

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: P563098

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563098
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-35-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11200.0 lumens
Efficiency: N/A
Efficacy: 86.4 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

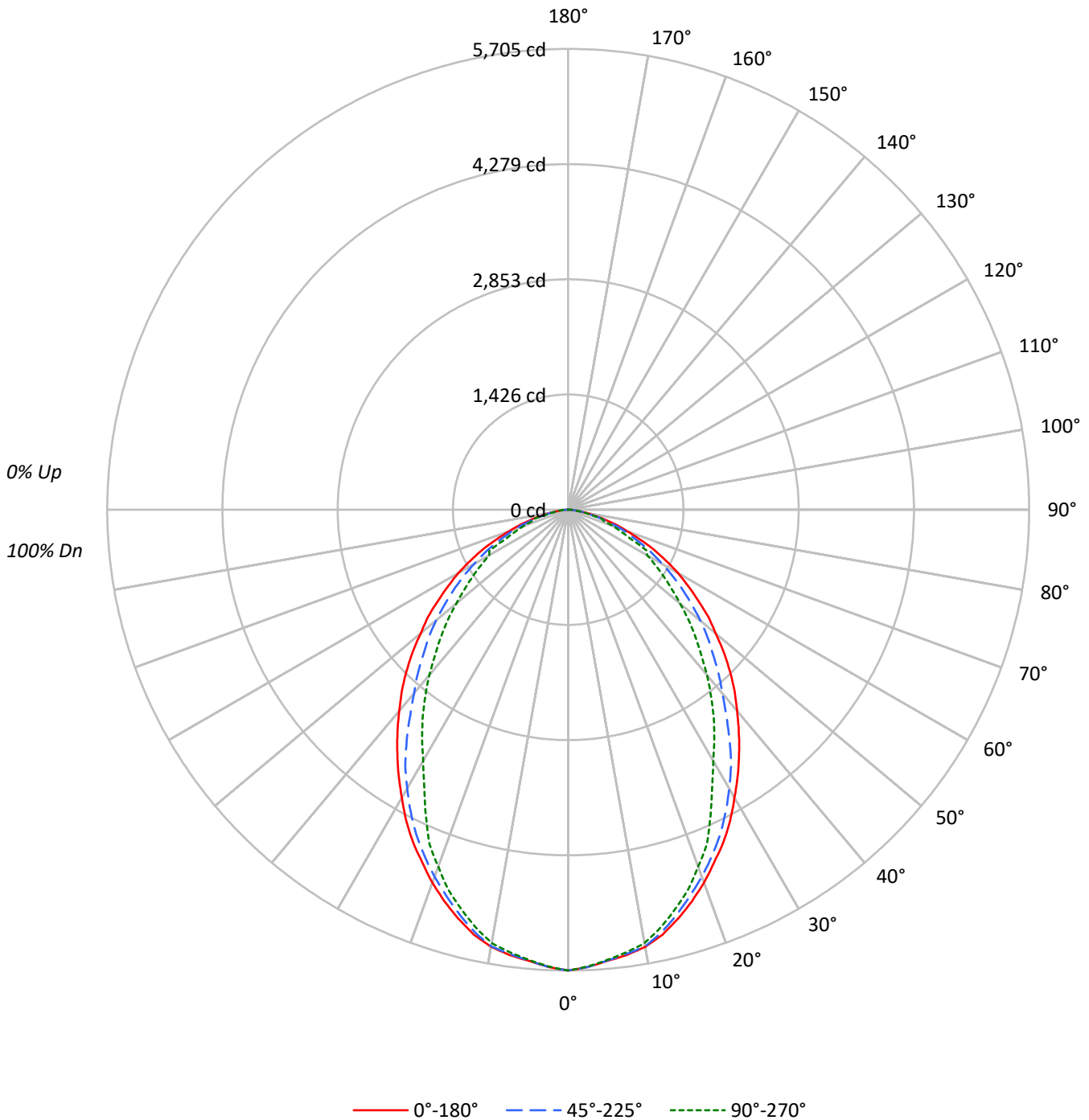
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7676	7676	7676
5°	7572	7563	7554
10°	7506	7497	7443
15°	7304	7230	7129
20°	7036	6922	6733
25°	6746	6600	6188
30°	6394	6189	5574
35°	6056	5720	5157
40°	5711	5213	4692
45°	5384	4819	4242
50°	4984	4473	3783
55°	4611	4054	3388
60°	4224	3621	3035
65°	3717	3171	2688
70°	3062	2776	2283
75°	2434	2126	2229
80°	1636	1533	1431
85°	1019	1221	1425

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5384 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	531.1	4.7
10°-20°	1457.5	13.0
20°-30°	2017.8	18.0
30°-40°	2151.5	19.2
40°-50°	1962.8	17.5
50°-60°	1537.7	13.7
60°-70°	1002.2	8.9
70°-80°	444.0	4.0
80°-90°	95.3	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°	4006.3	35.8
0°-40°	6157.9	55.0
0°-60°	9658.4	86.2
0°-90°	11200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11200.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5705	5705	5705	5705	5705	
5°	5606	5600	5600	5593	5593	532
15°	5243	5243	5191	5138	5118	1474
25°	4544	4518	4445	4287	4168	2086
35°	3687	3660	3482	3219	3140	2305
45°	2830	2770	2533	2322	2229	2180
55°	1966	1906	1728	1524	1444	1763
65°	1167	1102	996	1016	844	1150
75°	468	435	409	389	429	502
85°	66	73	79	86	92	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5705.1	5705.1	5705.1	5705.1	5705.1
2.5°	5665.6	5665.6	5665.6	5659.0	5659.0
5°	5606.2	5599.6	5599.6	5593.0	5593.0
7.5°	5560.0	5553.4	5546.8	5540.2	5527.1
10°	5494.1	5494.1	5487.5	5454.5	5447.9
12.5°	5388.5	5381.9	5355.6	5309.4	5296.2
15°	5243.4	5243.4	5190.7	5137.9	5118.1
17.5°	5085.2	5078.6	5012.6	4959.8	4933.5
20°	4913.7	4900.5	4834.5	4748.8	4702.6
22.5°	4722.4	4722.4	4643.3	4531.1	4485.0
25°	4544.3	4517.9	4445.4	4287.1	4168.4
27.5°	4339.9	4300.3	4221.1	3996.9	3858.4
30°	4115.6	4095.8	3983.7	3693.5	3588.0
32.5°	3904.6	3871.6	3752.9	3449.5	3363.7
35°	3686.9	3660.5	3482.4	3218.6	3139.5
37.5°	3469.2	3436.3	3212.0	3001.0	2902.0
40°	3251.6	3212.0	2968.0	2776.7	2671.2
42.5°	3047.1	2994.4	2756.9	2552.5	2433.7
45°	2829.5	2770.1	2532.7	2321.6	2229.3
47.5°	2611.8	2559.1	2341.4	2123.8	2018.2
50°	2381.0	2334.8	2137.0	1919.3	1807.2
52.5°	2189.7	2117.2	1925.9	1708.2	1615.9
55°	1965.5	1906.1	1728.0	1523.6	1444.4
57.5°	1761.0	1701.6	1536.8	1345.5	1279.5
60°	1569.7	1484.0	1345.5	1180.6	1127.8
62.5°	1358.7	1292.7	1174.0	1035.5	1101.5
65°	1167.4	1101.5	995.9	1015.7	844.2
67.5°	956.4	923.4	831.0	738.7	712.3
70°	778.3	738.7	705.7	606.8	580.4
72.5°	620.0	580.4	534.2	481.5	461.7
75°	468.3	435.3	408.9	389.1	428.7
77.5°	323.2	310.0	290.2	270.4	263.8
80°	211.1	204.5	197.9	191.3	184.7
82.5°	125.3	125.3	125.3	125.3	125.3
85°	66.0	72.6	79.1	85.7	92.3
87.5°	39.6	39.6	46.2	52.8	59.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)