

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: P546585

Luminaire Tested: **FMR-24-4-LD4-1STD-35-UNV-80-86-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: P546585
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-LD4-1STD-35-UNV-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

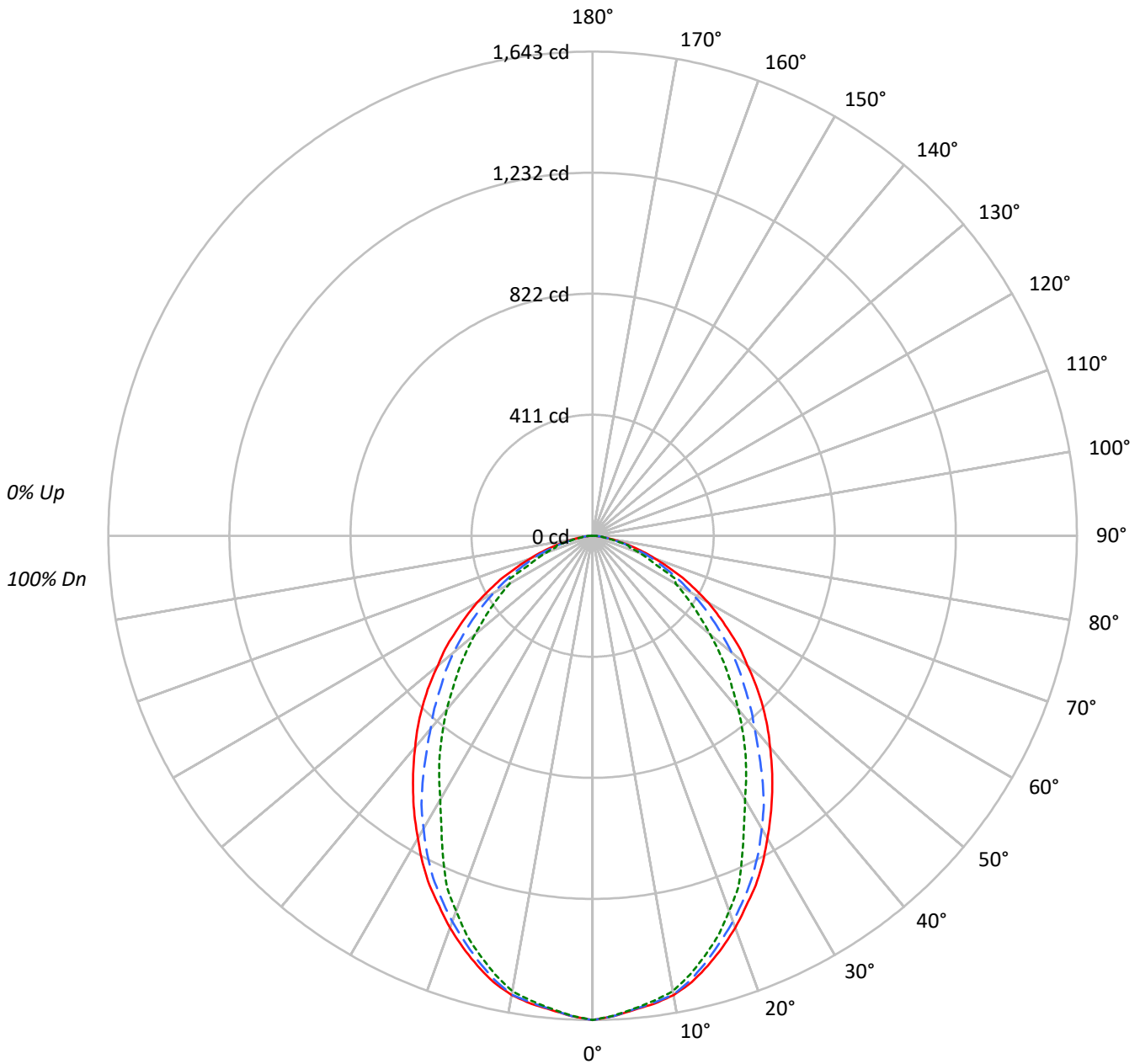
Lumens per Lamp: N/A
Luminaire Lumens: 3226.0 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	2211	2211	2211
5°	2181	2178	2176
10°	2162	2159	2144
15°	2104	2083	2053
20°	2026	1994	1939
25°	1943	1901	1782
30°	1842	1783	1606
35°	1744	1648	1485
40°	1645	1502	1351
45°	1551	1388	1222
50°	1436	1288	1090
55°	1328	1167	976
60°	1217	1043	874
65°	1071	913	774
70°	882	800	658
75°	701	612	642
80°	471	442	412
85°	293	352	411



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.0	4.7
10°-20°	419.8	13.0
20°-30°	581.2	18.0
30°-40°	619.7	19.2
40°-50°	565.4	17.5
50°-60°	442.9	13.7
60°-70°	288.7	8.9
70°-80°	127.9	4.0
80°-90°	27.5	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°	1154.0	35.8
0°-40°	1773.7	55.0
0°-60°	2782.0	86.2
0°-90°	3226.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3226.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1643	1643	1643	1643	1643	
5°	1615	1613	1613	1611	1611	153
15°	1510	1510	1495	1480	1474	425
25°	1309	1301	1280	1235	1201	601
35°	1062	1054	1003	927	904	664
45°	815	798	730	669	642	628
55°	566	549	498	439	416	508
65°	336	317	287	293	243	331
75°	135	125	118	112	124	145
85°	19	21	23	25	27	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1643.3	1643.3	1643.3	1643.3	1643.3
2.5°	1631.9	1631.9	1631.9	1630.0	1630.0
5°	1614.8	1612.9	1612.9	1611.0	1611.0
7.5°	1601.5	1599.6	1597.7	1595.8	1592.0
10°	1582.5	1582.5	1580.6	1571.1	1569.2
12.5°	1552.1	1550.2	1542.6	1529.3	1525.5
15°	1510.3	1510.3	1495.1	1479.9	1474.2
17.5°	1464.7	1462.8	1443.8	1428.6	1421.0
20°	1415.3	1411.5	1392.5	1367.8	1354.5
22.5°	1360.2	1360.2	1337.4	1305.1	1291.8
25°	1308.9	1301.3	1280.4	1234.8	1200.6
27.5°	1250.0	1238.6	1215.8	1151.2	1111.4
30°	1185.4	1179.7	1147.4	1063.9	1033.5
32.5°	1124.7	1115.2	1081.0	993.6	968.9
35°	1062.0	1054.4	1003.1	927.1	904.3
37.5°	999.3	989.8	925.2	864.4	835.9
40°	936.6	925.2	854.9	799.8	769.4
42.5°	877.7	862.5	794.1	735.2	701.0
45°	815.0	797.9	729.5	668.7	642.1
47.5°	752.3	737.1	674.4	611.7	581.3
50°	685.8	672.5	615.5	552.8	520.5
52.5°	630.7	609.8	554.7	492.0	465.4
55°	566.1	549.0	497.7	438.8	416.0
57.5°	507.2	490.1	442.6	387.5	368.6
60°	452.1	427.4	387.5	340.1	324.9
62.5°	391.3	372.4	338.2	298.3	317.3
65°	336.3	317.3	286.9	292.6	243.2
67.5°	275.5	266.0	239.4	212.8	205.2
70°	224.2	212.8	203.3	174.8	167.2
72.5°	178.6	167.2	153.9	138.7	133.0
75°	134.9	125.4	117.8	112.1	123.5
77.5°	93.1	89.3	83.6	77.9	76.0
80°	60.8	58.9	57.0	55.1	53.2
82.5°	36.1	36.1	36.1	36.1	36.1
85°	19.0	20.9	22.8	24.7	26.6
87.5°	11.4	11.4	13.3	15.2	17.1
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)