

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: P562738

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562738
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-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4848.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

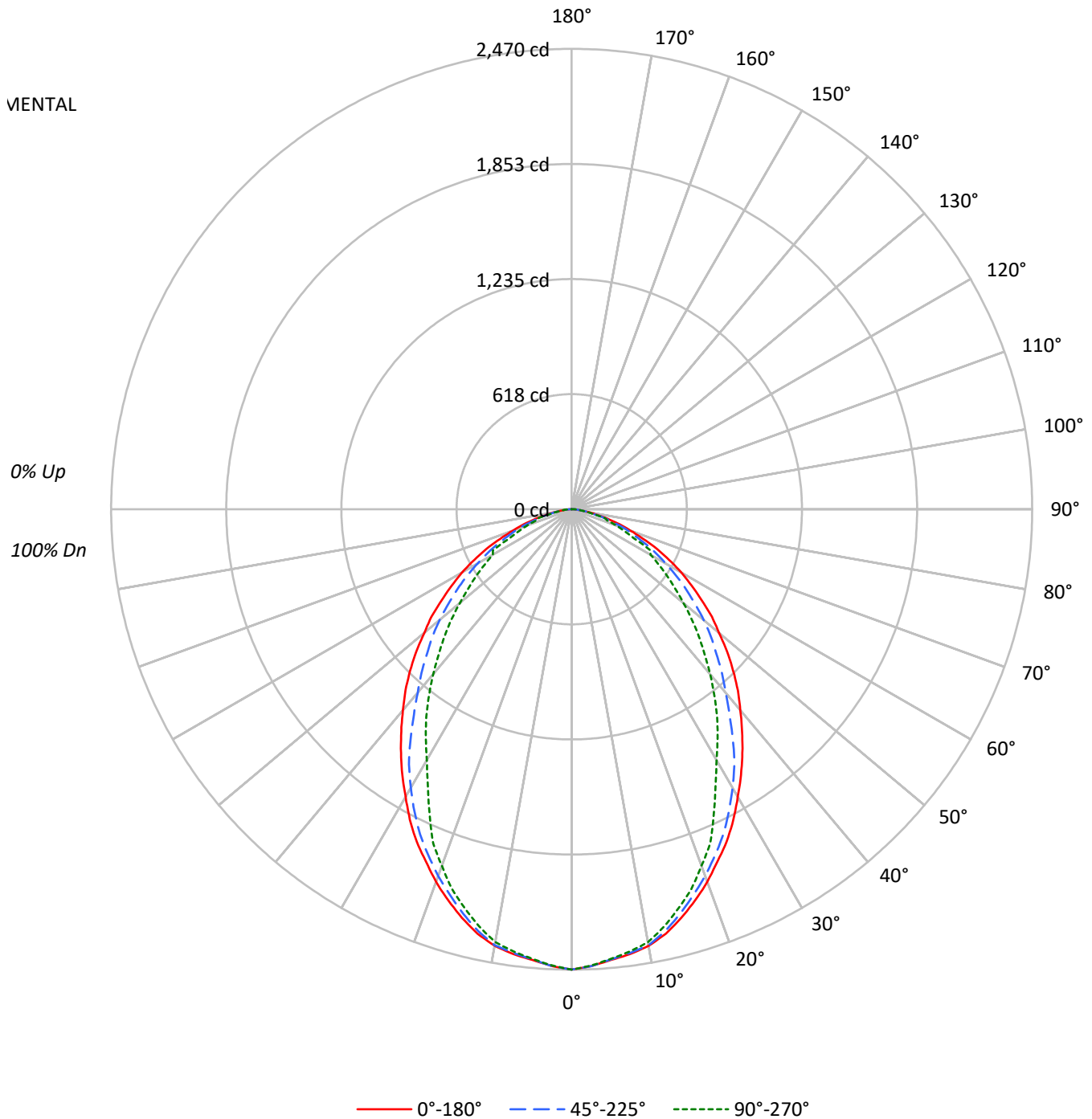
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	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	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°	3323	3323	3323
5°	3278	3274	3270
10°	3249	3245	3222
15°	3162	3130	3086
20°	3045	2996	2915
25°	2920	2857	2679
30°	2768	2679	2413
35°	2621	2476	2232
40°	2472	2256	2031
45°	2331	2086	1836
50°	2157	1936	1637
55°	1996	1755	1467
60°	1829	1567	1314
65°	1609	1372	1163
70°	1325	1202	988
75°	1054	920	965
80°	708	663	619
85°	440	530	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2331 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.9	4.7
10°-20°	630.9	13.0
20°-30°	873.4	18.0
30°-40°	931.3	19.2
40°-50°	849.6	17.5
50°-60°	665.6	13.7
60°-70°	433.8	8.9
70°-80°	192.2	4.0
80°-90°	41.2	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°	1734.2	35.8
0°-40°	2665.5	55.0
0°-60°	4180.7	86.2
0°-90°	4848.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4848.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2470	2470	2470	2470	2470	
5°	2427	2424	2424	2421	2421	230
15°	2270	2270	2247	2224	2215	638
25°	1967	1956	1924	1856	1804	903
35°	1596	1584	1507	1393	1359	998
45°	1225	1199	1096	1005	965	943
55°	851	825	748	660	625	763
65°	505	477	431	440	365	498
75°	203	188	177	168	186	217
85°	28	31	34	37	40	40
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2469.5	2469.5	2469.5	2469.5	2469.5
2.5°	2452.4	2452.4	2452.4	2449.5	2449.5
5°	2426.7	2423.8	2423.8	2421.0	2421.0
7.5°	2406.7	2403.8	2401.0	2398.1	2392.4
10°	2378.1	2378.1	2375.3	2361.0	2358.2
12.5°	2332.5	2329.6	2318.2	2298.2	2292.5
15°	2269.7	2269.7	2246.8	2224.0	2215.4
17.5°	2201.1	2198.3	2169.7	2146.9	2135.5
20°	2126.9	2121.2	2092.7	2055.5	2035.6
22.5°	2044.1	2044.1	2009.9	1961.3	1941.3
25°	1967.0	1955.6	1924.2	1855.7	1804.3
27.5°	1878.5	1861.4	1827.1	1730.1	1670.1
30°	1781.5	1772.9	1724.4	1598.8	1553.1
32.5°	1690.1	1675.8	1624.4	1493.1	1456.0
35°	1595.9	1584.5	1507.4	1393.2	1358.9
37.5°	1501.7	1487.4	1390.3	1299.0	1256.2
40°	1407.5	1390.3	1284.7	1201.9	1156.2
42.5°	1319.0	1296.1	1193.4	1104.9	1053.5
45°	1224.8	1199.1	1096.3	1004.9	965.0
47.5°	1130.5	1107.7	1013.5	919.3	873.6
50°	1030.6	1010.6	925.0	830.8	782.2
52.5°	947.8	916.4	833.6	739.4	699.5
55°	850.8	825.1	748.0	659.5	625.2
57.5°	762.3	736.6	665.2	582.4	553.9
60°	679.5	642.4	582.4	511.0	488.2
62.5°	588.1	559.6	508.2	448.2	476.8
65°	505.3	476.8	431.1	439.7	365.4
67.5°	414.0	399.7	359.7	319.8	308.3
70°	336.9	319.8	305.5	262.7	251.2
72.5°	268.4	251.2	231.2	208.4	199.8
75°	202.7	188.4	177.0	168.4	185.6
77.5°	139.9	134.2	125.6	117.1	114.2
80°	91.4	88.5	85.6	82.8	79.9
82.5°	54.2	54.2	54.2	54.2	54.2
85°	28.5	31.4	34.3	37.1	40.0
87.5°	17.1	17.1	20.0	22.8	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)