

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: P562502

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562502
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-LD4-2HI-35-UNV-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7135.0 lumens
Efficiency: N/A
Efficacy: 82.6 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

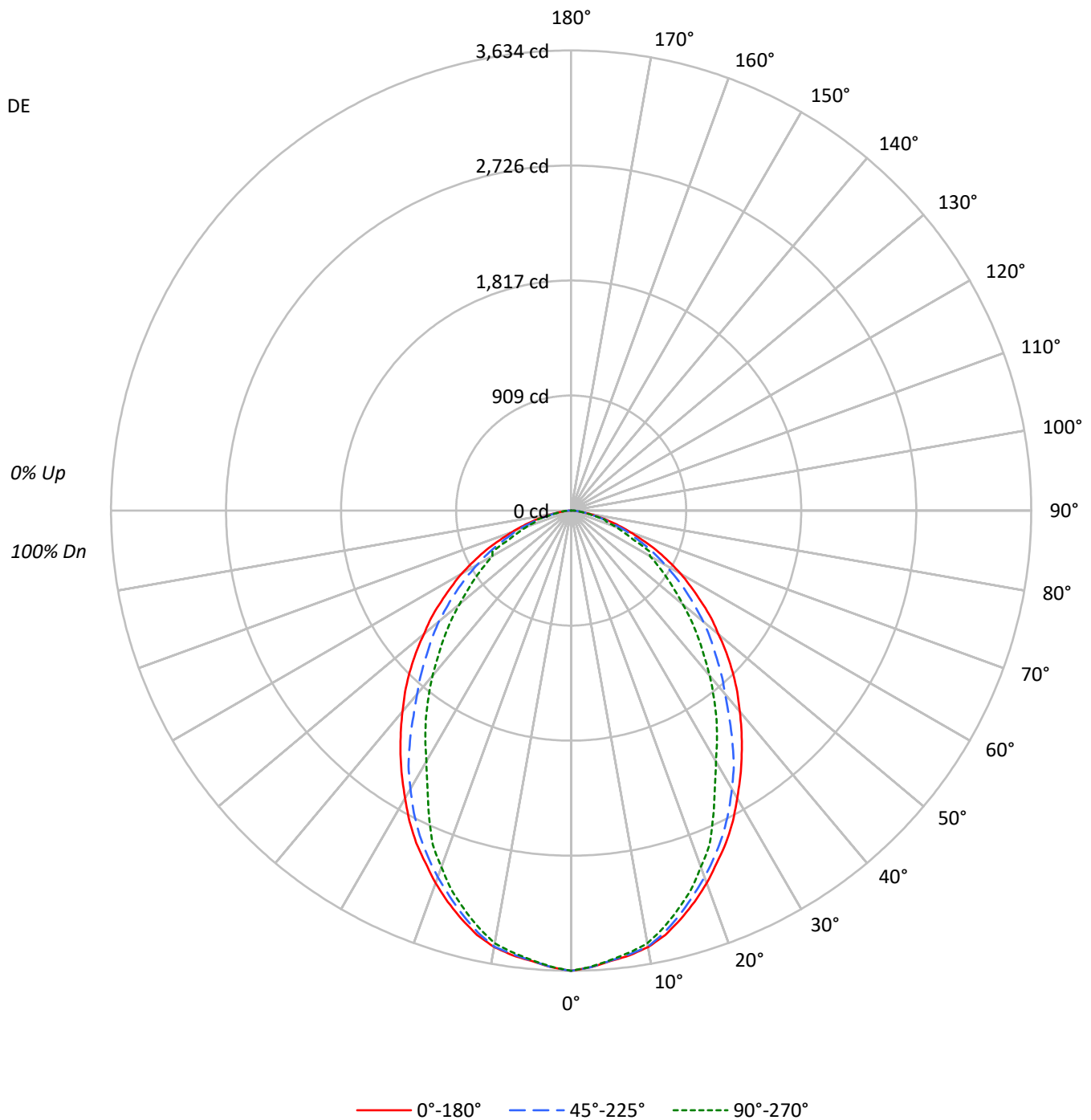
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4890	4890	4890
5°	4824	4818	4812
10°	4782	4776	4742
15°	4653	4606	4542
20°	4482	4410	4290
25°	4298	4204	3942
30°	4073	3943	3551
35°	3858	3644	3285
40°	3638	3321	2989
45°	3430	3070	2702
50°	3175	2850	2410
55°	2937	2582	2159
60°	2691	2306	1933
65°	2368	2020	1712
70°	1950	1769	1454
75°	1551	1354	1420
80°	1042	977	911
85°	648	778	908

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3430 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.3	4.7
10°-20°	928.5	13.0
20°-30°	1285.4	18.0
30°-40°	1370.6	19.2
40°-50°	1250.4	17.5
50°-60°	979.6	13.7
60°-70°	638.5	8.9
70°-80°	282.9	4.0
80°-90°	60.7	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°	2552.2	35.8
0°-40°	3922.9	55.0
0°-60°	6152.9	86.2
0°-90°	7135.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7135.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3634	3634	3634	3634	3634	
5°	3571	3567	3567	3563	3563	339
15°	3340	3340	3307	3273	3260	939
25°	2895	2878	2832	2731	2656	1329
35°	2349	2332	2218	2050	2000	1468
45°	1802	1765	1614	1479	1420	1388
55°	1252	1214	1101	971	920	1123
65°	744	702	634	647	538	733
75°	298	277	260	248	273	320
85°	42	46	50	55	59	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3634.5	3634.5	3634.5	3634.5	3634.5
2.5°	3609.3	3609.3	3609.3	3605.1	3605.1
5°	3571.4	3567.2	3567.2	3563.0	3563.0
7.5°	3542.0	3537.8	3533.6	3529.4	3521.0
10°	3500.0	3500.0	3495.8	3474.8	3470.6
12.5°	3432.8	3428.6	3411.8	3382.4	3374.0
15°	3340.4	3340.4	3306.7	3273.1	3260.5
17.5°	3239.5	3235.3	3193.3	3159.7	3142.9
20°	3130.3	3121.9	3079.8	3025.2	2995.8
22.5°	3008.4	3008.4	2958.0	2886.6	2857.2
25°	2895.0	2878.2	2831.9	2731.1	2655.5
27.5°	2764.7	2739.5	2689.1	2546.2	2458.0
30°	2621.9	2609.3	2537.8	2353.0	2285.7
32.5°	2487.4	2466.4	2390.8	2197.5	2142.9
35°	2348.8	2331.9	2218.5	2050.4	2000.0
37.5°	2210.1	2189.1	2046.2	1911.8	1848.7
40°	2071.4	2046.2	1890.8	1768.9	1701.7
42.5°	1941.2	1907.6	1756.3	1626.1	1550.4
45°	1802.5	1764.7	1613.5	1479.0	1420.2
47.5°	1663.9	1630.3	1491.6	1352.9	1285.7
50°	1516.8	1487.4	1361.4	1222.7	1151.3
52.5°	1395.0	1348.7	1226.9	1088.2	1029.4
55°	1252.1	1214.3	1100.8	970.6	920.2
57.5°	1121.9	1084.0	979.0	857.1	815.1
60°	1000.0	945.4	857.1	752.1	718.5
62.5°	865.6	823.5	747.9	659.7	701.7
65°	743.7	701.7	634.5	647.1	537.8
67.5°	609.2	588.2	529.4	470.6	453.8
70°	495.8	470.6	449.6	386.6	369.7
72.5°	395.0	369.7	340.3	306.7	294.1
75°	298.3	277.3	260.5	247.9	273.1
77.5°	205.9	197.5	184.9	172.3	168.1
80°	134.5	130.3	126.1	121.8	117.6
82.5°	79.8	79.8	79.8	79.8	79.8
85°	42.0	46.2	50.4	54.6	58.8
87.5°	25.2	25.2	29.4	33.6	37.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)