

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: P563089

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563089
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-35-UNV-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13354.0 lumens
Efficiency: N/A
Efficacy: 103.0 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

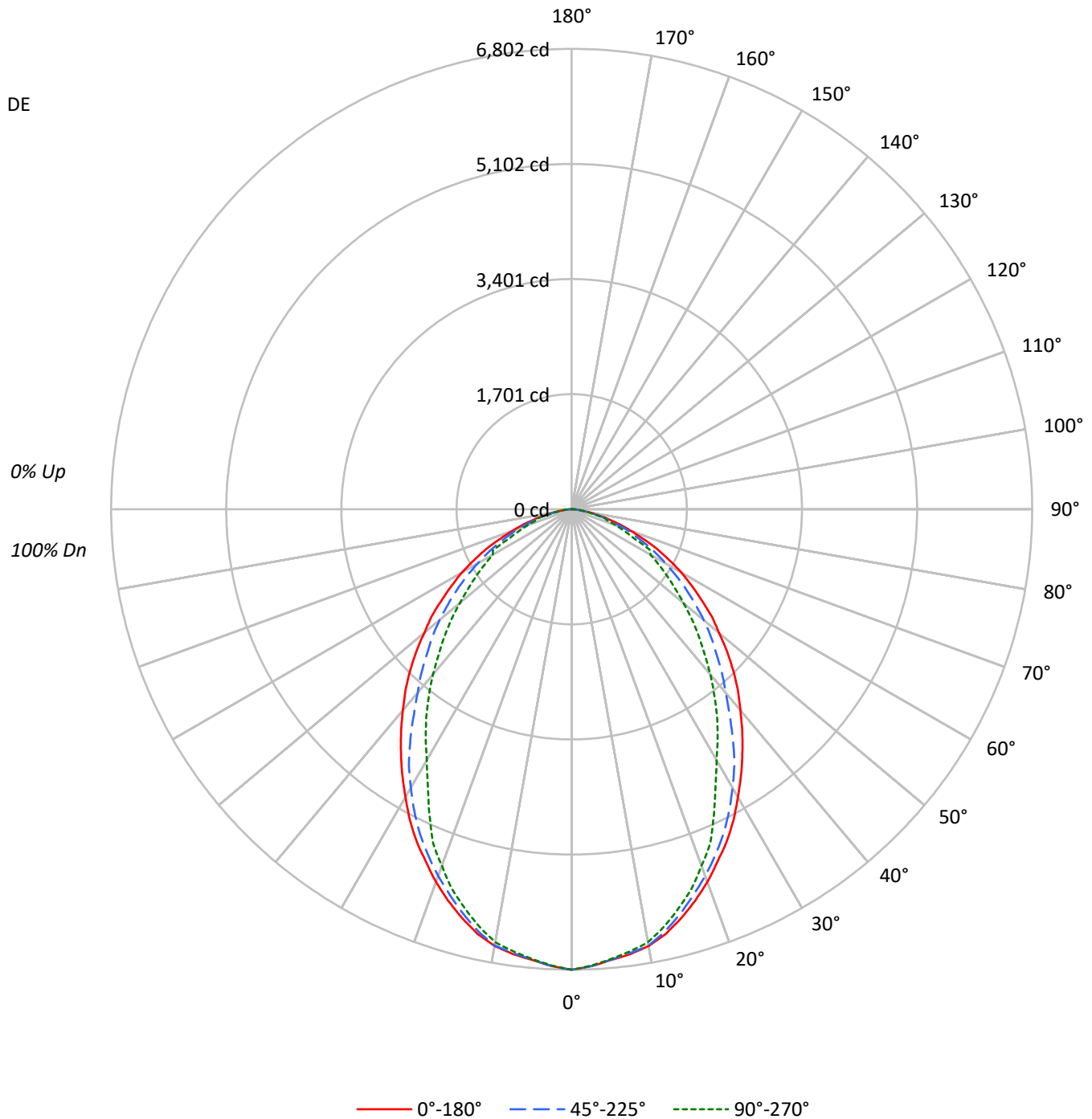
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563089

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-82-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563089

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-82-84-EDD

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°	9152	9152	9152
5°	9028	9017	9007
10°	8950	8939	8875
15°	8709	8621	8500
20°	8389	8254	8028
25°	8044	7869	7378
30°	7624	7379	6646
35°	7221	6820	6149
40°	6809	6216	5594
45°	6420	5746	5058
50°	5942	5333	4510
55°	5497	4833	4040
60°	5036	4317	3619
65°	4431	3781	3205
70°	3651	3310	2722
75°	2902	2535	2658
80°	1949	1828	1706
85°	1213	1457	1700

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6420 cd/sqm



TEST NUMBER: P563089

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-82-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	633.2	4.7
10°-20°	1737.8	13.0
20°-30°	2405.8	18.0
30°-40°	2565.3	19.2
40°-50°	2340.3	17.5
50°-60°	1833.5	13.7
60°-70°	1195.0	8.9
70°-80°	529.4	4.0
80°-90°	113.7	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°	4776.8	35.8
0°-40°	7342.2	55.0
0°-60°	11516.0	86.2
0°-90°	13354.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13354.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6802	6802	6802	6802	6802	
5°	6684	6676	6676	6669	6669	635
15°	6252	6252	6189	6126	6102	1758
25°	5418	5387	5300	5112	4970	2488
35°	4396	4364	4152	3838	3743	2748
45°	3374	3303	3020	2768	2658	2599
55°	2344	2273	2060	1817	1722	2102
65°	1392	1313	1188	1211	1007	1372
75°	558	519	488	464	511	598
85°	79	86	94	102	110	109
90°	0	0	0	0	0	



TEST NUMBER: P563089

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-82-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6802.3	6802.3	6802.3	6802.3	6802.3
2.5°	6755.2	6755.2	6755.2	6747.3	6747.3
5°	6684.4	6676.5	6676.5	6668.7	6668.7
7.5°	6629.3	6621.5	6613.6	6605.7	6590.0
10°	6550.7	6550.7	6542.8	6503.5	6495.7
12.5°	6424.9	6417.0	6385.6	6330.5	6314.8
15°	6251.9	6251.9	6189.0	6126.0	6102.5
17.5°	6063.1	6055.3	5976.6	5913.7	5882.3
20°	5858.7	5842.9	5764.3	5662.1	5607.0
22.5°	5630.6	5630.6	5536.2	5402.6	5347.5
25°	5418.3	5386.8	5300.3	5111.6	4970.0
27.5°	5174.5	5127.3	5033.0	4765.6	4600.4
30°	4907.1	4883.5	4749.8	4403.8	4278.0
32.5°	4655.5	4616.2	4474.6	4112.9	4010.6
35°	4396.0	4364.5	4152.2	3837.6	3743.3
37.5°	4136.5	4097.1	3829.8	3578.1	3460.2
40°	3876.9	3829.8	3538.8	3310.7	3184.9
42.5°	3633.2	3570.3	3287.1	3043.4	2901.8
45°	3373.7	3302.9	3019.8	2768.1	2658.0
47.5°	3114.1	3051.2	2791.7	2532.2	2406.4
50°	2838.9	2783.9	2547.9	2288.4	2154.7
52.5°	2610.8	2524.3	2296.3	2036.8	1926.7
55°	2343.5	2272.7	2060.4	1816.6	1722.2
57.5°	2099.7	2028.9	1832.3	1604.3	1525.6
60°	1871.6	1769.4	1604.3	1407.7	1344.7
62.5°	1620.0	1541.3	1399.8	1234.6	1313.3
65°	1391.9	1313.3	1187.5	1211.1	1006.6
67.5°	1140.3	1101.0	990.9	880.8	849.3
70°	928.0	880.8	841.4	723.5	692.0
72.5°	739.2	692.0	637.0	574.1	550.5
75°	558.3	519.0	487.6	464.0	511.2
77.5°	385.3	369.6	346.0	322.4	314.6
80°	251.6	243.8	235.9	228.1	220.2
82.5°	149.4	149.4	149.4	149.4	149.4
85°	78.6	86.5	94.4	102.2	110.1
87.5°	47.2	47.2	55.0	62.9	70.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)