

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: P563483

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563483
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-35-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10913.0 lumens
Efficiency: N/A
Efficacy: 109.2 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

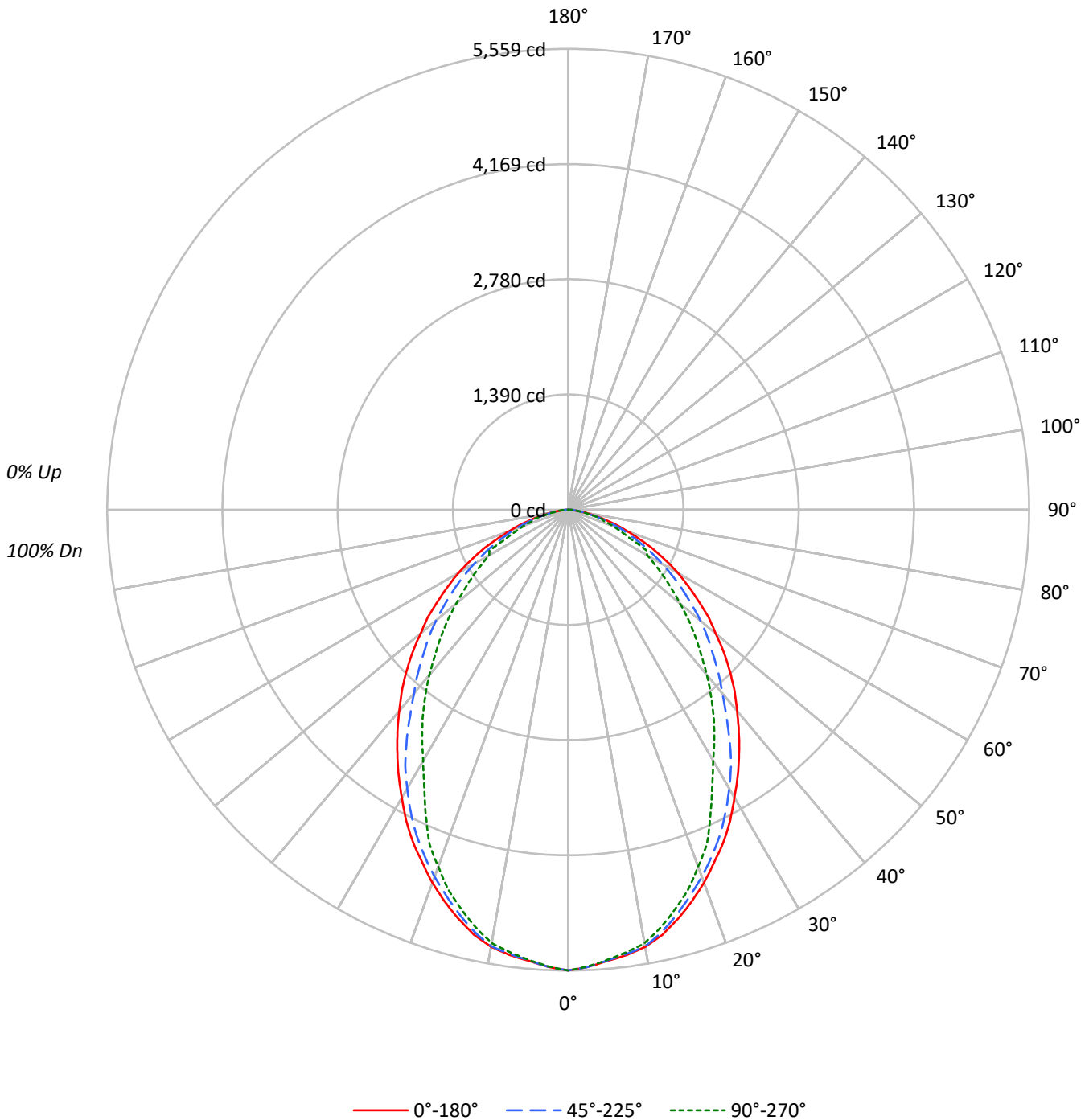
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7479	7479	7479
5°	7378	7369	7361
10°	7314	7305	7252
15°	7117	7045	6947
20°	6855	6745	6561
25°	6574	6430	6030
30°	6230	6031	5432
35°	5901	5573	5025
40°	5565	5079	4571
45°	5246	4696	4133
50°	4856	4358	3686
55°	4492	3950	3301
60°	4116	3528	2957
65°	3621	3089	2619
70°	2983	2705	2225
75°	2372	2071	2171
80°	1593	1494	1394
85°	993	1190	1389

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5246 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	517.5	4.7
10°-20°	1420.1	13.0
20°-30°	1966.1	18.0
30°-40°	2096.4	19.2
40°-50°	1912.5	17.5
50°-60°	1498.3	13.7
60°-70°	976.5	8.9
70°-80°	432.6	4.0
80°-90°	92.9	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°	3903.7	35.8
0°-40°	6000.1	55.0
0°-60°	9410.9	86.2
0°-90°	10913.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10913.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5559	5559	5559	5559	5559	
5°	5462	5456	5456	5450	5450	519
15°	5109	5109	5058	5006	4987	1436
25°	4428	4402	4332	4177	4062	2033
35°	3592	3567	3393	3136	3059	2246
45°	2757	2699	2468	2262	2172	2124
55°	1915	1857	1684	1484	1407	1718
65°	1138	1073	970	990	823	1121
75°	456	424	398	379	418	489
85°	64	71	77	84	90	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5558.9	5558.9	5558.9	5558.9	5558.9
2.5°	5520.4	5520.4	5520.4	5514.0	5514.0
5°	5462.5	5456.1	5456.1	5449.7	5449.7
7.5°	5417.6	5411.1	5404.7	5398.3	5385.4
10°	5353.3	5353.3	5346.9	5314.7	5308.3
12.5°	5250.5	5244.0	5218.3	5173.3	5160.5
15°	5109.1	5109.1	5057.7	5006.3	4987.0
17.5°	4954.8	4948.4	4884.2	4832.7	4807.0
20°	4787.8	4774.9	4710.6	4627.1	4582.1
22.5°	4601.4	4601.4	4524.3	4415.0	4370.0
25°	4427.9	4402.2	4331.5	4177.2	4061.6
27.5°	4228.6	4190.1	4113.0	3894.5	3759.5
30°	4010.1	3990.9	3881.6	3598.8	3496.0
32.5°	3804.5	3772.4	3656.7	3361.1	3277.5
35°	3592.4	3566.7	3393.2	3136.1	3059.0
37.5°	3380.3	3348.2	3129.7	2924.1	2827.7
40°	3168.3	3129.7	2891.9	2705.6	2602.7
42.5°	2969.1	2917.6	2686.3	2487.1	2371.4
45°	2757.0	2699.1	2467.8	2262.1	2172.2
47.5°	2544.9	2493.5	2281.4	2069.3	1966.5
50°	2320.0	2275.0	2082.2	1870.1	1760.9
52.5°	2133.6	2062.9	1876.5	1664.5	1574.5
55°	1915.1	1857.3	1683.7	1484.5	1407.4
57.5°	1715.9	1658.0	1497.4	1311.0	1246.7
60°	1529.5	1446.0	1311.0	1150.3	1098.9
62.5°	1323.9	1259.6	1143.9	1009.0	1073.2
65°	1137.5	1073.2	970.4	989.7	822.6
67.5°	931.8	899.7	809.7	719.8	694.1
70°	758.3	719.8	687.6	591.2	565.5
72.5°	604.1	565.5	520.5	469.1	449.9
75°	456.3	424.2	398.4	379.2	417.7
77.5°	314.9	302.0	282.8	263.5	257.1
80°	205.6	199.2	192.8	186.4	179.9
82.5°	122.1	122.1	122.1	122.1	122.1
85°	64.3	70.7	77.1	83.5	90.0
87.5°	38.6	38.6	45.0	51.4	57.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)