

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: P546072

Luminaire Tested: **FMR-12-4-LD4-1STD-50-UNV-80-85-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: P546072
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-LD4-1STD-50-UNV-80-85-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

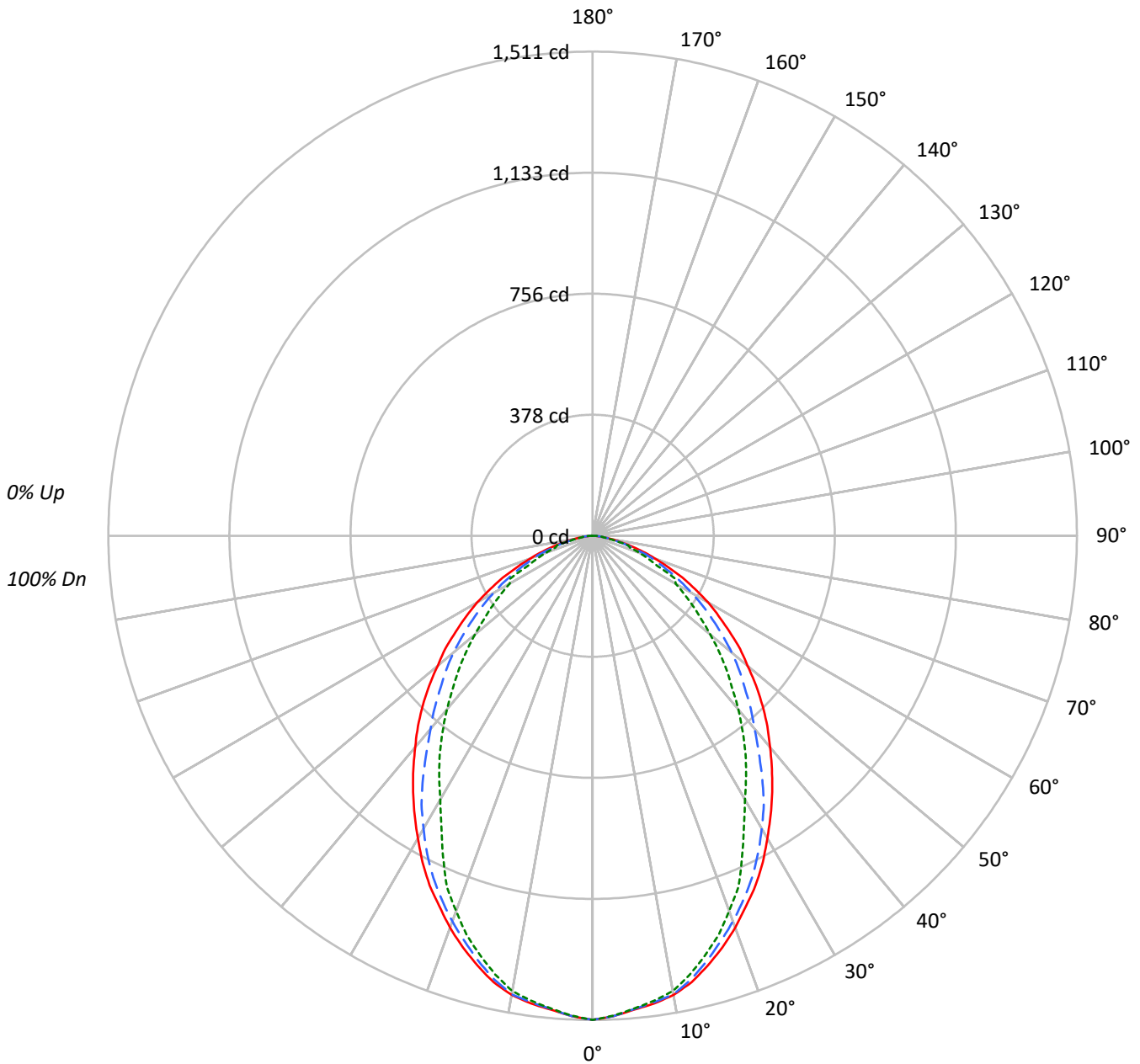
Lumens per Lamp: N/A
Luminaire Lumens: 2966.0 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4066	4066	4066
5°	4010	4006	4001
10°	3976	3971	3942
15°	3869	3830	3776
20°	3726	3666	3566
25°	3573	3495	3278
30°	3387	3278	2953
35°	3208	3029	2731
40°	3025	2761	2485
45°	2852	2552	2247
50°	2640	2369	2004
55°	2442	2147	1795
60°	2237	1918	1608
65°	1969	1679	1424
70°	1622	1471	1209
75°	1289	1126	1180
80°	866	812	758
85°	540	648	756



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.6	4.7
10°-20°	386.0	13.0
20°-30°	534.3	18.0
30°-40°	569.8	19.2
40°-50°	519.8	17.5
50°-60°	407.2	13.7
60°-70°	265.4	8.9
70°-80°	117.6	4.0
80°-90°	25.3	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°	1061.0	35.8
0°-40°	1630.7	55.0
0°-60°	2557.8	86.2
0°-90°	2966.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2966.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1511	1511	1511	1511	1511	
5°	1485	1483	1483	1481	1481	141
15°	1389	1389	1375	1361	1355	390
25°	1203	1196	1177	1135	1104	552
35°	976	969	922	852	831	610
45°	749	734	671	615	590	577
55°	520	505	458	404	382	467
65°	309	292	264	269	224	305
75°	124	115	108	103	114	133
85°	18	19	21	23	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1510.8	1510.8	1510.8	1510.8	1510.8
2.5°	1500.4	1500.4	1500.4	1498.6	1498.6
5°	1484.6	1482.9	1482.9	1481.1	1481.1
7.5°	1472.4	1470.7	1468.9	1467.2	1463.7
10°	1454.9	1454.9	1453.2	1444.5	1442.7
12.5°	1427.0	1425.3	1418.3	1406.0	1402.5
15°	1388.6	1388.6	1374.6	1360.6	1355.4
17.5°	1346.7	1344.9	1327.4	1313.5	1306.5
20°	1301.2	1297.8	1280.3	1257.6	1245.4
22.5°	1250.6	1250.6	1229.6	1199.9	1187.7
25°	1203.4	1196.4	1177.2	1135.3	1103.9
27.5°	1149.3	1138.8	1117.8	1058.5	1021.8
30°	1089.9	1084.7	1055.0	978.1	950.2
32.5°	1034.0	1025.3	993.8	913.5	890.8
35°	976.4	969.4	922.2	852.4	831.4
37.5°	918.7	910.0	850.6	794.7	768.5
40°	861.1	850.6	786.0	735.3	707.4
42.5°	806.9	793.0	730.1	675.9	644.5
45°	749.3	733.6	670.7	614.8	590.4
47.5°	691.7	677.7	620.1	562.4	534.5
50°	630.5	618.3	565.9	508.3	478.6
52.5°	579.9	560.7	510.0	452.4	427.9
55°	520.5	504.8	457.6	403.5	382.5
57.5°	466.4	450.6	407.0	356.3	338.8
60°	415.7	393.0	356.3	312.6	298.7
62.5°	359.8	342.3	310.9	274.2	291.7
65°	309.2	291.7	263.7	269.0	223.6
67.5°	253.3	244.5	220.1	195.6	188.6
70°	206.1	195.6	186.9	160.7	153.7
72.5°	164.2	153.7	141.5	127.5	122.3
75°	124.0	115.3	108.3	103.1	113.5
77.5°	85.6	82.1	76.9	71.6	69.9
80°	55.9	54.1	52.4	50.7	48.9
82.5°	33.2	33.2	33.2	33.2	33.2
85°	17.5	19.2	21.0	22.7	24.5
87.5°	10.5	10.5	12.2	14.0	15.7
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)