

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: P564057

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564057
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-LD4-4STD-35-UNV-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12258.0 lumens
Efficiency: N/A
Efficacy: 92.0 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

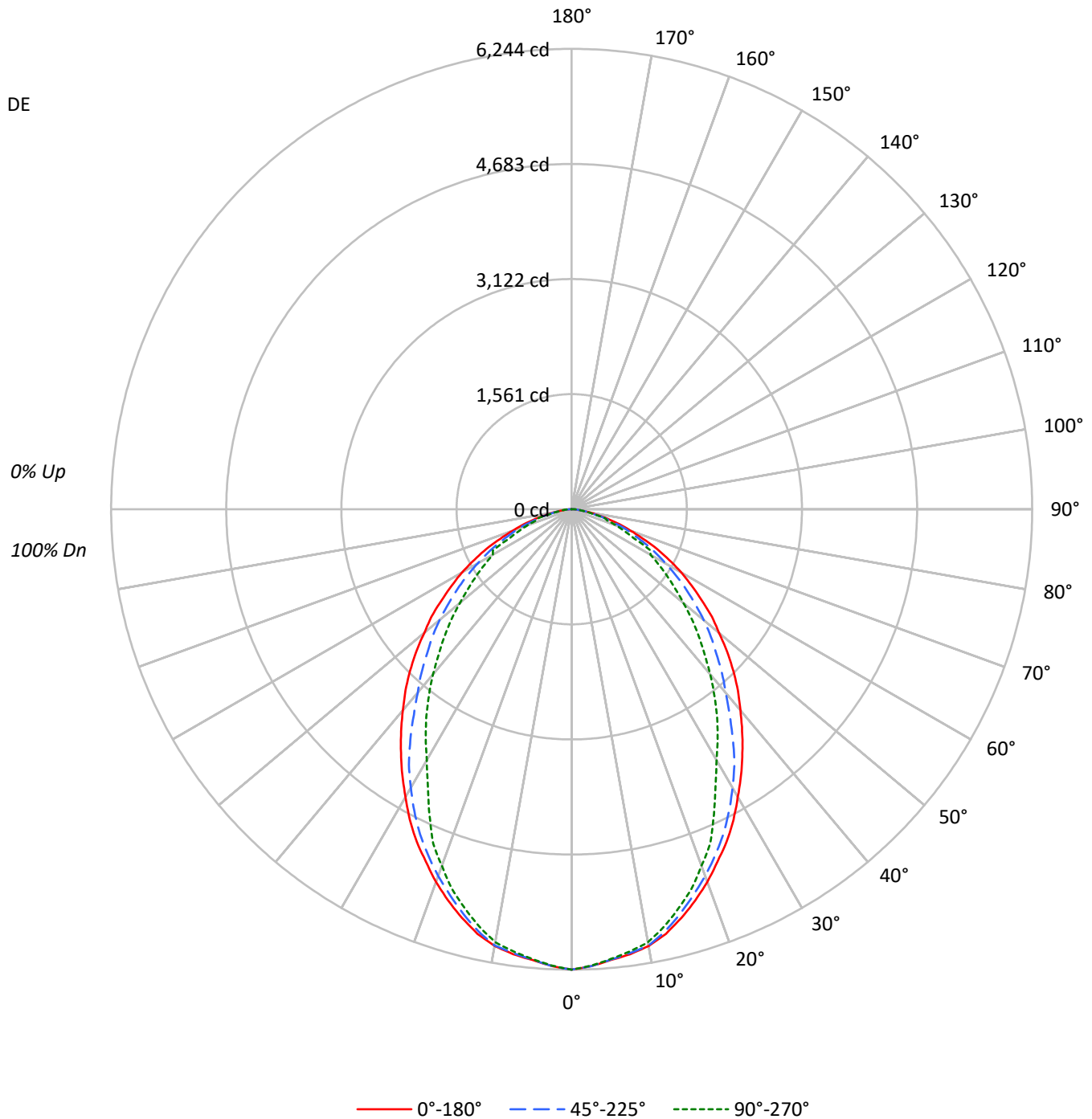
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8401	8401	8401
5°	8287	8277	8268
10°	8215	8205	8146
15°	7994	7913	7803
20°	7700	7576	7369
25°	7384	7223	6773
30°	6998	6774	6101
35°	6628	6260	5644
40°	6251	5706	5135
45°	5893	5274	4643
50°	5455	4896	4140
55°	5046	4437	3708
60°	4623	3963	3322
65°	4068	3470	2942
70°	3351	3039	2499
75°	2664	2327	2439
80°	1790	1678	1566
85°	1115	1337	1561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5893 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	581.2	4.7
10°-20°	1595.2	13.0
20°-30°	2208.4	18.0
30°-40°	2354.8	19.2
40°-50°	2148.3	17.5
50°-60°	1683.0	13.7
60°-70°	1096.9	8.9
70°-80°	486.0	4.0
80°-90°	104.3	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°	4384.8	35.8
0°-40°	6739.6	55.0
0°-60°	10570.8	86.2
0°-90°	12258.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12258.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6244	6244	6244	6244	6244	
5°	6136	6129	6129	6121	6121	582
15°	5739	5739	5681	5623	5602	1613
25°	4974	4945	4865	4692	4562	2283
35°	4035	4006	3811	3523	3436	2523
45°	3097	3032	2772	2541	2440	2385
55°	2151	2086	1891	1668	1581	1929
65°	1278	1206	1090	1112	924	1259
75°	512	476	448	426	469	549
85°	72	79	87	94	101	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6244.1	6244.1	6244.1	6244.1	6244.1
2.5°	6200.8	6200.8	6200.8	6193.5	6193.5
5°	6135.8	6128.6	6128.6	6121.3	6121.3
7.5°	6085.3	6078.0	6070.8	6063.6	6049.2
10°	6013.1	6013.1	6005.8	5969.8	5962.5
12.5°	5897.6	5890.4	5861.5	5810.9	5796.5
15°	5738.8	5738.8	5681.0	5623.3	5601.6
17.5°	5565.5	5558.3	5486.1	5428.4	5399.5
20°	5377.8	5363.4	5291.2	5197.4	5146.8
22.5°	5168.5	5168.5	5081.9	4959.2	4908.6
25°	4973.6	4944.7	4865.3	4692.1	4562.1
27.5°	4749.8	4706.5	4619.9	4374.5	4222.9
30°	4504.4	4482.7	4360.0	4042.4	3926.9
32.5°	4273.4	4237.3	4107.4	3775.3	3681.5
35°	4035.2	4006.3	3811.4	3522.7	3436.0
37.5°	3797.0	3760.9	3515.4	3284.4	3176.2
40°	3558.8	3515.4	3248.4	3039.0	2923.5
42.5°	3335.0	3277.2	3017.4	2793.6	2663.7
45°	3096.8	3031.8	2771.9	2540.9	2439.9
47.5°	2858.6	2800.8	2562.6	2324.4	2208.9
50°	2605.9	2555.4	2338.8	2100.6	1977.9
52.5°	2396.6	2317.2	2107.8	1869.6	1768.5
55°	2151.1	2086.2	1891.3	1667.5	1580.9
57.5°	1927.4	1862.4	1681.9	1472.6	1400.4
60°	1718.0	1624.2	1472.6	1292.1	1234.4
62.5°	1487.0	1414.8	1284.9	1133.3	1205.5
65°	1277.7	1205.5	1090.0	1111.7	924.0
67.5°	1046.7	1010.6	909.5	808.5	779.6
70°	851.8	808.5	772.4	664.1	635.2
72.5°	678.5	635.2	584.7	527.0	505.3
75°	512.5	476.4	447.6	425.9	469.2
77.5°	353.7	339.3	317.6	296.0	288.7
80°	231.0	223.8	216.6	209.3	202.1
82.5°	137.2	137.2	137.2	137.2	137.2
85°	72.2	79.4	86.6	93.8	101.1
87.5°	43.3	43.3	50.5	57.7	65.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)