45°	634	620	567	520	499	488
55°	440	427	387	341	323	395
65°	261	247	223	227	189	258
75°	105	98	92	87	96	112
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1277.5	1277.5	1277.5	1277.5	1277.5
2.5°	1268.7	1268.7	1268.7	1267.2	1267.2
5°	1255.4	1253.9	1253.9	1252.4	1252.4
7.5°	1245.0	1243.6	1242.1	1240.6	1237.7
10°	1230.3	1230.3	1228.8	1221.4	1219.9
12.5°	1206.6	1205.2	1199.3	1188.9	1186.0
15°	1174.2	1174.2	1162.3	1150.5	1146.1
17.5°	1138.7	1137.2	1122.5	1110.6	1104.7
20°	1100.3	1097.4	1082.6	1063.4	1053.0
22.5°	1057.5	1057.5	1039.8	1014.6	1004.3
25°	1017.6	1011.7	995.4	960.0	933.4
27.5°	971.8	963.0	945.2	895.0	864.0
30°	921.6	917.2	892.1	827.1	803.4
32.5°	874.3	867.0	840.4	772.4	753.2
35°	825.6	819.7	779.8	720.7	703.0
37.5°	776.9	769.5	719.3	672.0	649.8
40°	728.1	719.3	664.6	621.8	598.2
42.5°	682.3	670.5	617.4	571.6	545.0
45°	633.6	620.3	567.1	519.9	499.2
47.5°	584.9	573.0	524.3	475.6	451.9
50°	533.2	522.8	478.5	429.8	404.7
52.5°	490.3	474.1	431.3	382.5	361.8
55°	440.1	426.8	387.0	341.2	323.4
57.5°	394.3	381.0	344.1	301.3	286.5
60°	351.5	332.3	301.3	264.4	252.6
62.5°	304.2	289.5	262.9	231.9	246.6
65°	261.4	246.6	223.0	227.4	189.0
67.5°	214.2	206.8	186.1	165.4	159.5
70°	174.3	165.4	158.0	135.9	130.0
72.5°	138.8	130.0	119.6	107.8	103.4
75°	104.9	97.5	91.6	87.1	96.0
77.5°	72.4	69.4	65.0	60.6	59.1
80°	47.3	45.8	44.3	42.8	41.4
82.5°	28.1	28.1	28.1	28.1	28.1
85°	14.8	16.2	17.7	19.2	20.7
87.5°	8.9	8.9	10.3	11.8	13.3
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)