

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: P563238

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563238
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-LD4-3HI-50-UNV-93-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12056.0 lumens
Efficiency: N/A
Efficacy: 93.0 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

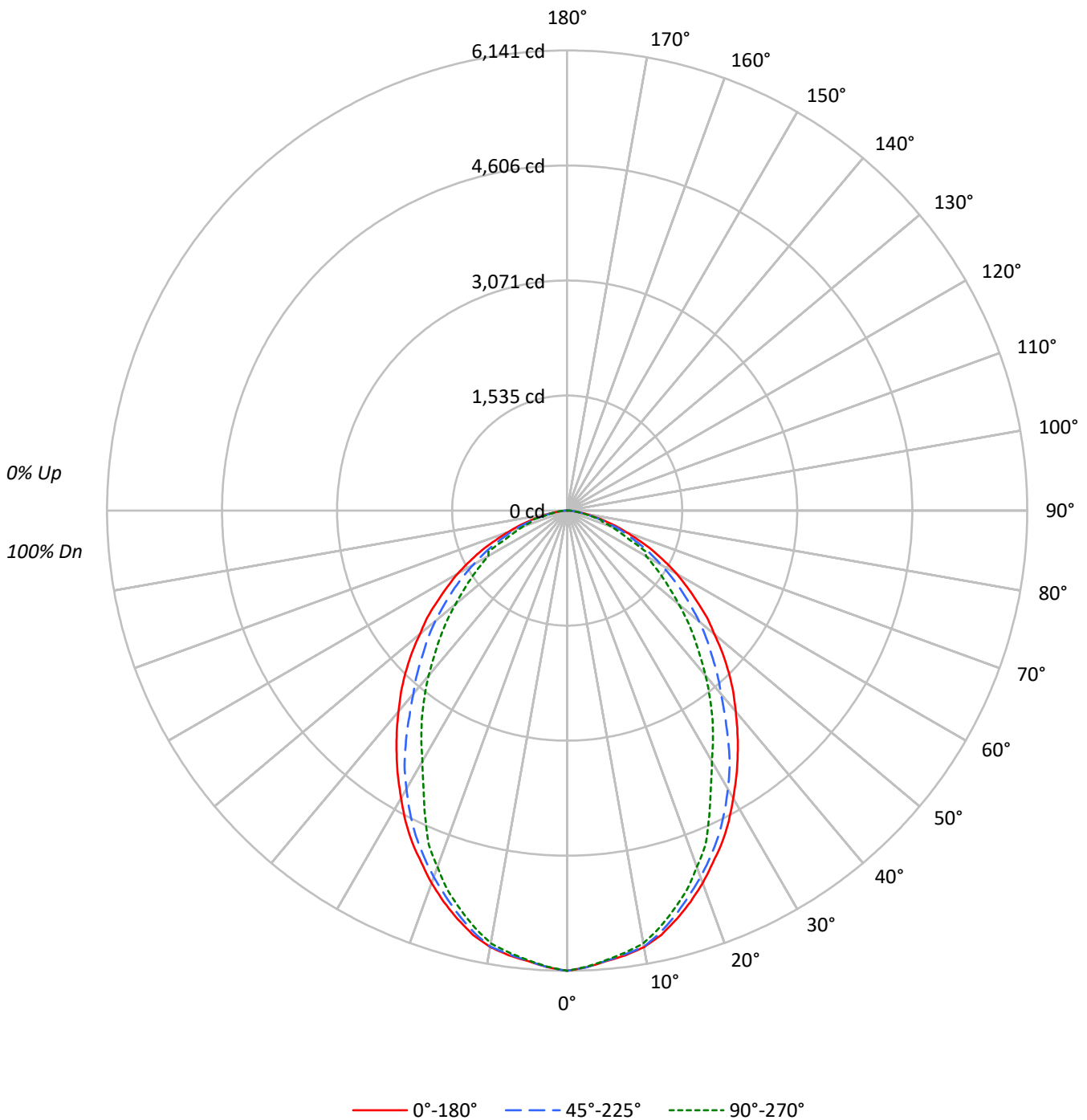
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8263	8263	8263
5°	8151	8141	8131
10°	8080	8070	8012
15°	7862	7783	7674
20°	7573	7451	7248
25°	7262	7104	6661
30°	6883	6662	6000
35°	6519	6157	5551
40°	6148	5611	5050
45°	5795	5188	4566
50°	5365	4815	4072
55°	4963	4363	3647
60°	4547	3897	3267
65°	4001	3413	2893
70°	3296	2989	2458
75°	2621	2288	2399
80°	1760	1650	1540
85°	1096	1315	1535

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5795 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	571.7	4.7
10°-20°	1568.9	13.0
20°-30°	2172.0	18.0
30°-40°	2316.0	19.2
40°-50°	2112.9	17.5
50°-60°	1655.2	13.7
60°-70°	1078.8	8.9
70°-80°	478.0	4.0
80°-90°	102.6	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°	4312.5	35.8
0°-40°	6628.5	55.0
0°-60°	10396.6	86.2
0°-90°	12056.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12056.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6141	6141	6141	6141	6141	
5°	6035	6028	6028	6020	6020	573
15°	5644	5644	5587	5531	5509	1587
25°	4892	4863	4785	4615	4487	2246
35°	3969	3940	3749	3465	3379	2481
45°	3046	2982	2726	2499	2400	2346
55°	2116	2052	1860	1640	1555	1898
65°	1257	1186	1072	1093	909	1238
75°	504	469	440	419	462	540
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6141.2	6141.2	6141.2	6141.2	6141.2
2.5°	6098.6	6098.6	6098.6	6091.5	6091.5
5°	6034.7	6027.6	6027.6	6020.5	6020.5
7.5°	5985.0	5977.9	5970.8	5963.7	5949.5
10°	5914.0	5914.0	5906.9	5871.4	5864.3
12.5°	5800.4	5793.3	5764.9	5715.2	5701.0
15°	5644.2	5644.2	5587.4	5530.6	5509.3
17.5°	5473.8	5466.7	5395.7	5338.9	5310.5
20°	5289.2	5275.0	5204.0	5111.7	5062.0
22.5°	5083.3	5083.3	4998.1	4877.4	4827.7
25°	4891.6	4863.2	4785.1	4614.7	4487.0
27.5°	4671.5	4628.9	4543.8	4302.4	4153.3
30°	4430.2	4408.9	4288.2	3975.8	3862.2
32.5°	4203.0	4167.5	4039.7	3713.1	3620.8
35°	3968.7	3940.3	3748.6	3464.6	3379.4
37.5°	3734.4	3698.9	3457.5	3230.3	3123.8
40°	3500.1	3457.5	3194.8	2988.9	2875.3
42.5°	3280.0	3223.2	2967.6	2747.6	2619.8
45°	3045.7	2981.8	2726.3	2499.1	2399.7
47.5°	2811.4	2754.6	2520.4	2286.1	2172.5
50°	2563.0	2513.3	2300.3	2066.0	1945.3
52.5°	2357.1	2279.0	2073.1	1838.8	1739.4
55°	2115.7	2051.8	1860.1	1640.0	1554.8
57.5°	1895.6	1831.7	1654.2	1448.3	1377.3
60°	1689.7	1597.4	1448.3	1270.8	1214.0
62.5°	1462.5	1391.5	1263.7	1114.6	1185.6
65°	1256.6	1185.6	1072.0	1093.3	908.8
67.5°	1029.4	993.9	894.6	795.2	766.8
70°	837.8	795.2	759.7	653.2	624.8
72.5°	667.4	624.8	575.1	518.3	497.0
75°	504.1	468.6	440.2	418.9	461.5
77.5°	347.9	333.7	312.4	291.1	284.0
80°	227.2	220.1	213.0	205.9	198.8
82.5°	134.9	134.9	134.9	134.9	134.9
85°	71.0	78.1	85.2	92.3	99.4
87.5°	42.6	42.6	49.7	56.8	63.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)