

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: P561865

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561865
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-50-UNV-81-88-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5473.0 lumens
Efficiency: N/A
Efficacy: 82.2 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

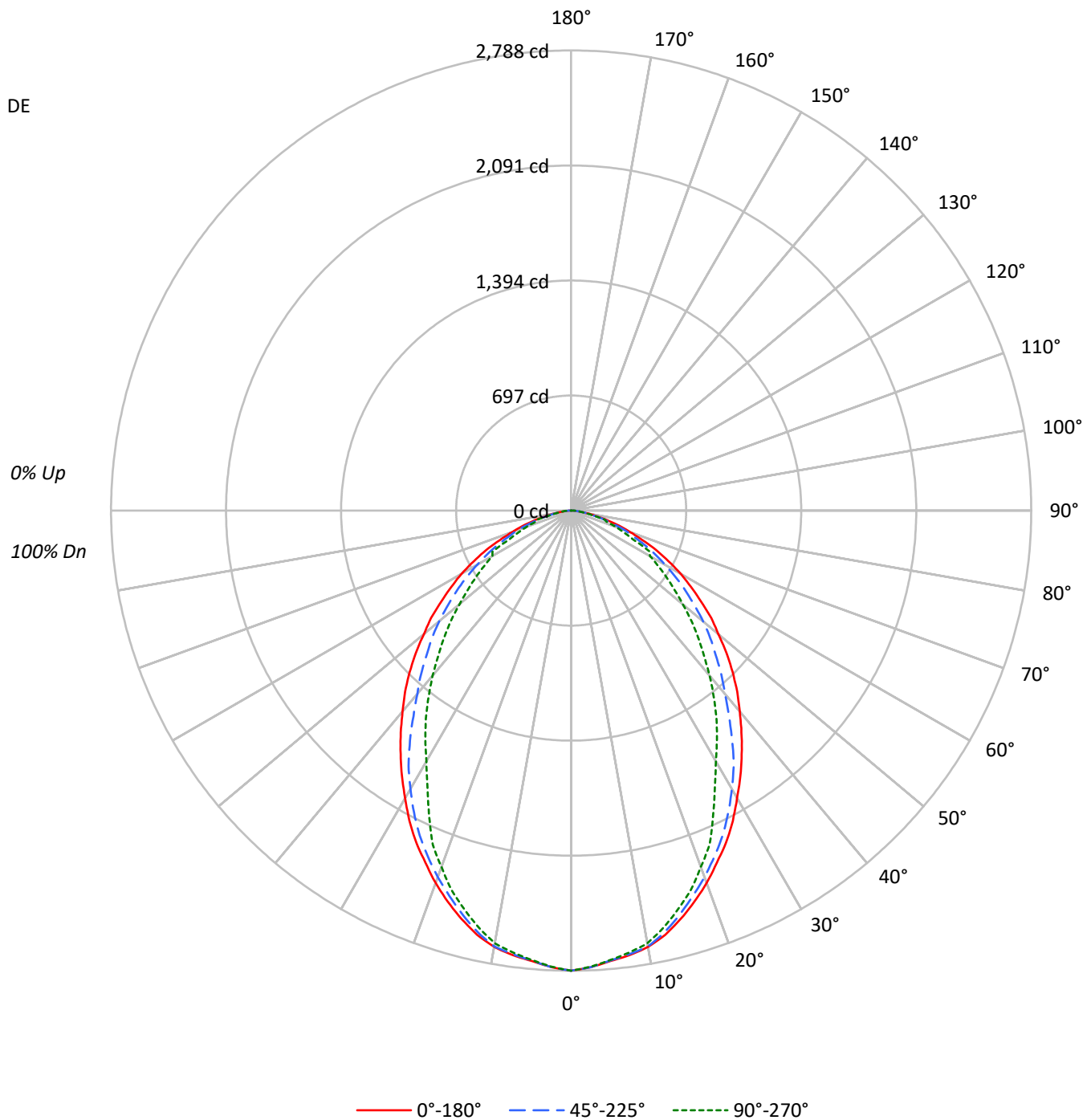
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	7502	7502	7502
5°	7400	7391	7383
10°	7336	7327	7274
15°	7138	7066	6968
20°	6876	6765	6581
25°	6593	6450	6048
30°	6249	6049	5448
35°	5918	5590	5040
40°	5582	5095	4585
45°	5262	4710	4146
50°	4871	4371	3697
55°	4506	3962	3311
60°	4128	3539	2966
65°	3633	3099	2627
70°	2992	2714	2231
75°	2379	2077	2178
80°	1598	1499	1398
85°	994	1195	1392

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5262 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.5	4.7
10°-20°	712.2	13.0
20°-30°	986.0	18.0
30°-40°	1051.4	19.2
40°-50°	959.2	17.5
50°-60°	751.4	13.7
60°-70°	489.7	8.9
70°-80°	217.0	4.0
80°-90°	46.6	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°	1957.7	35.8
0°-40°	3009.1	55.0
0°-60°	4719.7	86.2
0°-90°	5473.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5473.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2788	2788	2788	2788	2788	
5°	2740	2736	2736	2733	2733	260
15°	2562	2562	2536	2511	2501	720
25°	2221	2208	2172	2095	2037	1019
35°	1802	1789	1702	1573	1534	1126
45°	1383	1354	1238	1134	1089	1065
55°	960	931	844	744	706	861
65°	570	538	487	496	412	562
75°	229	213	200	190	210	245
85°	32	36	39	42	45	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2787.9	2787.9	2787.9	2787.9	2787.9
2.5°	2768.5	2768.5	2768.5	2765.3	2765.3
5°	2739.5	2736.3	2736.3	2733.1	2733.1
7.5°	2717.0	2713.7	2710.5	2707.3	2700.9
10°	2684.7	2684.7	2681.5	2665.4	2662.2
12.5°	2633.2	2629.9	2617.1	2594.5	2588.0
15°	2562.3	2562.3	2536.5	2510.7	2501.0
17.5°	2484.9	2481.7	2449.5	2423.7	2410.8
20°	2401.1	2394.7	2362.4	2320.5	2298.0
22.5°	2307.6	2307.6	2269.0	2214.2	2191.6
25°	2220.6	2207.7	2172.3	2094.9	2036.9
27.5°	2120.7	2101.4	2062.7	1953.1	1885.4
30°	2011.1	2001.5	1946.7	1804.9	1753.3
32.5°	1908.0	1891.9	1833.9	1685.6	1643.7
35°	1801.6	1788.8	1701.7	1572.8	1534.1
37.5°	1695.3	1679.2	1569.6	1466.5	1418.1
40°	1588.9	1569.6	1450.3	1356.9	1305.3
42.5°	1489.0	1463.2	1347.2	1247.3	1189.3
45°	1382.7	1353.6	1237.6	1134.5	1089.4
47.5°	1276.3	1250.5	1144.2	1037.8	986.2
50°	1163.5	1140.9	1044.2	937.9	883.1
52.5°	1070.0	1034.6	941.1	834.8	789.6
55°	960.4	931.4	844.4	744.5	705.8
57.5°	860.5	831.5	751.0	657.5	625.3
60°	767.1	725.2	657.5	576.9	551.1
62.5°	663.9	631.7	573.7	506.0	538.2
65°	570.5	538.2	486.7	496.3	412.5
67.5°	467.3	451.2	406.1	361.0	348.1
70°	380.3	361.0	344.9	296.5	283.6
72.5°	303.0	283.6	261.1	235.3	225.6
75°	228.8	212.7	199.8	190.2	209.5
77.5°	157.9	151.5	141.8	132.1	128.9
80°	103.1	99.9	96.7	93.5	90.2
82.5°	61.2	61.2	61.2	61.2	61.2
85°	32.2	35.5	38.7	41.9	45.1
87.5°	19.3	19.3	22.6	25.8	29.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)