

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: P563858

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563858
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-LD4-4LO-35-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8891.0 lumens
Efficiency: N/A
Efficacy: 95.0 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

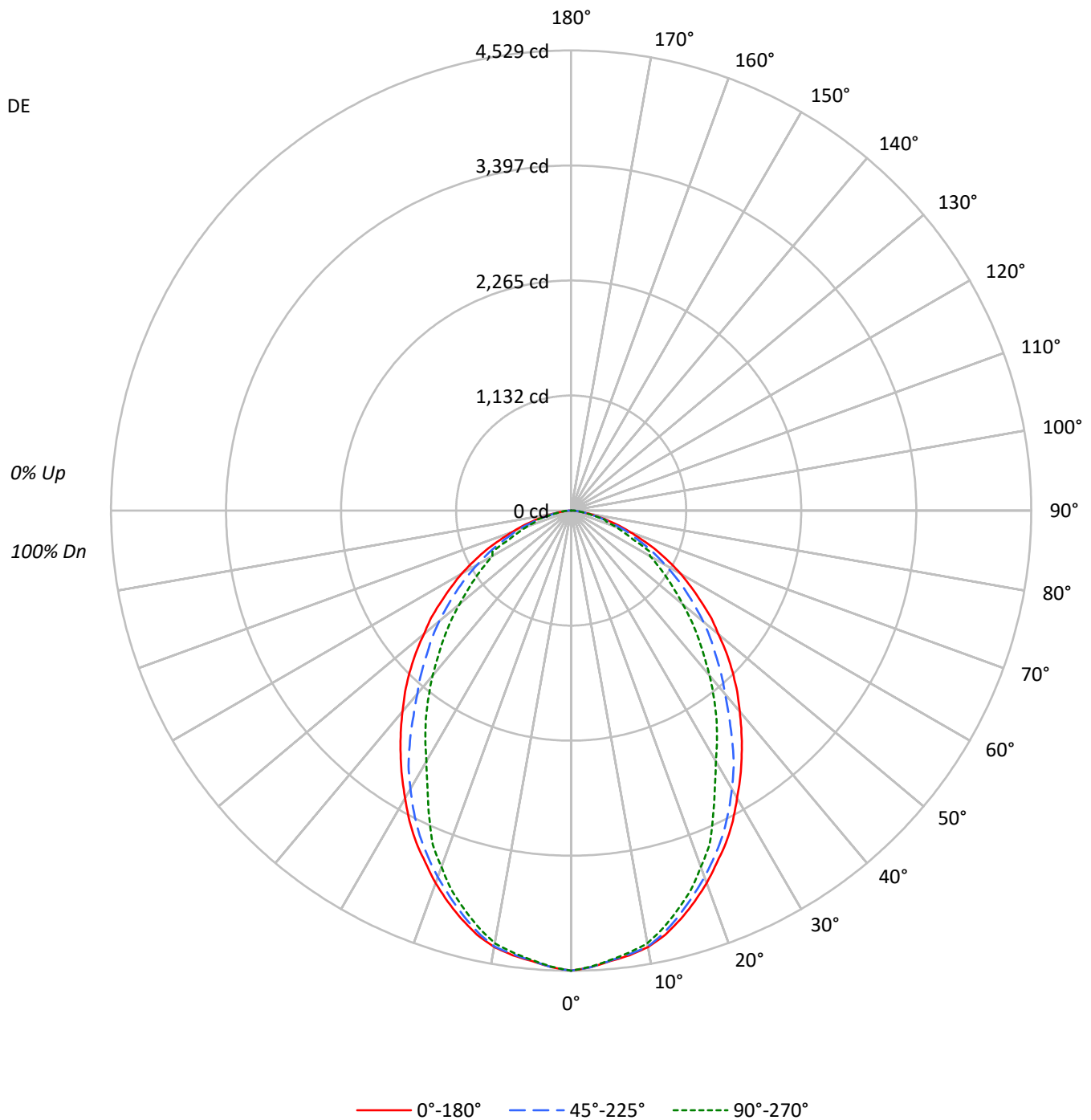
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6094	6094	6094
5°	6011	6004	5997
10°	5959	5952	5909
15°	5798	5740	5660
20°	5585	5495	5345
25°	5356	5239	4912
30°	5076	4913	4425
35°	4807	4541	4094
40°	4534	4138	3724
45°	4274	3826	3367
50°	3956	3551	3003
55°	3660	3218	2690
60°	3353	2874	2409
65°	2950	2517	2134
70°	2430	2204	1812
75°	1932	1687	1769
80°	1298	1217	1136
85°	809	969	1132

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4274 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	421.6	4.7
10°-20°	1157.0	13.0
20°-30°	1601.8	18.0
30°-40°	1708.0	19.2
40°-50°	1558.2	17.5
50°-60°	1220.7	13.7
60°-70°	795.6	8.9
70°-80°	352.5	4.0
80°-90°	75.7	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°	3180.4	35.8
0°-40°	4888.4	55.0
0°-60°	7667.2	86.2
0°-90°	8891.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8891.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4529	4529	4529	4529	4529	
5°	4450	4445	4445	4440	4440	422
15°	4162	4162	4121	4079	4063	1170
25°	3608	3586	3529	3403	3309	1656
35°	2927	2906	2764	2555	2492	1830
45°	2246	2199	2010	1843	1770	1730
55°	1560	1513	1372	1210	1147	1399
65°	927	874	791	806	670	913
75°	372	346	325	309	340	398
85°	52	58	63	68	73	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4529.0	4529.0	4529.0	4529.0	4529.0
2.5°	4497.5	4497.5	4497.5	4492.3	4492.3
5°	4450.4	4445.2	4445.2	4439.9	4439.9
7.5°	4413.8	4408.5	4403.3	4398.1	4387.6
10°	4361.4	4361.4	4356.2	4330.0	4324.8
12.5°	4277.6	4272.4	4251.5	4214.8	4204.3
15°	4162.5	4162.5	4120.6	4078.7	4063.0
17.5°	4036.8	4031.6	3979.2	3937.3	3916.4
20°	3900.7	3890.2	3837.8	3769.8	3733.1
22.5°	3748.8	3748.8	3686.0	3597.0	3560.3
25°	3607.5	3586.5	3528.9	3403.3	3309.0
27.5°	3445.1	3413.7	3350.9	3172.9	3062.9
30°	3267.1	3251.4	3162.4	2932.0	2848.3
32.5°	3099.6	3073.4	2979.2	2738.3	2670.3
35°	2926.8	2905.9	2764.5	2555.1	2492.2
37.5°	2754.0	2727.8	2549.8	2382.3	2303.7
40°	2581.2	2549.8	2356.1	2204.3	2120.5
42.5°	2418.9	2377.0	2188.6	2026.2	1932.0
45°	2246.2	2199.0	2010.5	1843.0	1769.7
47.5°	2073.4	2031.5	1858.7	1685.9	1602.2
50°	1890.1	1853.5	1696.4	1523.6	1434.6
52.5°	1738.3	1680.7	1528.9	1356.1	1282.8
55°	1560.3	1513.1	1371.8	1209.5	1146.6
57.5°	1398.0	1350.8	1219.9	1068.1	1015.7
60°	1246.1	1178.1	1068.1	937.2	895.3
62.5°	1078.6	1026.2	932.0	822.0	874.4
65°	926.7	874.4	790.6	806.3	670.2
67.5°	759.2	733.0	659.7	586.4	565.5
70°	617.8	586.4	560.2	481.7	460.7
72.5°	492.2	460.7	424.1	382.2	366.5
75°	371.7	345.6	324.6	308.9	340.3
77.5°	256.6	246.1	230.4	214.7	209.4
80°	167.5	162.3	157.1	151.8	146.6
82.5°	99.5	99.5	99.5	99.5	99.5
85°	52.4	57.6	62.8	68.1	73.3
87.5°	31.4	31.4	36.7	41.9	47.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)