

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: P563563

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563563
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-LD4-3STD-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

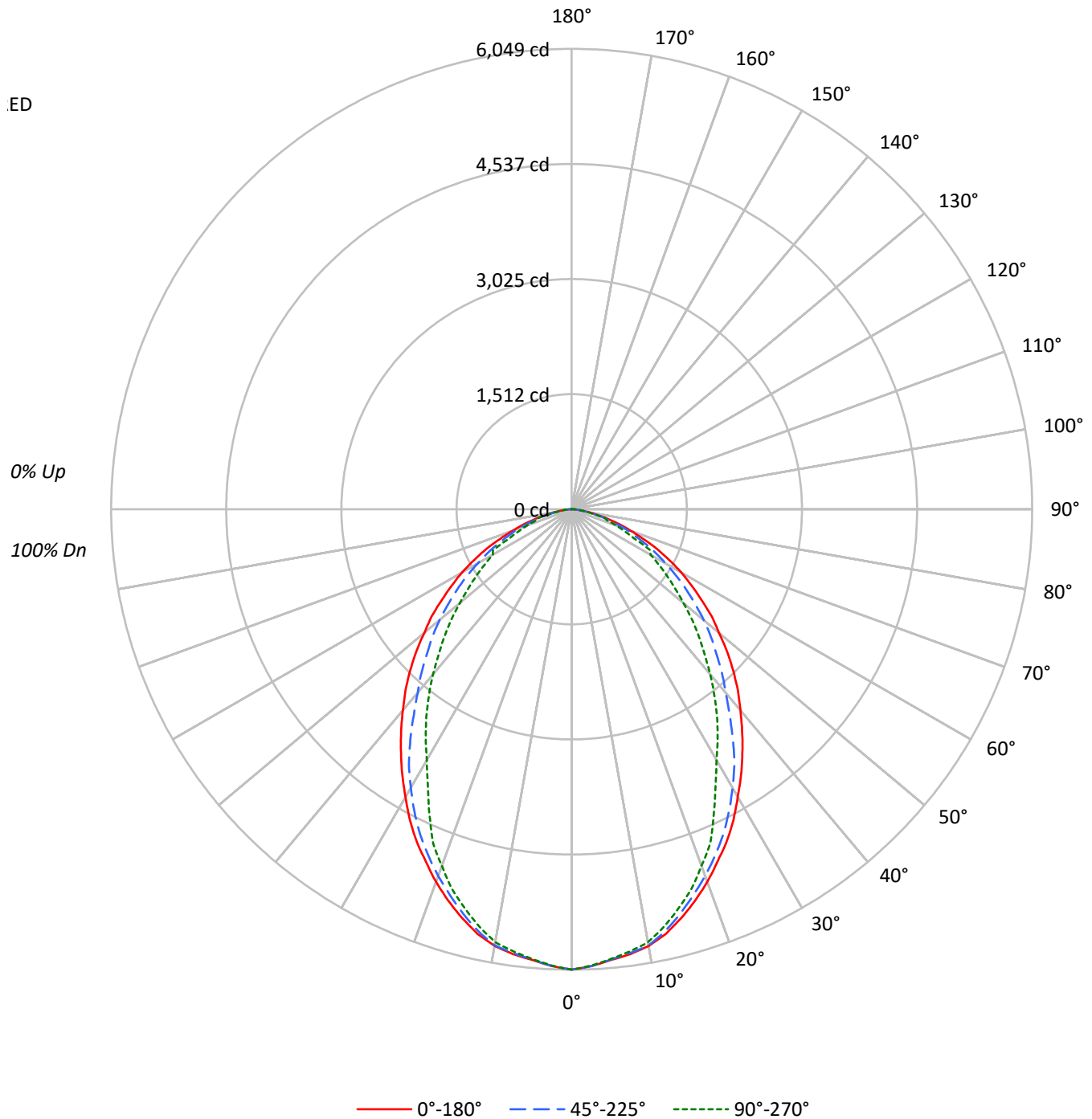
Lumens per Lamp: N/A
Luminaire Lumens: 11875.0 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	8139	8139	8139
5°	8028	8019	8009
10°	7959	7949	7892
15°	7744	7666	7559
20°	7460	7339	7139
25°	7153	6997	6561
30°	6779	6562	5910
35°	6421	6065	5468
40°	6055	5527	4975
45°	5708	5110	4497
50°	5284	4743	4011
55°	4888	4298	3593
60°	4479	3839	3218
65°	3941	3362	2850
70°	3246	2944	2421
75°	2581	2254	2363
80°	1734	1626	1517
85°	1079	1295	1511

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5708 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	563.1	4.7
10°-20°	1545.3	13.0
20°-30°	2139.4	18.0
30°-40°	2281.2	19.2
40°-50°	2081.1	17.5
50°-60°	1630.4	13.7
60°-70°	1062.6	8.9
70°-80°	470.8	4.0
80°-90°	101.1	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°	4247.8	35.8
0°-40°	6529.0	55.0
0°-60°	10240.5	86.2
0°-90°	11875.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11875.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6049	6049	6049	6049	6049	
5°	5944	5937	5937	5930	5930	564
15°	5560	5560	5504	5448	5427	1563
25°	4818	4790	4713	4546	4420	2212
35°	3909	3881	3692	3413	3329	2444
45°	3000	2937	2685	2462	2364	2311
55°	2084	2021	1832	1615	1532	1869
65°	1238	1168	1056	1077	895	1220
75°	496	462	434	413	454	532
85°	70	77	84	91	98	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6049.0	6049.0	6049.0	6049.0	6049.0
2.5°	6007.0	6007.0	6007.0	6000.0	6000.0
5°	5944.1	5937.1	5937.1	5930.1	5930.1
7.5°	5895.1	5888.1	5881.1	5874.1	5860.2
10°	5825.2	5825.2	5818.2	5783.2	5776.2
12.5°	5713.3	5706.3	5678.3	5629.4	5615.4
15°	5559.5	5559.5	5503.5	5447.6	5426.6
17.5°	5391.6	5384.6	5314.7	5258.8	5230.8
20°	5209.8	5195.8	5125.9	5035.0	4986.0
22.5°	5007.0	5007.0	4923.1	4804.2	4755.3
25°	4818.2	4790.2	4713.3	4545.5	4419.6
27.5°	4601.4	4559.5	4475.5	4237.8	4090.9
30°	4363.6	4342.7	4223.8	3916.1	3804.2
32.5°	4139.9	4104.9	3979.0	3657.4	3566.4
35°	3909.1	3881.1	3692.3	3412.6	3328.7
37.5°	3678.3	3643.4	3405.6	3181.8	3076.9
40°	3447.6	3405.6	3146.9	2944.1	2832.2
42.5°	3230.8	3174.8	2923.1	2706.3	2580.4
45°	3000.0	2937.1	2685.3	2461.5	2363.6
47.5°	2769.2	2713.3	2482.5	2251.8	2139.9
50°	2524.5	2475.5	2265.7	2035.0	1916.1
52.5°	2321.7	2244.8	2042.0	1811.2	1713.3
55°	2083.9	2021.0	1832.2	1615.4	1531.5
57.5°	1867.1	1804.2	1629.4	1426.6	1356.6
60°	1664.3	1573.4	1426.6	1251.8	1195.8
62.5°	1440.6	1370.6	1244.8	1097.9	1167.8
65°	1237.8	1167.8	1055.9	1076.9	895.1
67.5°	1014.0	979.0	881.1	783.2	755.2
70°	825.2	783.2	748.3	643.4	615.4
72.5°	657.3	615.4	566.4	510.5	489.5
75°	496.5	461.5	433.6	412.6	454.5
77.5°	342.7	328.7	307.7	286.7	279.7
80°	223.8	216.8	209.8	202.8	195.8
82.5°	132.9	132.9	132.9	132.9	132.9
85°	69.9	76.9	83.9	90.9	97.9
87.5°	42.0	42.0	49.0	55.9	62.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)