

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: P563272

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563272
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-LD4-3LO-35-UNV-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5868.0 lumens
Efficiency: N/A
Efficacy: 83.6 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

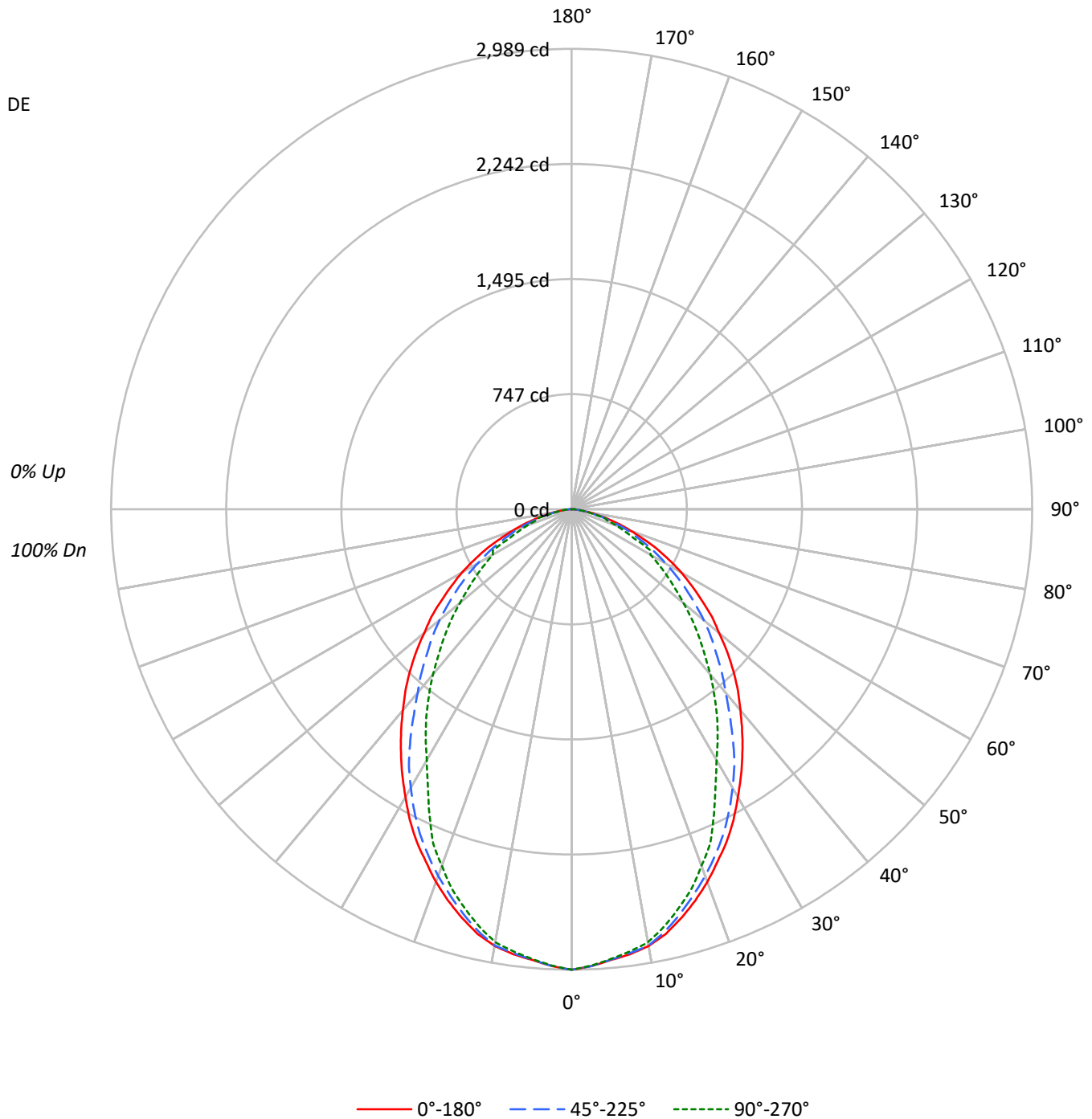
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	4022	4022	4022
5°	3967	3962	3958
10°	3933	3928	3900
15°	3827	3788	3735
20°	3686	3627	3528
25°	3535	3458	3242
30°	3350	3243	2921
35°	3173	2997	2702
40°	2992	2731	2458
45°	2821	2525	2222
50°	2611	2344	1982
55°	2416	2124	1775
60°	2213	1897	1590
65°	1947	1661	1408
70°	1604	1454	1196
75°	1275	1114	1168
80°	857	804	750
85°	534	641	747

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2821 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.2	4.7
10°-20°	763.6	13.0
20°-30°	1057.2	18.0
30°-40°	1127.3	19.2
40°-50°	1028.4	17.5
50°-60°	805.7	13.7
60°-70°	525.1	8.9
70°-80°	232.6	4.0
80°-90°	50.0	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°	2099.0	35.8
0°-40°	3226.3	55.0
0°-60°	5060.3	86.2
0°-90°	5868.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5868.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2989	2989	2989	2989	2989	
5°	2937	2934	2934	2930	2930	279
15°	2747	2747	2720	2692	2682	772
25°	2381	2367	2329	2246	2184	1093
35°	1932	1918	1824	1686	1645	1208
45°	1482	1451	1327	1216	1168	1142
55°	1030	999	905	798	757	924
65°	612	577	522	532	442	603
75°	245	228	214	204	225	263
85°	35	38	42	45	48	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2989.1	2989.1	2989.1	2989.1	2989.1
2.5°	2968.3	2968.3	2968.3	2964.9	2964.9
5°	2937.2	2933.8	2933.8	2930.3	2930.3
7.5°	2913.1	2909.6	2906.1	2902.7	2895.8
10°	2878.5	2878.5	2875.0	2857.8	2854.3
12.5°	2823.2	2819.8	2805.9	2781.7	2774.8
15°	2747.2	2747.2	2719.5	2691.9	2681.5
17.5°	2664.3	2660.8	2626.2	2598.6	2584.8
20°	2574.4	2567.5	2532.9	2488.0	2463.8
22.5°	2474.2	2474.2	2432.7	2374.0	2349.8
25°	2380.9	2367.1	2329.1	2246.1	2183.9
27.5°	2273.8	2253.0	2211.6	2094.1	2021.5
30°	2156.3	2145.9	2087.2	1935.1	1879.8
32.5°	2045.7	2028.4	1966.2	1807.3	1762.3
35°	1931.7	1917.8	1824.5	1686.3	1644.9
37.5°	1817.6	1800.4	1682.9	1572.3	1520.5
40°	1703.6	1682.9	1555.0	1454.8	1399.5
42.5°	1596.5	1568.8	1444.4	1337.3	1275.1
45°	1482.4	1451.3	1326.9	1216.4	1168.0
47.5°	1368.4	1340.8	1226.7	1112.7	1057.4
50°	1247.5	1223.3	1119.6	1005.6	946.8
52.5°	1147.3	1109.2	1009.0	895.0	846.6
55°	1029.8	998.7	905.4	798.2	756.8
57.5°	922.6	891.5	805.2	704.9	670.4
60°	822.4	777.5	704.9	618.5	590.9
62.5°	711.9	677.3	615.1	542.5	577.1
65°	611.6	577.1	521.8	532.2	442.3
67.5°	501.1	483.8	435.4	387.0	373.2
70°	407.8	387.0	369.7	317.9	304.1
72.5°	324.8	304.1	279.9	252.3	241.9
75°	245.3	228.1	214.2	203.9	224.6
77.5°	169.3	162.4	152.0	141.7	138.2
80°	110.6	107.1	103.7	100.2	96.8
82.5°	65.7	65.7	65.7	65.7	65.7
85°	34.6	38.0	41.5	44.9	48.4
87.5°	20.7	20.7	24.2	27.6	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)