

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: P564166

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564166
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-50-UNV-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12425.0 lumens
Efficiency: N/A
Efficacy: 93.3 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

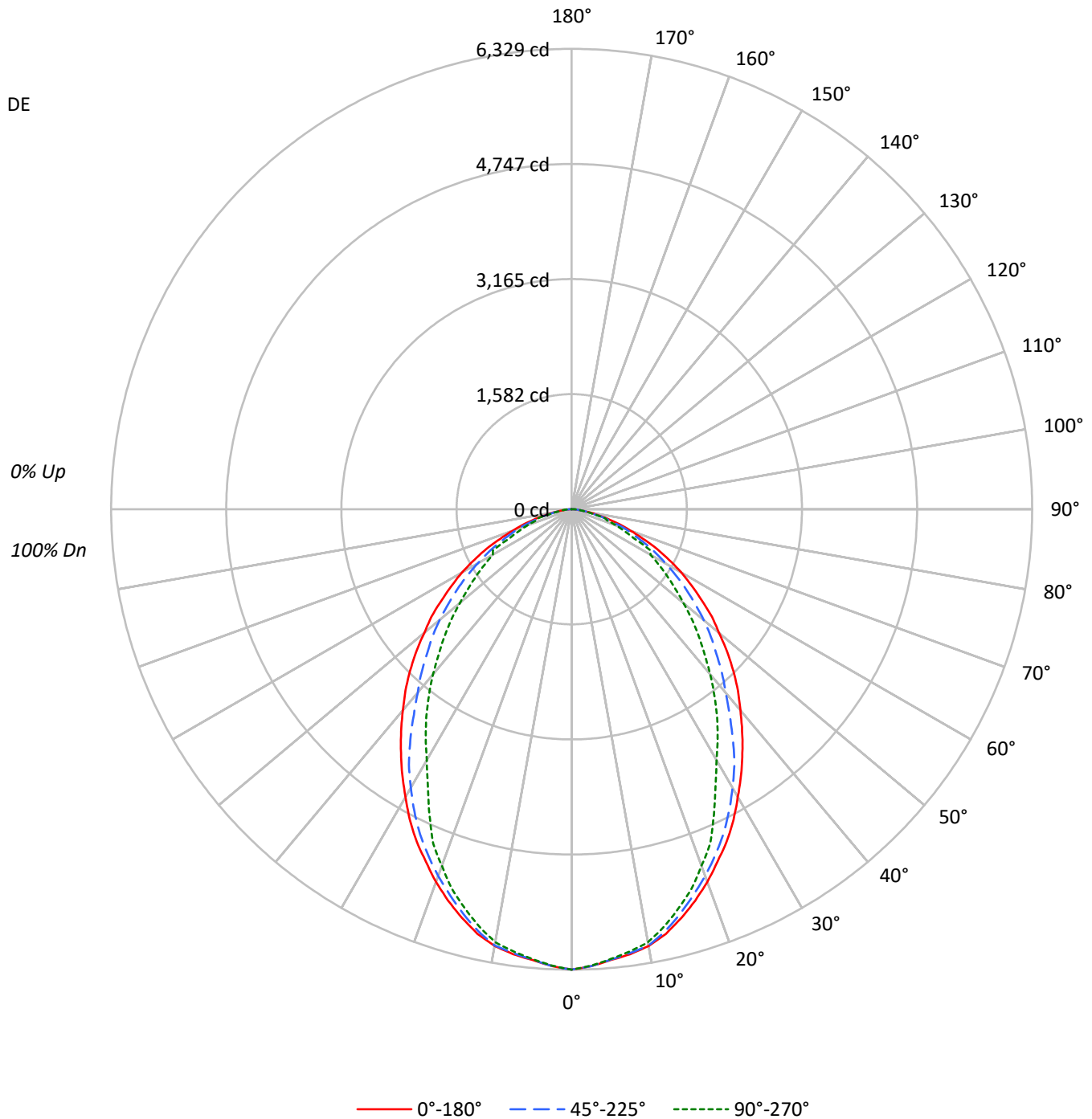
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P564166

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-81-87-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P564166

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-81-87-EDD-90

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	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°	8516	8516	8516
5°	8400	8390	8380
10°	8327	8317	8257
15°	8103	8021	7909
20°	7805	7679	7470
25°	7484	7321	6865
30°	7094	6866	6184
35°	6718	6346	5721
40°	6336	5783	5205
45°	5973	5346	4706
50°	5529	4962	4196
55°	5115	4497	3759
60°	4686	4017	3367
65°	4123	3518	2982
70°	3397	3080	2533
75°	2701	2358	2472
80°	1814	1701	1588
85°	1130	1355	1581

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5973 cd/sqm



TEST NUMBER: P564166

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-81-87-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	589.2	4.7
10°-20°	1616.9	13.0
20°-30°	2238.5	18.0
30°-40°	2386.9	19.2
40°-50°	2177.5	17.5
50°-60°	1705.9	13.7
60°-70°	1111.8	8.9
70°-80°	492.6	4.0
80°-90°	105.7	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°	4444.5	35.8
0°-40°	6831.4	55.0
0°-60°	10714.8	86.2
0°-90°	12425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12425.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6329	6329	6329	6329	6329	
5°	6219	6212	6212	6205	6205	590
15°	5817	5817	5758	5700	5678	1635
25°	5041	5012	4932	4756	4624	2314
35°	4090	4061	3863	3571	3483	2557
45°	3139	3073	2810	2576	2473	2418
55°	2180	2115	1917	1690	1602	1956
65°	1295	1222	1105	1127	937	1276
75°	520	483	454	432	476	557
85°	73	80	88	95	102	101
90°	0	0	0	0	0	



TEST NUMBER: P564166

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-81-87-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6329.1	6329.1	6329.1	6329.1	6329.1
2.5°	6285.2	6285.2	6285.2	6277.9	6277.9
5°	6219.4	6212.1	6212.1	6204.7	6204.7
7.5°	6168.2	6160.8	6153.5	6146.2	6131.6
10°	6095.0	6095.0	6087.7	6051.1	6043.8
12.5°	5977.9	5970.6	5941.3	5890.1	5875.5
15°	5816.9	5816.9	5758.4	5699.9	5677.9
17.5°	5641.3	5634.0	5560.9	5502.3	5473.1
20°	5451.1	5436.5	5363.3	5268.2	5217.0
22.5°	5238.9	5238.9	5151.1	5026.7	4975.5
25°	5041.4	5012.1	4931.6	4756.0	4624.3
27.5°	4814.5	4770.6	4682.8	4434.0	4280.4
30°	4565.8	4543.8	4419.4	4097.5	3980.4
32.5°	4331.6	4295.0	4163.3	3826.7	3731.6
35°	4090.2	4060.9	3863.3	3570.7	3482.9
37.5°	3848.7	3812.1	3563.3	3329.2	3219.4
40°	3607.2	3563.3	3292.6	3080.4	2963.3
42.5°	3380.4	3321.9	3058.5	2831.6	2699.9
45°	3139.0	3073.1	2809.7	2575.6	2473.1
47.5°	2897.5	2839.0	2597.5	2356.0	2239.0
50°	2641.4	2590.2	2370.7	2129.2	2004.8
52.5°	2429.2	2348.7	2136.5	1895.1	1792.6
55°	2180.4	2114.6	1917.0	1690.2	1602.4
57.5°	1953.6	1887.8	1704.8	1492.7	1419.5
60°	1741.4	1646.3	1492.7	1309.7	1251.2
62.5°	1507.3	1434.1	1302.4	1148.8	1221.9
65°	1295.1	1221.9	1104.9	1126.8	936.6
67.5°	1061.0	1024.4	921.9	819.5	790.2
70°	863.4	819.5	782.9	673.2	643.9
72.5°	687.8	643.9	592.7	534.1	512.2
75°	519.5	482.9	453.6	431.7	475.6
77.5°	358.5	343.9	321.9	300.0	292.7
80°	234.1	226.8	219.5	212.2	204.9
82.5°	139.0	139.0	139.0	139.0	139.0
85°	73.2	80.5	87.8	95.1	102.4
87.5°	43.9	43.9	51.2	58.5	65.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)