

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: P563649

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563649
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-LD4-4HI-35-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 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: 18189.0 lumens
Efficiency: N/A
Efficacy: 105.3 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

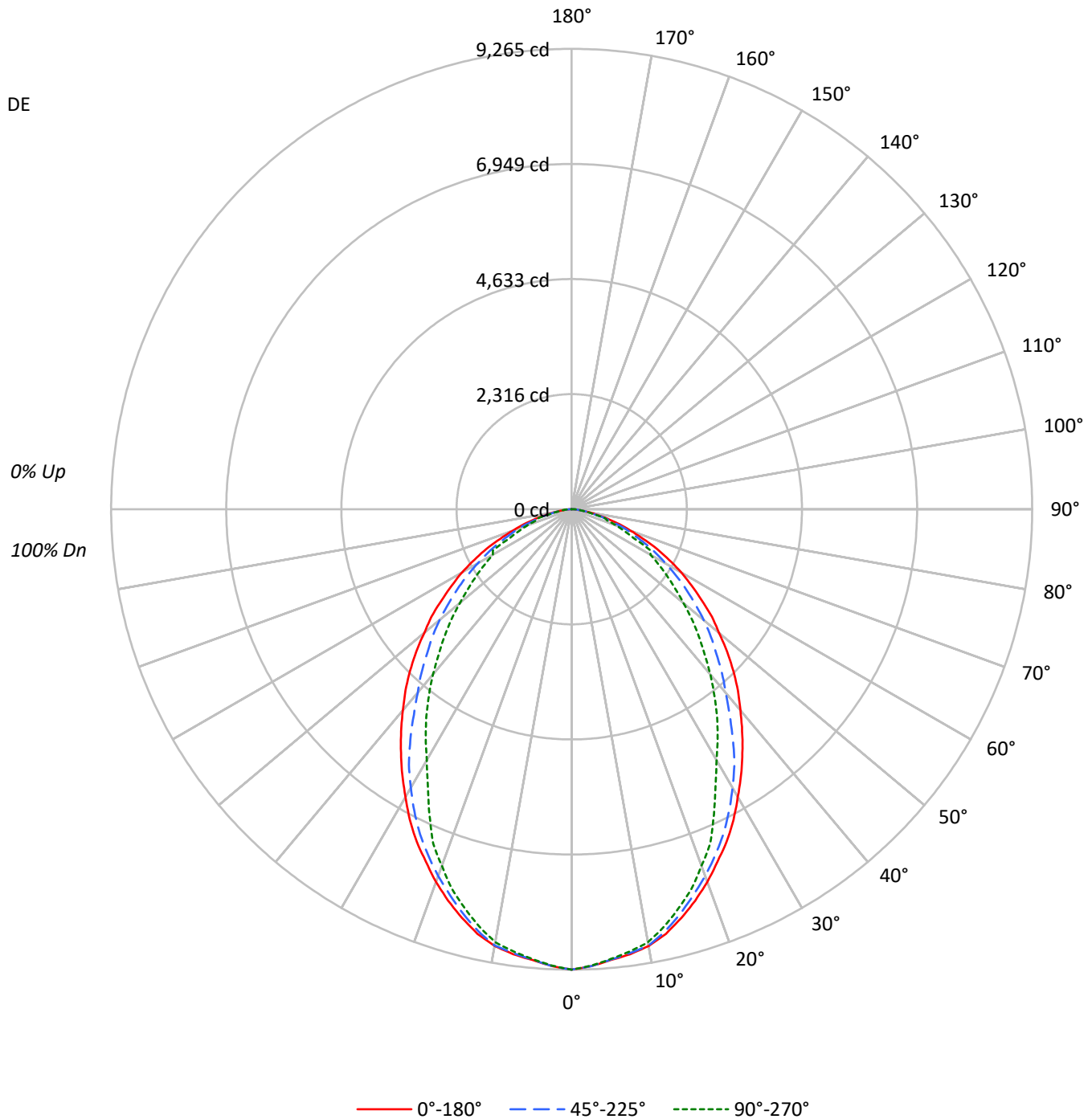
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563649

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-81-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563649

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-81-84-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	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°	12466	12466	12466
5°	12297	12282	12268
10°	12190	12176	12088
15°	11862	11742	11578
20°	11426	11242	10935
25°	10956	10718	10050
30°	10384	10051	9053
35°	9835	9289	8375
40°	9275	8466	7619
45°	8744	7826	6889
50°	8094	7264	6143
55°	7488	6583	5503
60°	6860	5880	4929
65°	6036	5149	4365
70°	4972	4509	3708
75°	3954	3452	3619
80°	2656	2490	2324
85°	1653	1984	2316

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8744 cd/sqm



TEST NUMBER: P563649

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-81-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	862.5	4.7
10°-20°	2367.0	13.0
20°-30°	3276.9	18.0
30°-40°	3494.1	19.2
40°-50°	3187.7	17.5
50°-60°	2497.3	13.7
60°-70°	1627.6	8.9
70°-80°	721.1	4.0
80°-90°	154.8	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°	6506.4	35.8
0°-40°	10000.5	55.0
0°-60°	15685.5	86.2
0°-90°	18189.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18189.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9265	9265	9265	9265	9265	
5°	9105	9094	9094	9083	9083	864
15°	8515	8515	8430	8344	8312	2394
25°	7380	7337	7219	6962	6770	3388
35°	5988	5945	5656	5227	5099	3743
45°	4595	4499	4113	3770	3620	3540
55°	3192	3096	2806	2474	2346	2863
65°	1896	1789	1617	1650	1371	1868
75°	760	707	664	632	696	815
85°	107	118	128	139	150	149
90°	0	0	0	0	0	



TEST NUMBER: P563649

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-81-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9265.2	9265.2	9265.2	9265.2	9265.2
2.5°	9201.0	9201.0	9201.0	9190.3	9190.3
5°	9104.6	9093.9	9093.9	9083.1	9083.1
7.5°	9029.6	9018.9	9008.2	8997.5	8976.0
10°	8922.5	8922.5	8911.8	8858.2	8847.5
12.5°	8751.1	8740.4	8697.5	8622.6	8601.1
15°	8515.4	8515.4	8429.8	8344.1	8311.9
17.5°	8258.4	8247.7	8140.6	8054.9	8012.0
20°	7979.9	7958.5	7851.3	7712.1	7637.1
22.5°	7669.3	7669.3	7540.7	7358.6	7283.7
25°	7380.1	7337.2	7219.4	6962.3	6769.5
27.5°	7048.0	6983.7	6855.2	6491.0	6266.1
30°	6683.8	6651.7	6469.6	5998.3	5826.9
32.5°	6341.1	6287.5	6094.7	5602.0	5462.7
35°	5987.6	5944.7	5655.5	5227.1	5098.6
37.5°	5634.1	5580.6	5216.4	4873.6	4713.0
40°	5280.6	5216.4	4820.1	4509.4	4338.1
42.5°	4948.6	4862.9	4477.3	4145.3	3952.5
45°	4595.1	4498.7	4113.1	3770.4	3620.4
47.5°	4241.7	4156.0	3802.5	3449.0	3277.6
50°	3866.8	3791.8	3470.4	3117.0	2934.9
52.5°	3556.1	3438.3	3127.7	2774.2	2624.3
55°	3192.0	3095.6	2806.3	2474.3	2345.8
57.5°	2859.9	2763.5	2495.7	2185.1	2078.0
60°	2549.3	2410.0	2185.1	1917.3	1831.6
62.5°	2206.5	2099.4	1906.6	1681.7	1788.8
65°	1895.9	1788.8	1617.4	1649.5	1371.0
67.5°	1553.1	1499.6	1349.6	1199.7	1156.8
70°	1263.9	1199.7	1146.1	985.4	942.6
72.5°	1006.9	942.6	867.6	781.9	749.8
75°	760.5	706.9	664.1	632.0	696.2
77.5°	524.9	503.4	471.3	439.2	428.5
80°	342.8	332.0	321.3	310.6	299.9
82.5°	203.5	203.5	203.5	203.5	203.5
85°	107.1	117.8	128.5	139.2	150.0
87.5°	64.3	64.3	75.0	85.7	96.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)