

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: P589220

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-81-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589220
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-2STD-40-UNV-81-97-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

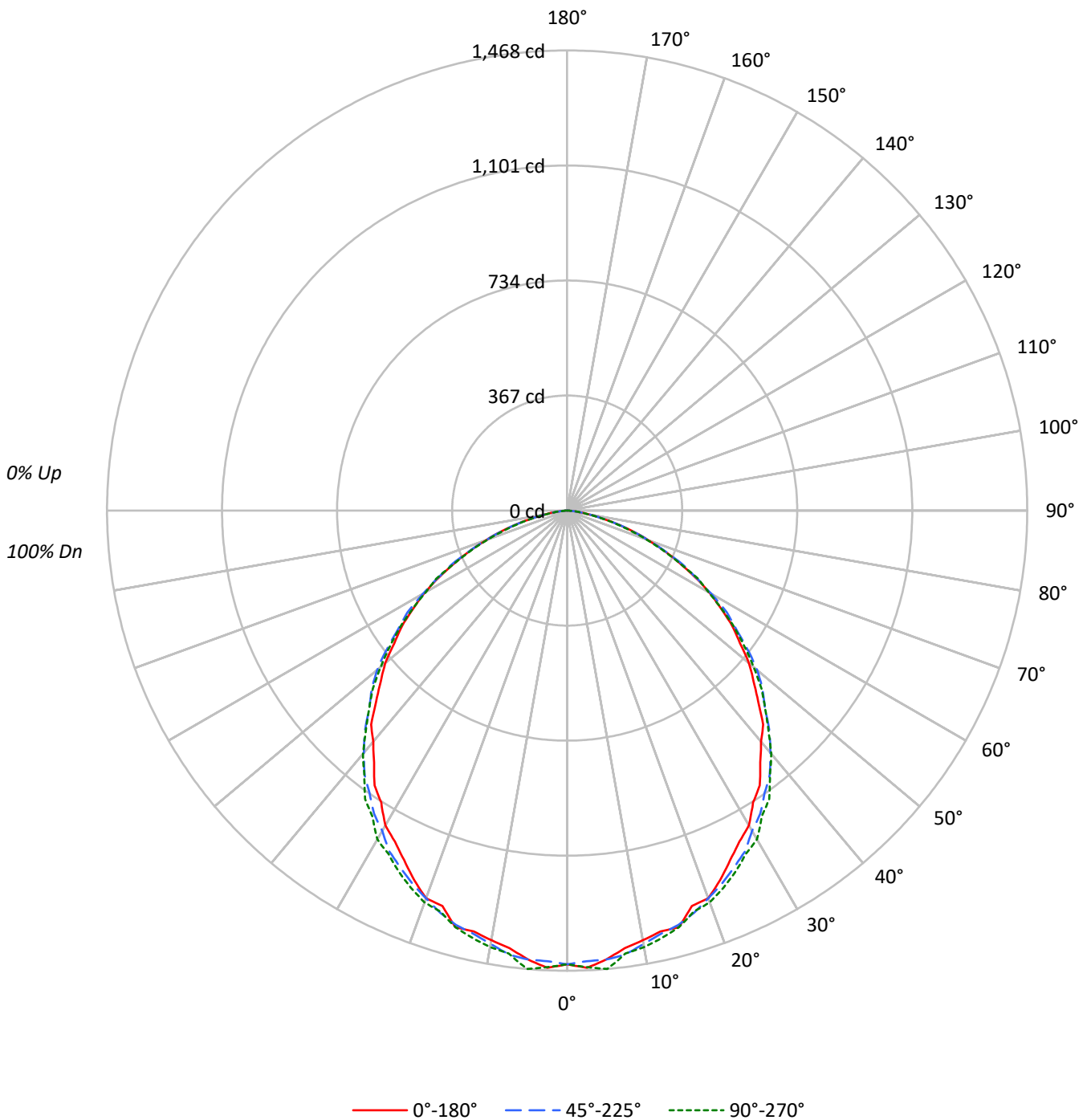
Lumens per Lamp: N/A
Luminaire Lumens: 3648.0 lumens
Efficiency: N/A
Efficacy: 109.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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					
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	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3895	3895	3895
5°	3882	3884	3965
10°	3803	3837	3864
15°	3833	3813	3834
20°	3769	3769	3809
25°	3653	3733	3774
30°	3603	3666	3764
35°	3518	3610	3691
40°	3381	3544	3560
45°	3279	3395	3400
50°	3171	3314	3251
55°	3021	3080	3058
60°	2826	2854	2802
65°	2519	2583	2501
70°	2161	2169	2109
75°	1711	1708	1642
80°	1147	1116	1071
85°	624	618	577



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.2	3.7
10°-20°	385.9	10.6
20°-30°	578.1	15.8
30°-40°	685.2	18.8
40°-50°	686.5	18.8
50°-60°	582.7	16.0
60°-70°	392.9	10.8
70°-80°	172.6	4.7
80°-90°	28.1	0.8
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°	1100.1	30.2
0°-40°	1785.3	48.9
0°-60°	3054.5	83.7
0°-90°	3648.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3648.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1447	1447	1447	1447	1447	
5°	1437	1434	1438	1433	1468	135
15°	1376	1360	1369	1376	1376	383
25°	1230	1237	1257	1274	1271	569
35°	1071	1074	1099	1124	1124	665
45°	862	878	892	915	894	666
55°	644	640	656	652	652	573
65°	396	390	406	390	393	393
75°	165	161	164	153	158	176
85°	20	20	20	19	19	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1447.4	1447.4	1447.4	1447.4	1447.4
2.5°	1460.0	1448.9	1438.7	1450.6	1457.9
5°	1437.2	1433.8	1437.7	1433.4	1468.0
7.5°	1407.6	1420.5	1428.0	1423.3	1425.4
10°	1391.9	1387.4	1404.1	1415.7	1414.0
12.5°	1375.1	1381.8	1382.8	1395.3	1396.4
15°	1376.0	1360.2	1368.6	1375.7	1376.2
17.5°	1322.6	1339.8	1345.6	1361.8	1341.7
20°	1316.1	1303.5	1316.1	1332.7	1330.1
22.5°	1275.9	1261.9	1288.8	1303.5	1302.6
25°	1230.3	1237.0	1257.2	1273.6	1271.0
27.5°	1190.3	1198.1	1226.9	1249.5	1234.9
30°	1159.4	1155.5	1179.8	1200.0	1211.2
32.5°	1104.3	1118.5	1146.9	1166.9	1156.3
35°	1070.9	1074.0	1098.9	1124.3	1123.6
37.5°	1012.4	1027.1	1062.1	1069.2	1062.6
40°	962.5	977.2	1008.8	1016.5	1013.3
42.5°	925.6	928.3	955.4	964.1	950.1
45°	861.5	877.6	892.2	915.2	893.5
47.5°	807.0	814.5	845.8	852.0	840.6
50°	757.5	760.1	791.7	784.0	776.5
52.5°	695.2	706.2	724.0	722.5	713.7
55°	644.0	639.7	656.5	652.0	651.9
57.5°	582.5	590.0	603.8	596.7	585.3
60°	525.0	525.2	530.2	522.2	520.7
62.5°	460.9	463.1	464.2	454.3	470.4
65°	395.6	390.4	405.7	390.2	392.8
67.5°	335.6	338.3	336.8	327.1	330.8
70°	274.7	278.1	275.7	264.6	268.0
72.5°	219.0	214.9	217.5	203.7	210.1
75°	164.6	161.3	164.3	152.7	157.9
77.5°	112.1	114.7	112.9	106.7	110.3
80°	74.0	72.0	72.0	68.4	69.1
82.5°	43.2	41.1	40.6	39.4	41.1
85°	20.2	19.6	20.0	19.4	18.7
87.5°	7.3	7.5	7.5	7.1	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)