

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: P562500

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562500
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-81-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7374.0 lumens
Efficiency: N/A
Efficacy: 85.3 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

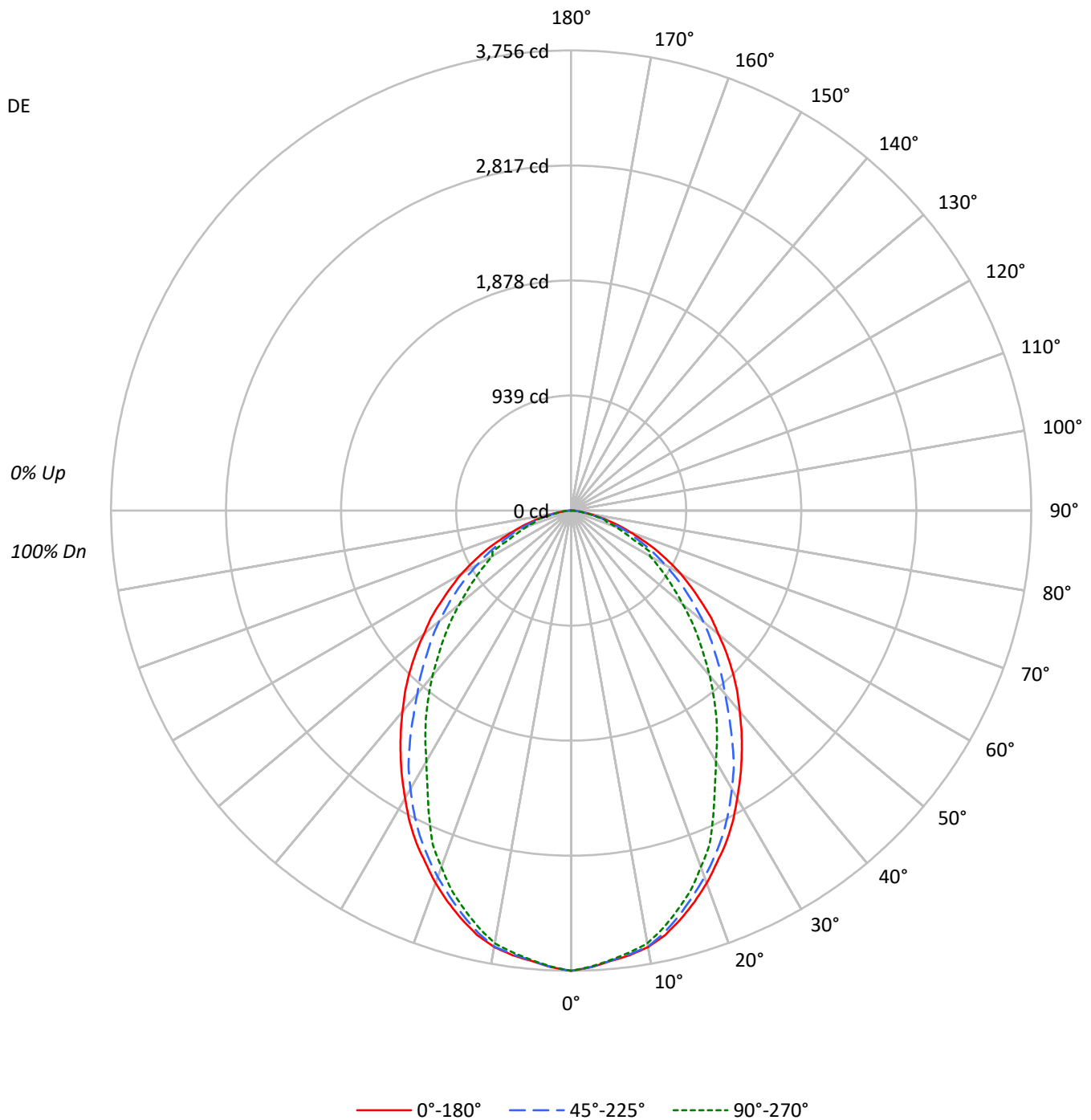
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5054	5054	5054
5°	4985	4979	4974
10°	4942	4936	4901
15°	4809	4760	4694
20°	4632	4558	4433
25°	4442	4345	4074
30°	4210	4075	3670
35°	3987	3766	3395
40°	3760	3432	3089
45°	3545	3173	2793
50°	3281	2945	2491
55°	3035	2669	2231
60°	2781	2384	1998
65°	2447	2088	1769
70°	2016	1828	1503
75°	1603	1399	1468
80°	1077	1010	942
85°	670	804	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3545 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	349.7	4.7
10°-20°	959.6	13.0
20°-30°	1328.5	18.0
30°-40°	1416.6	19.2
40°-50°	1292.3	17.5
50°-60°	1012.4	13.7
60°-70°	659.9	8.9
70°-80°	292.3	4.0
80°-90°	62.8	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°	2637.7	35.8
0°-40°	4054.3	55.0
0°-60°	6359.1	86.2
0°-90°	7374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7374.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3756	3756	3756	3756	3756	
5°	3691	3687	3687	3682	3682	350
15°	3452	3452	3418	3383	3370	971
25°	2992	2975	2927	2823	2744	1374
35°	2427	2410	2293	2119	2067	1518
45°	1863	1824	1668	1528	1468	1435
55°	1294	1255	1138	1003	951	1161
65°	769	725	656	669	556	757
75°	308	287	269	256	282	330
85°	43	48	52	56	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3756.2	3756.2	3756.2	3756.2	3756.2
2.5°	3730.2	3730.2	3730.2	3725.8	3725.8
5°	3691.1	3686.7	3686.7	3682.4	3682.4
7.5°	3660.7	3656.3	3652.0	3647.7	3639.0
10°	3617.3	3617.3	3612.9	3591.2	3586.9
12.5°	3547.8	3543.4	3526.1	3495.7	3487.0
15°	3452.2	3452.2	3417.5	3382.8	3369.7
17.5°	3348.0	3343.7	3300.3	3265.5	3248.2
20°	3235.1	3226.4	3183.0	3126.6	3096.2
22.5°	3109.2	3109.2	3057.1	2983.3	2952.9
25°	2991.9	2974.6	2926.8	2822.6	2744.4
27.5°	2857.3	2831.3	2779.2	2631.5	2540.3
30°	2709.7	2696.7	2622.8	2431.8	2362.3
32.5°	2570.7	2549.0	2470.9	2271.1	2214.6
35°	2427.4	2410.1	2292.8	2119.1	2067.0
37.5°	2284.1	2262.4	2114.8	1975.8	1910.7
40°	2140.8	2114.8	1954.1	1828.2	1758.7
42.5°	2006.2	1971.5	1815.1	1680.5	1602.4
45°	1862.9	1823.8	1667.5	1528.5	1467.7
47.5°	1719.6	1684.9	1541.6	1398.3	1328.8
50°	1567.6	1537.2	1407.0	1263.7	1189.8
52.5°	1441.7	1393.9	1268.0	1124.7	1063.9
55°	1294.0	1255.0	1137.7	1003.1	951.0
57.5°	1159.4	1120.4	1011.8	885.9	842.4
60°	1033.5	977.1	885.9	777.3	742.6
62.5°	894.5	851.1	773.0	681.8	725.2
65°	768.6	725.2	655.7	668.7	555.8
67.5°	629.7	607.9	547.1	486.4	469.0
70°	512.4	486.4	464.6	399.5	382.1
72.5°	408.2	382.1	351.7	317.0	304.0
75°	308.3	286.6	269.2	256.2	282.3
77.5°	212.8	204.1	191.1	178.0	173.7
80°	139.0	134.6	130.3	125.9	121.6
82.5°	82.5	82.5	82.5	82.5	82.5
85°	43.4	47.8	52.1	56.5	60.8
87.5°	26.1	26.1	30.4	34.7	39.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)