

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: P563133

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563133
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-LD4-3HI-40-UNV-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14376.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

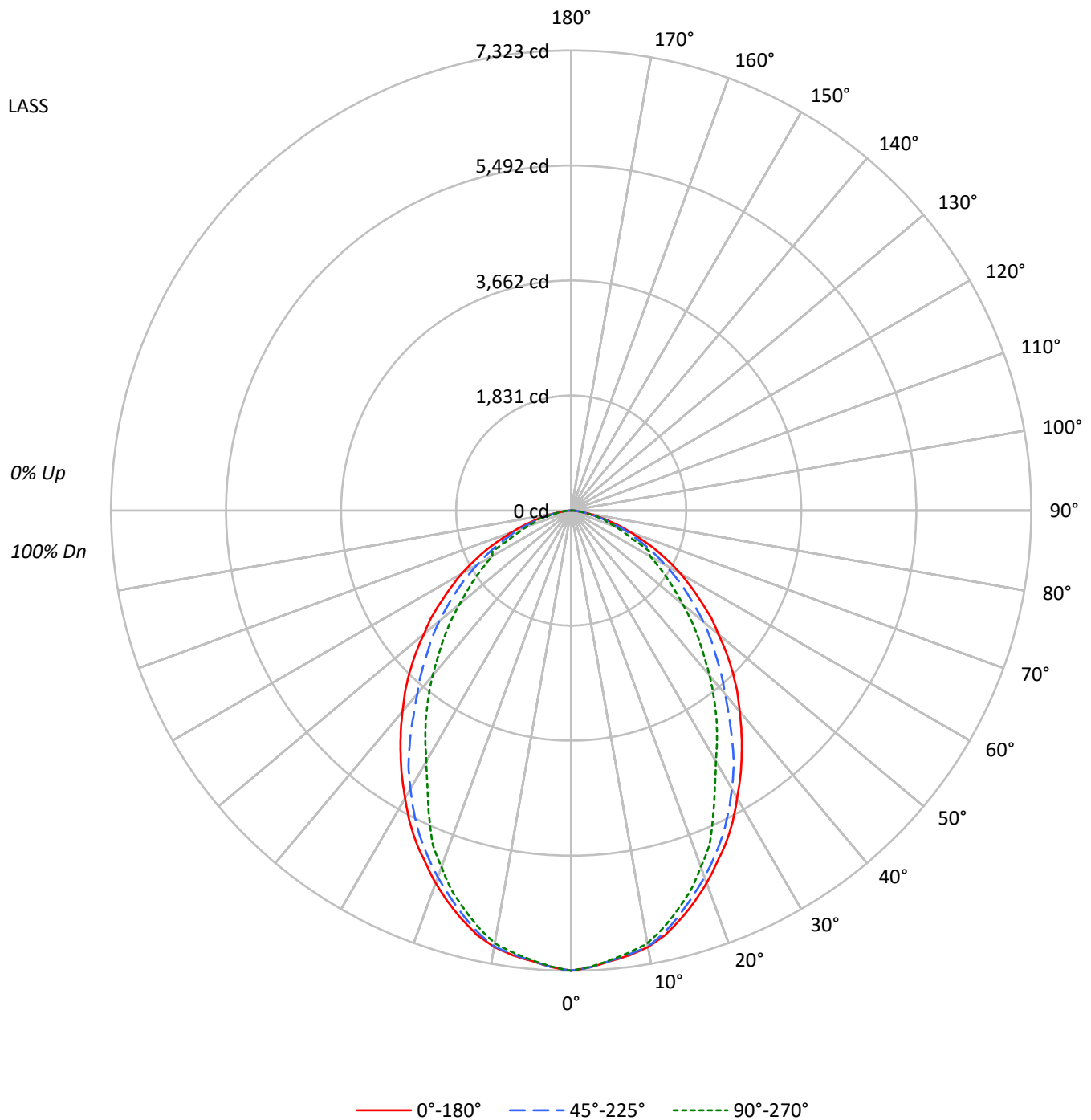
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9853	9853	9853
5°	9719	9708	9696
10°	9635	9623	9554
15°	9375	9281	9151
20°	9031	8885	8643
25°	8660	8471	7943
30°	8207	7944	7155
35°	7773	7342	6619
40°	7331	6691	6022
45°	6911	6186	5445
50°	6397	5741	4855
55°	5918	5203	4349
60°	5422	4647	3896
65°	4771	4070	3450
70°	3930	3563	2931
75°	3125	2729	2861
80°	2099	1968	1836
85°	1308	1568	1829

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6911 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	681.7	4.7
10°-20°	1870.8	13.0
20°-30°	2590.0	18.0
30°-40°	2761.7	19.2
40°-50°	2519.4	17.5
50°-60°	1973.8	13.7
60°-70°	1286.4	8.9
70°-80°	569.9	4.0
80°-90°	122.4	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°	5142.4	35.8
0°-40°	7904.1	55.0
0°-60°	12397.3	86.2
0°-90°	14376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7323	7323	7323	7323	7323	
5°	7196	7188	7188	7179	7179	683
15°	6730	6730	6663	6595	6570	1892
25°	5833	5799	5706	5503	5350	2678
35°	4732	4698	4470	4131	4030	2959
45°	3632	3556	3251	2980	2862	2798
55°	2523	2447	2218	1956	1854	2263
65°	1498	1414	1278	1304	1084	1477
75°	601	559	525	500	550	644
85°	85	93	102	110	118	117
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7322.9	7322.9	7322.9	7322.9	7322.9
2.5°	7272.1	7272.1	7272.1	7263.7	7263.7
5°	7196.0	7187.5	7187.5	7179.0	7179.0
7.5°	7136.7	7128.2	7119.8	7111.3	7094.4
10°	7052.0	7052.0	7043.6	7001.2	6992.8
12.5°	6916.6	6908.1	6874.3	6815.0	6798.1
15°	6730.3	6730.3	6662.6	6594.9	6569.5
17.5°	6527.2	6518.7	6434.0	6366.3	6332.4
20°	6307.0	6290.1	6205.5	6095.4	6036.1
22.5°	6061.5	6061.5	5959.9	5816.0	5756.8
25°	5833.0	5799.1	5706.0	5502.8	5350.4
27.5°	5570.5	5519.7	5418.1	5130.3	4952.5
30°	5282.7	5257.3	5113.4	4740.9	4605.4
32.5°	5011.8	4969.4	4817.1	4427.6	4317.6
35°	4732.4	4698.5	4470.0	4131.3	4029.7
37.5°	4453.0	4410.7	4122.9	3852.0	3725.0
40°	4173.7	4122.9	3809.6	3564.1	3428.7
42.5°	3911.2	3843.5	3538.7	3276.3	3123.9
45°	3631.8	3555.6	3250.9	2980.0	2861.5
47.5°	3352.5	3284.7	3005.4	2726.0	2590.5
50°	3056.2	2996.9	2742.9	2463.6	2319.6
52.5°	2810.7	2717.5	2472.0	2192.6	2074.1
55°	2522.8	2446.6	2218.0	1955.6	1854.0
57.5°	2260.4	2184.2	1972.5	1727.0	1642.4
60°	2014.9	1904.8	1727.0	1515.4	1447.7
62.5°	1744.0	1659.3	1506.9	1329.1	1413.8
65°	1498.5	1413.8	1278.3	1303.7	1083.6
67.5°	1227.5	1185.2	1066.7	948.2	914.3
70°	999.0	948.2	905.8	778.9	745.0
72.5°	795.8	745.0	685.7	618.0	592.6
75°	601.1	558.7	524.9	499.5	550.3
77.5°	414.8	397.9	372.5	347.1	338.6
80°	270.9	262.4	254.0	245.5	237.0
82.5°	160.9	160.9	160.9	160.9	160.9
85°	84.7	93.1	101.6	110.1	118.5
87.5°	50.8	50.8	59.3	67.7	76.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)