

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: P562693

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562693
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-35-UNV-81-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5365.0 lumens
Efficiency: N/A
Efficacy: 114.6 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

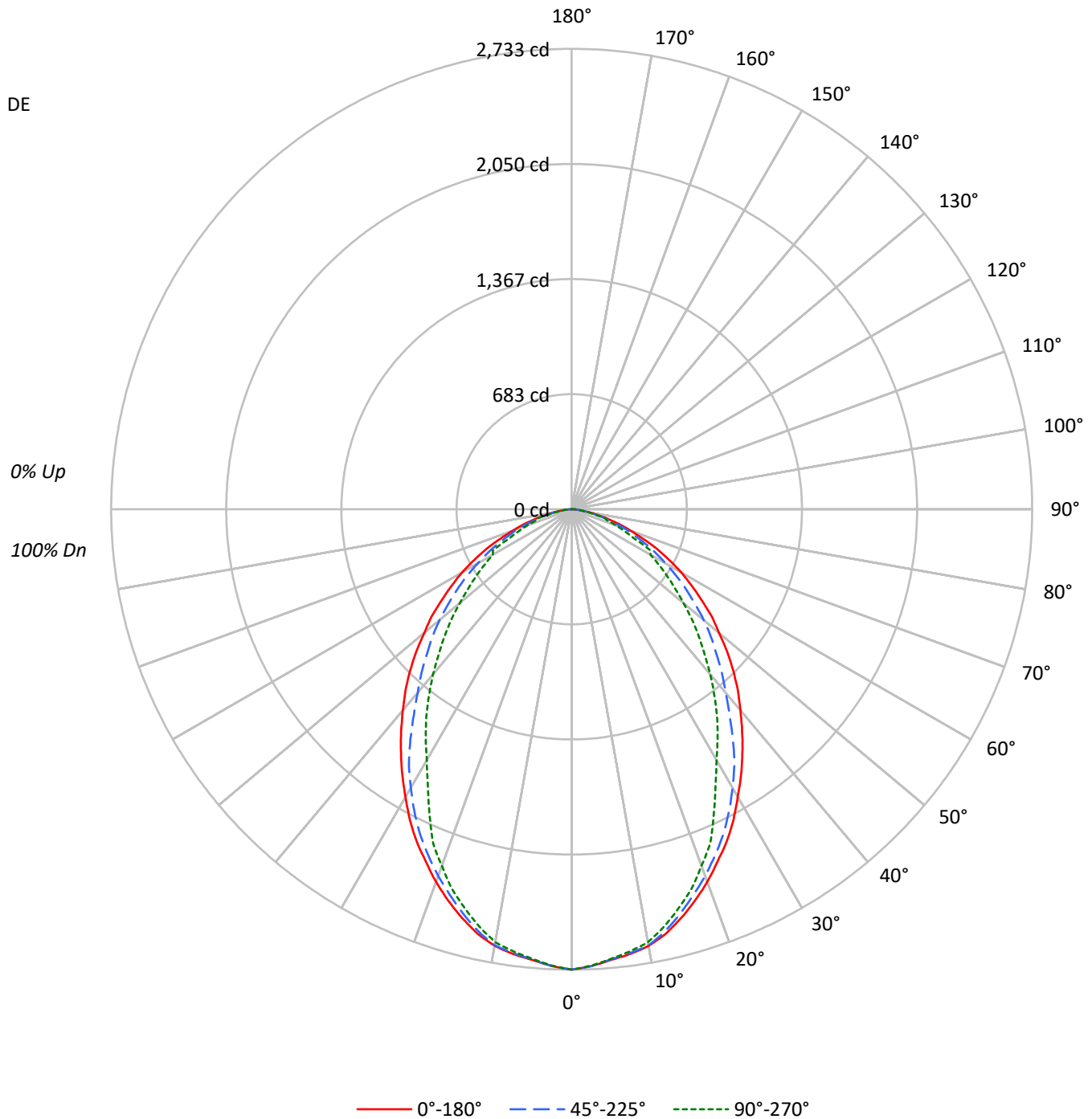
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562693

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-81-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562693

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-81-86-EDD

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																												
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°	3677	3677	3677
5°	3627	3623	3618
10°	3596	3591	3565
15°	3499	3463	3415
20°	3370	3316	3225
25°	3232	3161	2964
30°	3063	2965	2670
35°	2901	2740	2470
40°	2736	2497	2247
45°	2579	2308	2032
50°	2387	2143	1812
55°	2209	1942	1623
60°	2023	1734	1454
65°	1780	1519	1287
70°	1467	1330	1094
75°	1166	1018	1068
80°	783	735	686
85°	488	585	682

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2579 cd/sqm



TEST NUMBER: P562693

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-81-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.4	4.7
10°-20°	698.2	13.0
20°-30°	966.6	18.0
30°-40°	1030.6	19.2
40°-50°	940.2	17.5
50°-60°	736.6	13.7
60°-70°	480.1	8.9
70°-80°	212.7	4.0
80°-90°	45.7	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°	1919.1	35.8
0°-40°	2949.7	55.0
0°-60°	4626.6	86.2
0°-90°	5365.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5365.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2733	2733	2733	2733	2733	
5°	2686	2682	2682	2679	2679	255
15°	2512	2512	2486	2461	2452	706
25°	2177	2164	2129	2054	1997	999
35°	1766	1754	1668	1542	1504	1104
45°	1355	1327	1213	1112	1068	1044
55°	942	913	828	730	692	844
65°	559	528	477	486	404	551
75°	224	208	196	186	205	240
85°	32	35	38	41	44	44
90°	0	0	0	0	0	



TEST NUMBER: P562693

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-81-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2732.9	2732.9	2732.9	2732.9	2732.9
2.5°	2713.9	2713.9	2713.9	2710.7	2710.7
5°	2685.5	2682.3	2682.3	2679.1	2679.1
7.5°	2663.4	2660.2	2657.0	2653.9	2647.6
10°	2631.8	2631.8	2628.6	2612.8	2609.6
12.5°	2581.2	2578.0	2565.4	2543.3	2537.0
15°	2511.7	2511.7	2486.4	2461.2	2451.7
17.5°	2435.9	2432.7	2401.1	2375.8	2363.2
20°	2353.7	2347.4	2315.8	2274.7	2252.6
22.5°	2262.1	2262.1	2224.2	2170.5	2148.4
25°	2176.8	2164.2	2129.4	2053.6	1996.7
27.5°	2078.9	2059.9	2022.0	1914.6	1848.2
30°	1971.4	1962.0	1908.3	1769.2	1718.7
32.5°	1870.3	1854.6	1797.7	1652.4	1611.3
35°	1766.1	1753.5	1668.1	1541.8	1503.9
37.5°	1661.8	1646.0	1538.6	1437.5	1390.1
40°	1557.6	1538.6	1421.7	1330.1	1279.5
42.5°	1459.6	1434.4	1320.6	1222.7	1165.8
45°	1355.4	1326.9	1213.2	1112.1	1067.9
47.5°	1251.1	1225.8	1121.6	1017.3	966.8
50°	1140.5	1118.4	1023.6	919.4	865.7
52.5°	1048.9	1014.2	922.5	818.3	774.0
55°	941.5	913.1	827.8	729.8	691.9
57.5°	843.6	815.1	736.1	644.5	612.9
60°	751.9	710.9	644.5	565.5	540.3
62.5°	650.8	619.2	562.4	496.0	527.6
65°	559.2	527.6	477.1	486.5	404.4
67.5°	458.1	442.3	398.1	353.8	341.2
70°	372.8	353.8	338.1	290.7	278.0
72.5°	297.0	278.0	255.9	230.6	221.2
75°	224.3	208.5	195.9	186.4	205.4
77.5°	154.8	148.5	139.0	129.5	126.4
80°	101.1	97.9	94.8	91.6	88.5
82.5°	60.0	60.0	60.0	60.0	60.0
85°	31.6	34.8	37.9	41.1	44.2
87.5°	19.0	19.0	22.1	25.3	28.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)