

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: P563626

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563626
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-50-UNV-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10507.0 lumens
Efficiency: N/A
Efficacy: 105.2 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

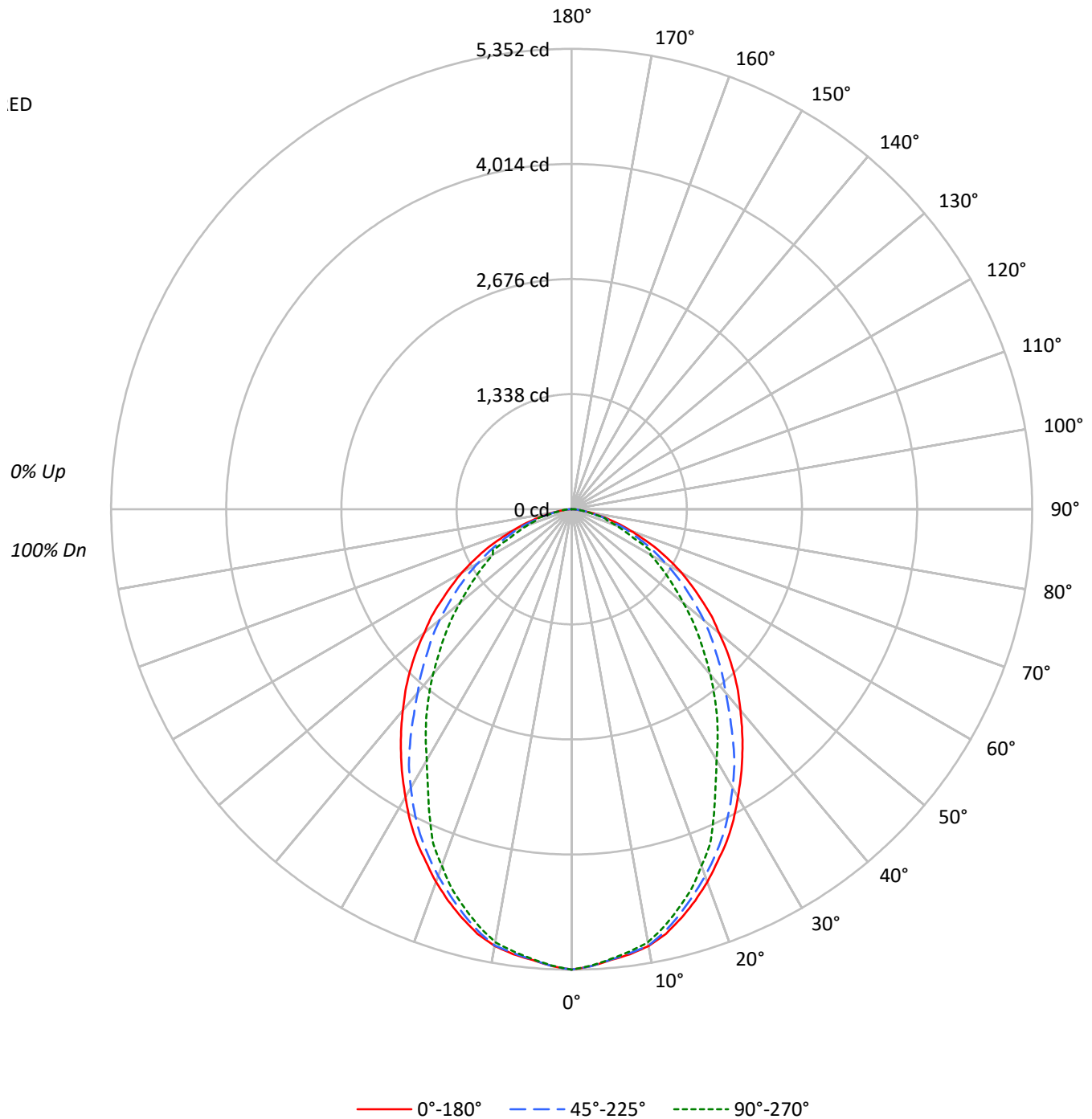
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7201	7201	7201
5°	7103	7095	7087
10°	7042	7033	6983
15°	6852	6783	6688
20°	6600	6494	6317
25°	6329	6191	5805
30°	5999	5806	5230
35°	5681	5366	4838
40°	5358	4890	4401
45°	5051	4521	3980
50°	4676	4196	3549
55°	4325	3803	3179
60°	3963	3397	2847
65°	3487	2975	2521
70°	2872	2605	2142
75°	2284	1994	2091
80°	1534	1438	1342
85°	956	1145	1337

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5051 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	498.2	4.7
10°-20°	1367.3	13.0
20°-30°	1892.9	18.0
30°-40°	2018.4	19.2
40°-50°	1841.4	17.5
50°-60°	1442.6	13.7
60°-70°	940.2	8.9
70°-80°	416.5	4.0
80°-90°	89.4	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°	3758.4	35.8
0°-40°	5776.9	55.0
0°-60°	9060.8	86.2
0°-90°	10507.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10507.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5352	5352	5352	5352	5352	
5°	5259	5253	5253	5247	5247	499
15°	4919	4919	4870	4820	4801	1383
25°	4263	4238	4170	4022	3910	1957
35°	3459	3434	3267	3020	2945	2162
45°	2654	2599	2376	2178	2091	2045
55°	1844	1788	1621	1429	1355	1654
65°	1095	1033	934	953	792	1079
75°	439	408	384	365	402	471
85°	62	68	74	80	87	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5352.1	5352.1	5352.1	5352.1	5352.1
2.5°	5315.0	5315.0	5315.0	5308.8	5308.8
5°	5259.3	5253.1	5253.1	5246.9	5246.9
7.5°	5216.0	5209.8	5203.6	5197.4	5185.1
10°	5154.1	5154.1	5147.9	5117.0	5110.8
12.5°	5055.1	5048.9	5024.2	4980.9	4968.5
15°	4919.0	4919.0	4869.5	4820.0	4801.4
17.5°	4770.5	4764.3	4702.4	4652.9	4628.2
20°	4609.6	4597.3	4535.4	4454.9	4411.6
22.5°	4430.2	4430.2	4355.9	4250.8	4207.5
25°	4263.1	4238.4	4170.3	4021.8	3910.5
27.5°	4071.3	4034.2	3960.0	3749.6	3619.6
30°	3861.0	3842.4	3737.2	3465.0	3366.0
32.5°	3663.0	3632.0	3520.6	3236.0	3155.6
35°	3458.8	3434.0	3267.0	3019.5	2945.2
37.5°	3254.6	3223.7	3013.3	2815.3	2722.5
40°	3050.4	3013.3	2784.3	2604.9	2505.9
42.5°	2858.6	2809.1	2586.3	2394.5	2283.2
45°	2654.4	2598.7	2376.0	2178.0	2091.4
47.5°	2450.2	2400.7	2196.5	1992.4	1893.4
50°	2233.7	2190.3	2004.7	1800.5	1695.4
52.5°	2054.2	1986.2	1806.7	1602.5	1515.9
55°	1843.9	1788.2	1621.1	1429.3	1355.0
57.5°	1652.0	1596.4	1441.7	1262.2	1200.4
60°	1472.6	1392.2	1262.2	1107.5	1058.1
62.5°	1274.6	1212.7	1101.4	971.4	1033.3
65°	1095.2	1033.3	934.3	952.9	792.0
67.5°	897.2	866.2	779.6	693.0	668.2
70°	730.1	693.0	662.1	569.2	544.5
72.5°	581.6	544.5	501.2	451.7	433.1
75°	439.3	408.4	383.6	365.1	402.2
77.5°	303.2	290.8	272.2	253.7	247.5
80°	198.0	191.8	185.6	179.4	173.2
82.5°	117.6	117.6	117.6	117.6	117.6
85°	61.9	68.1	74.2	80.4	86.6
87.5°	37.1	37.1	43.3	49.5	55.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)