

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: P561729

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561729
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-12-4-LD4-2STD-35-UNV-81-84-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6311.0 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

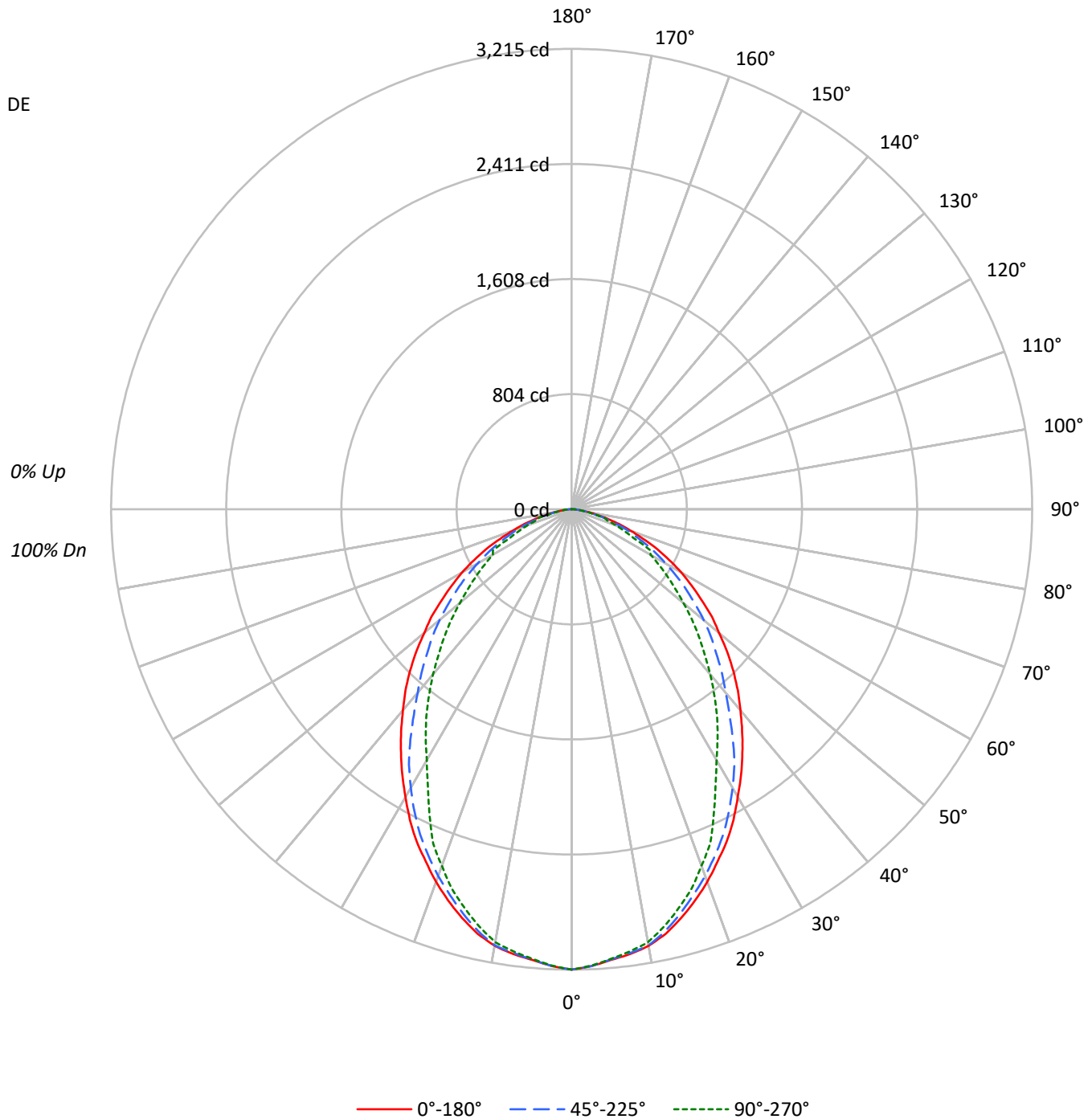
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8651	8651	8651
5°	8533	8523	8513
10°	8459	8449	8388
15°	8231	8148	8035
20°	7929	7801	7588
25°	7603	7437	6974
30°	7206	6975	6282
35°	6825	6446	5811
40°	6436	5875	5288
45°	6068	5431	4781
50°	5617	5041	4263
55°	5196	4568	3818
60°	4760	4081	3420
65°	4188	3573	3029
70°	3450	3129	2573
75°	2744	2396	2512
80°	1843	1728	1613
85°	1149	1377	1606

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6068 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.2	4.7
10°-20°	821.3	13.0
20°-30°	1137.0	18.0
30°-40°	1212.4	19.2
40°-50°	1106.0	17.5
50°-60°	866.5	13.7
60°-70°	564.7	8.9
70°-80°	250.2	4.0
80°-90°	53.7	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°	2257.5	35.8
0°-40°	3469.8	55.0
0°-60°	5442.3	86.2
0°-90°	6311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6311.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3215	3215	3215	3215	3215	
5°	3159	3155	3155	3152	3152	300
15°	2955	2955	2925	2895	2884	831
25°	2561	2546	2505	2416	2349	1176
35°	2078	2063	1962	1814	1769	1299
45°	1594	1561	1427	1308	1256	1228
55°	1108	1074	974	858	814	993
65°	658	621	561	572	476	648
75°	264	245	230	219	242	283
85°	37	41	45	48	52	52
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3214.7	3214.7	3214.7	3214.7	3214.7
2.5°	3192.4	3192.4	3192.4	3188.7	3188.7
5°	3159.0	3155.3	3155.3	3151.6	3151.6
7.5°	3133.0	3129.3	3125.5	3121.8	3114.4
10°	3095.8	3095.8	3092.1	3073.5	3069.8
12.5°	3036.3	3032.6	3017.8	2991.8	2984.3
15°	2954.6	2954.6	2924.9	2895.1	2884.0
17.5°	2865.4	2861.7	2824.5	2794.8	2779.9
20°	2768.8	2761.3	2724.2	2675.9	2649.8
22.5°	2661.0	2661.0	2616.4	2553.2	2527.2
25°	2560.6	2545.8	2504.9	2415.7	2348.8
27.5°	2445.4	2423.1	2378.5	2252.2	2174.1
30°	2319.1	2307.9	2244.7	2081.2	2021.8
32.5°	2200.1	2181.6	2114.7	1943.7	1895.4
35°	2077.5	2062.6	1962.3	1813.6	1769.0
37.5°	1954.9	1936.3	1809.9	1691.0	1635.2
40°	1832.2	1809.9	1672.4	1564.6	1505.2
42.5°	1717.0	1687.3	1553.5	1438.3	1371.4
45°	1594.4	1560.9	1427.1	1308.2	1256.2
47.5°	1471.7	1442.0	1319.3	1196.7	1137.2
50°	1341.6	1315.6	1204.1	1081.5	1018.3
52.5°	1233.9	1193.0	1085.2	962.6	910.5
55°	1107.5	1074.1	973.7	858.5	813.9
57.5°	992.3	958.8	865.9	758.2	721.0
60°	884.5	836.2	758.2	665.2	635.5
62.5°	765.6	728.4	661.5	583.5	620.6
65°	657.8	620.6	561.2	572.3	475.7
67.5°	538.9	520.3	468.3	416.2	401.4
70°	438.5	416.2	397.7	341.9	327.0
72.5°	349.3	327.0	301.0	271.3	260.2
75°	263.9	245.3	230.4	219.3	241.6
77.5°	182.1	174.7	163.5	152.4	148.7
80°	118.9	115.2	111.5	107.8	104.1
82.5°	70.6	70.6	70.6	70.6	70.6
85°	37.2	40.9	44.6	48.3	52.0
87.5°	22.3	22.3	26.0	29.7	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)