

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P562788

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562788
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2LO-40-UNV-93-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4803.0 lumens
Efficiency: N/A
Efficacy: 102.6 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

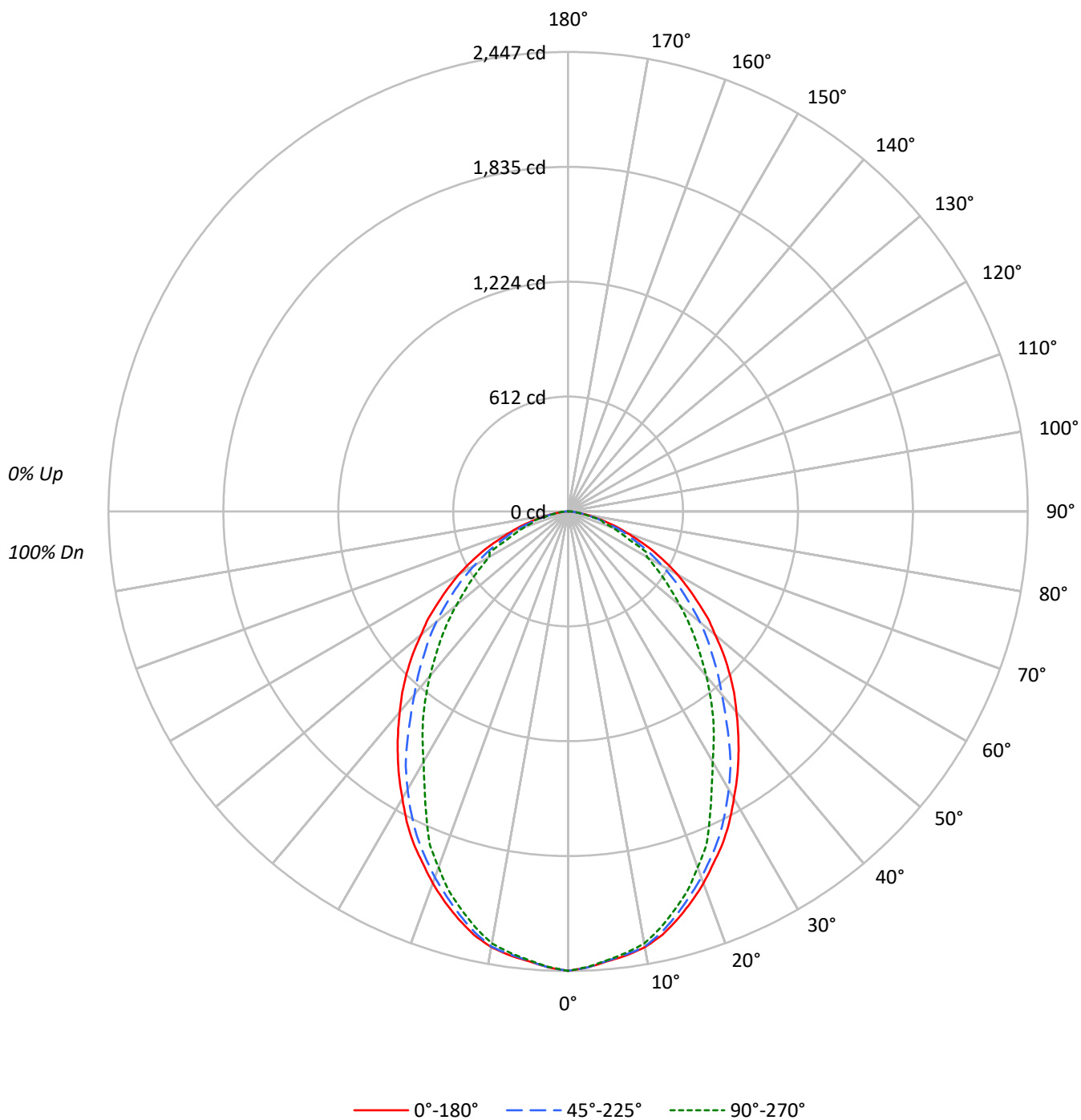
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	3292	3292	3292
5°	3247	3243	3239
10°	3219	3215	3192
15°	3132	3101	3057
20°	3017	2968	2888
25°	2893	2830	2654
30°	2742	2654	2391
35°	2597	2453	2211
40°	2449	2236	2012
45°	2309	2067	1819
50°	2137	1918	1622
55°	1977	1738	1453
60°	1812	1553	1302
65°	1594	1360	1152
70°	1313	1190	979
75°	1044	912	955
80°	701	658	614
85°	437	523	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2309 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.7	4.7
10°-20°	625.0	13.0
20°-30°	865.3	18.0
30°-40°	922.7	19.2
40°-50°	841.7	17.5
50°-60°	659.4	13.7
60°-70°	429.8	8.9
70°-80°	190.4	4.0
80°-90°	40.9	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°	1718.1	35.8
0°-40°	2640.7	55.0
0°-60°	4141.9	86.2
0°-90°	4803.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4803.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2447	2447	2447	2447	2447	
5°	2404	2401	2401	2398	2398	228
15°	2249	2249	2226	2203	2195	632
25°	1949	1938	1906	1838	1788	895
35°	1581	1570	1493	1380	1346	988
45°	1213	1188	1086	996	956	935
55°	843	817	741	653	619	756
65°	501	472	427	436	362	493
75°	201	187	175	167	184	215
85°	28	31	34	37	40	39
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2446.6	2446.6	2446.6	2446.6	2446.6
2.5°	2429.6	2429.6	2429.6	2426.8	2426.8
5°	2404.2	2401.3	2401.3	2398.5	2398.5
7.5°	2384.4	2381.5	2378.7	2375.9	2370.2
10°	2356.1	2356.1	2353.2	2339.1	2336.3
12.5°	2310.8	2308.0	2296.7	2276.9	2271.2
15°	2248.6	2248.6	2226.0	2203.3	2194.9
17.5°	2180.7	2177.9	2149.6	2127.0	2115.7
20°	2107.2	2101.5	2073.2	2036.5	2016.7
22.5°	2025.1	2025.1	1991.2	1943.1	1923.3
25°	1948.8	1937.5	1906.4	1838.5	1787.6
27.5°	1861.1	1844.1	1810.2	1714.0	1654.6
30°	1764.9	1756.4	1708.4	1583.9	1538.7
32.5°	1674.4	1660.3	1609.4	1479.3	1442.5
35°	1581.1	1569.8	1493.4	1380.3	1346.3
37.5°	1487.7	1473.6	1377.4	1286.9	1244.5
40°	1394.4	1377.4	1272.8	1190.8	1145.5
42.5°	1306.7	1284.1	1182.3	1094.6	1043.7
45°	1213.4	1187.9	1086.1	995.6	956.0
47.5°	1120.1	1097.4	1004.1	910.8	865.5
50°	1021.1	1001.3	916.4	823.1	775.0
52.5°	939.0	907.9	825.9	732.6	693.0
55°	842.9	817.4	741.0	653.4	619.4
57.5°	755.2	729.7	659.0	577.0	548.7
60°	673.2	636.4	577.0	506.3	483.7
62.5°	582.7	554.4	503.5	444.1	472.3
65°	500.6	472.3	427.1	435.6	362.0
67.5°	410.1	396.0	356.4	316.8	305.5
70°	333.8	316.8	302.6	260.2	248.9
72.5°	265.9	248.9	229.1	206.5	198.0
75°	200.8	186.7	175.4	166.9	183.8
77.5°	138.6	132.9	124.5	116.0	113.1
80°	90.5	87.7	84.9	82.0	79.2
82.5°	53.7	53.7	53.7	53.7	53.7
85°	28.3	31.1	33.9	36.8	39.6
87.5°	17.0	17.0	19.8	22.6	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)