

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: P563243

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563243
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-50-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14813.0 lumens
Efficiency: N/A
Efficacy: 114.3 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

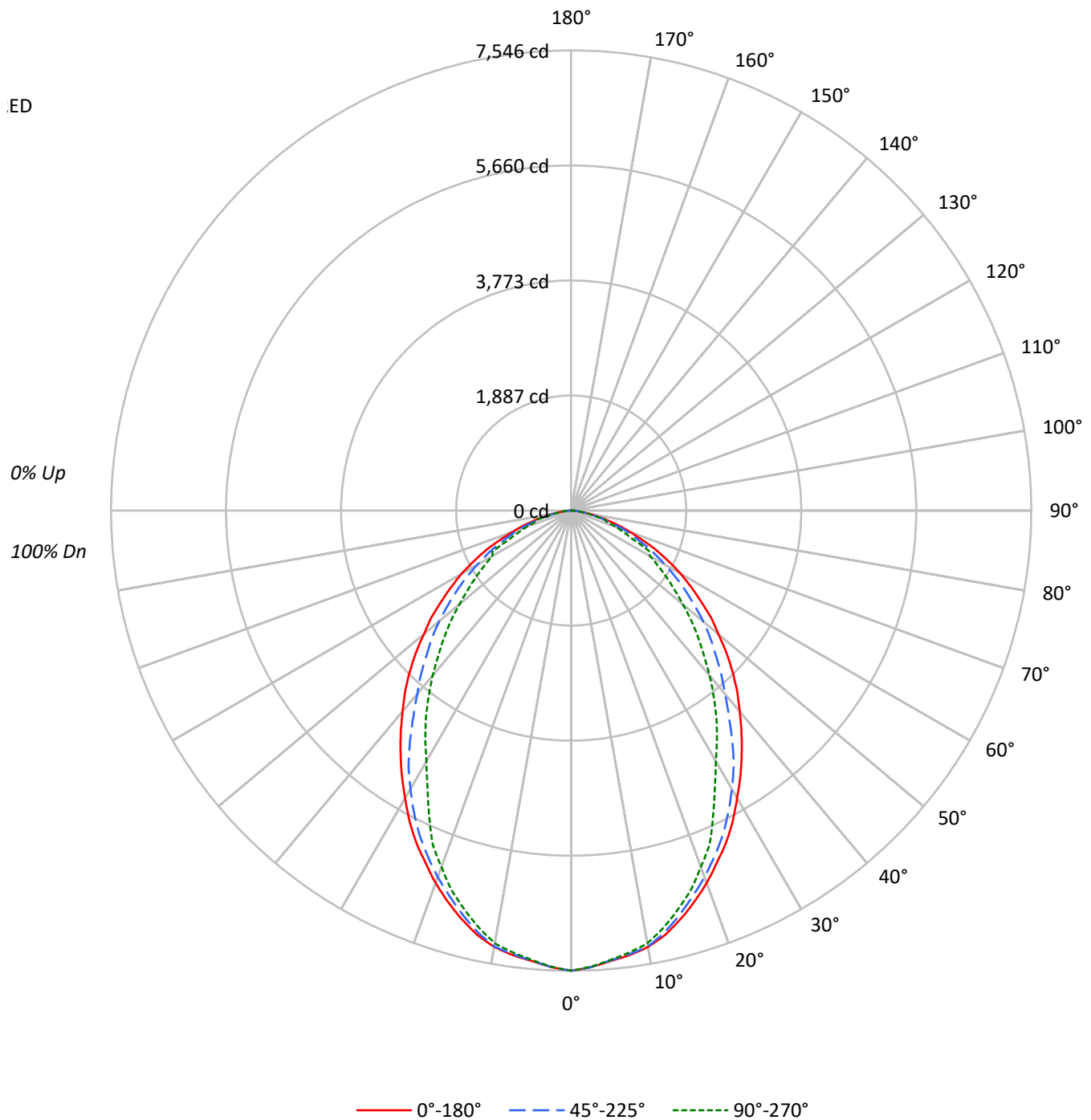
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100												100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10152	10152	10152
5°	10015	10003	9991
10°	9928	9916	9844
15°	9660	9563	9429
20°	9305	9155	8905
25°	8923	8728	8185
30°	8457	8186	7373
35°	8010	7565	6820
40°	7553	6895	6205
45°	7121	6374	5610
50°	6592	5916	5003
55°	6098	5361	4481
60°	5587	4789	4014
65°	4916	4194	3555
70°	4049	3672	3020
75°	3219	2811	2948
80°	2163	2028	1892
85°	1346	1616	1885

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7121 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	702.4	4.7
10°-20°	1927.6	13.0
20°-30°	2668.7	18.0
30°-40°	2845.6	19.2
40°-50°	2596.0	17.5
50°-60°	2033.8	13.7
60°-70°	1325.5	8.9
70°-80°	587.3	4.0
80°-90°	126.1	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°	5298.7	35.8
0°-40°	8144.3	55.0
0°-60°	12774.1	86.2
0°-90°	14813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14813.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7546	7546	7546	7546	7546	
5°	7415	7406	7406	7397	7397	704
15°	6935	6935	6865	6795	6769	1950
25°	6010	5975	5879	5670	5513	2759
35°	4876	4841	4606	4257	4152	3049
45°	3742	3664	3350	3071	2948	2883
55°	2600	2521	2286	2015	1910	2332
65°	1544	1457	1317	1343	1117	1522
75°	619	576	541	515	567	664
85°	87	96	105	113	122	121
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7545.5	7545.5	7545.5	7545.5	7545.5
2.5°	7493.2	7493.2	7493.2	7484.5	7484.5
5°	7414.7	7406.0	7406.0	7397.3	7397.3
7.5°	7353.6	7344.9	7336.2	7327.5	7310.0
10°	7266.4	7266.4	7257.7	7214.1	7205.3
12.5°	7126.8	7118.1	7083.2	7022.2	7004.7
15°	6934.9	6934.9	6865.1	6795.4	6769.2
17.5°	6725.6	6716.8	6629.6	6559.8	6524.9
20°	6498.8	6481.3	6394.1	6280.7	6219.6
22.5°	6245.8	6245.8	6141.1	5992.8	5931.8
25°	6010.3	5975.4	5879.4	5670.1	5513.0
27.5°	5739.8	5687.5	5582.8	5286.2	5103.1
30°	5443.3	5417.1	5268.8	4885.0	4745.4
32.5°	5164.1	5120.5	4963.5	4562.2	4448.8
35°	4876.3	4841.4	4605.8	4256.9	4152.2
37.5°	4588.4	4544.8	4248.2	3969.0	3838.2
40°	4300.5	4248.2	3925.4	3672.5	3532.9
42.5°	4030.1	3960.3	3646.3	3375.9	3218.9
45°	3742.2	3663.7	3349.7	3070.6	2948.4
47.5°	3454.4	3384.6	3096.7	2808.9	2669.3
50°	3149.1	3088.0	2826.3	2538.4	2390.1
52.5°	2896.1	2800.1	2547.2	2259.3	2137.2
55°	2599.5	2521.0	2285.5	2015.1	1910.4
57.5°	2329.1	2250.6	2032.5	1779.5	1692.3
60°	2076.1	1962.7	1779.5	1561.4	1491.7
62.5°	1797.0	1709.7	1552.7	1369.5	1456.8
65°	1544.0	1456.8	1317.2	1343.4	1116.6
67.5°	1264.9	1221.2	1099.1	977.0	942.1
70°	1029.3	977.0	933.4	802.5	767.6
72.5°	820.0	767.6	706.6	636.8	610.6
75°	619.3	575.7	540.8	514.7	567.0
77.5°	427.4	410.0	383.8	357.7	348.9
80°	279.1	270.4	261.7	253.0	244.2
82.5°	165.7	165.7	165.7	165.7	165.7
85°	87.2	96.0	104.7	113.4	122.1
87.5°	52.3	52.3	61.1	69.8	78.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)