

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: P589795

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589795
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-LD4-4STD-40-UNV-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

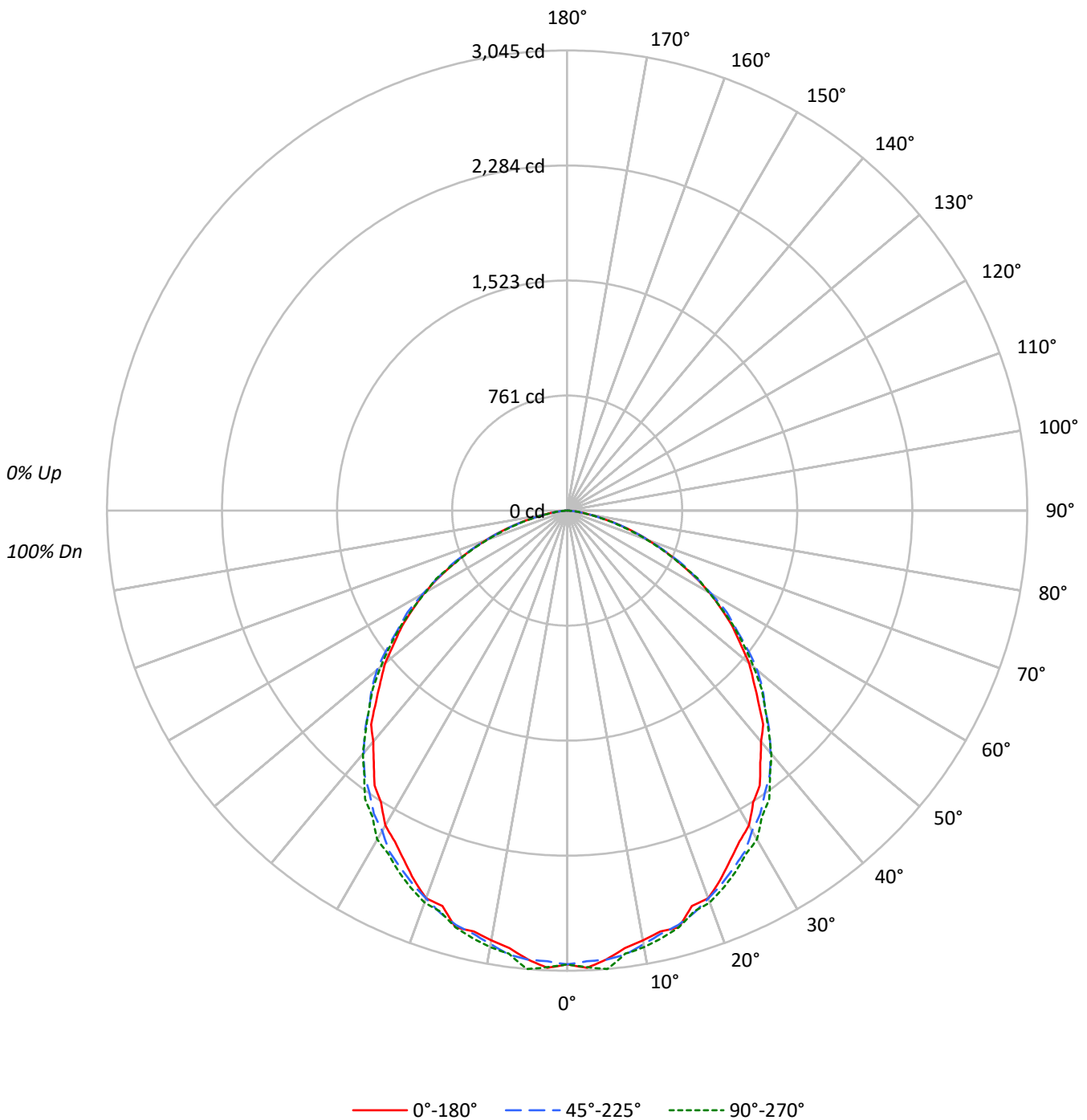
Lumens per Lamp: N/A
Luminaire Lumens: 7568.0 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8080	8080	8080
5°	8054	8057	8226
10°	7890	7959	8015
15°	7953	7910	7954
20°	7818	7818	7902
25°	7578	7744	7829
30°	7474	7605	7808
35°	7298	7489	7657
40°	7014	7352	7384
45°	6802	7044	7054
50°	6579	6875	6744
55°	6268	6390	6344
60°	5861	5920	5814
65°	5226	5359	5189
70°	4484	4500	4375
75°	3552	3543	3406
80°	2379	2314	2224
85°	1294	1281	1198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.5	3.7
10°-20°	800.5	10.6
20°-30°	1199.3	15.8
30°-40°	1421.5	18.8
40°-50°	1424.1	18.8
50°-60°	1208.8	16.0
60°-70°	815.0	10.8
70°-80°	358.1	4.7
80°-90°	58.2	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°	2282.3	30.2
0°-40°	3703.8	48.9
0°-60°	6336.7	83.7
0°-90°	7568.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7568.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3003	3003	3003	3003	3003	
5°	2982	2974	2983	2974	3045	281
15°	2855	2822	2839	2854	2855	795
25°	2552	2566	2608	2642	2637	1180
35°	2222	2228	2280	2332	2331	1379
45°	1787	1821	1851	1899	1854	1383
55°	1336	1327	1362	1353	1352	1188
65°	821	810	842	810	815	816
75°	342	335	341	317	328	366
85°	42	41	42	40	39	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3002.8	3002.8	3002.8	3002.8	3002.8
2.5°	3028.8	3005.9	2984.6	3009.4	3024.5
5°	2981.5	2974.5	2982.6	2973.7	3045.4
7.5°	2920.2	2947.0	2962.5	2952.8	2957.0
10°	2887.6	2878.3	2912.8	2936.9	2933.4
12.5°	2852.7	2866.7	2868.6	2894.6	2896.9
15°	2854.7	2821.7	2839.2	2853.9	2855.1
17.5°	2743.8	2779.5	2791.5	2825.2	2783.3
20°	2730.2	2704.3	2730.2	2764.7	2759.3
22.5°	2646.9	2617.8	2673.6	2704.3	2702.3
25°	2552.3	2566.2	2608.1	2642.2	2636.8
27.5°	2469.3	2485.6	2545.3	2592.2	2562.0
30°	2405.3	2397.2	2447.6	2489.5	2512.7
32.5°	2291.0	2320.4	2379.4	2420.8	2398.7
35°	2221.6	2228.2	2279.7	2332.4	2330.9
37.5°	2100.2	2130.8	2203.3	2218.1	2204.5
40°	1996.7	2027.3	2092.8	2108.7	2102.1
42.5°	1920.3	1925.7	1982.0	2000.2	1971.1
45°	1787.3	1820.7	1850.9	1898.6	1853.6
47.5°	1674.1	1689.6	1754.8	1767.6	1743.9
50°	1571.4	1576.8	1642.3	1626.4	1610.9
52.5°	1442.3	1465.1	1502.0	1498.9	1480.7
55°	1336.0	1327.1	1362.0	1352.7	1352.3
57.5°	1208.5	1224.0	1252.7	1237.9	1214.3
60°	1089.1	1089.5	1099.9	1083.3	1080.2
62.5°	956.1	960.7	963.1	942.5	975.9
65°	820.8	809.9	841.7	809.5	815.0
67.5°	696.3	701.7	698.6	678.5	686.2
70°	569.9	576.9	571.9	549.0	556.0
72.5°	454.4	445.9	451.3	422.6	435.8
75°	341.6	334.6	340.8	316.8	327.6
77.5°	232.6	238.1	234.2	221.4	228.7
80°	153.5	149.3	149.3	141.9	143.5
82.5°	89.6	85.3	84.1	81.8	85.3
85°	41.9	40.7	41.5	40.3	38.8
87.5°	15.1	15.5	15.5	14.7	14.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)