

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: P563655

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563655
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-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17055.0 lumens
Efficiency: N/A
Efficacy: 98.7 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

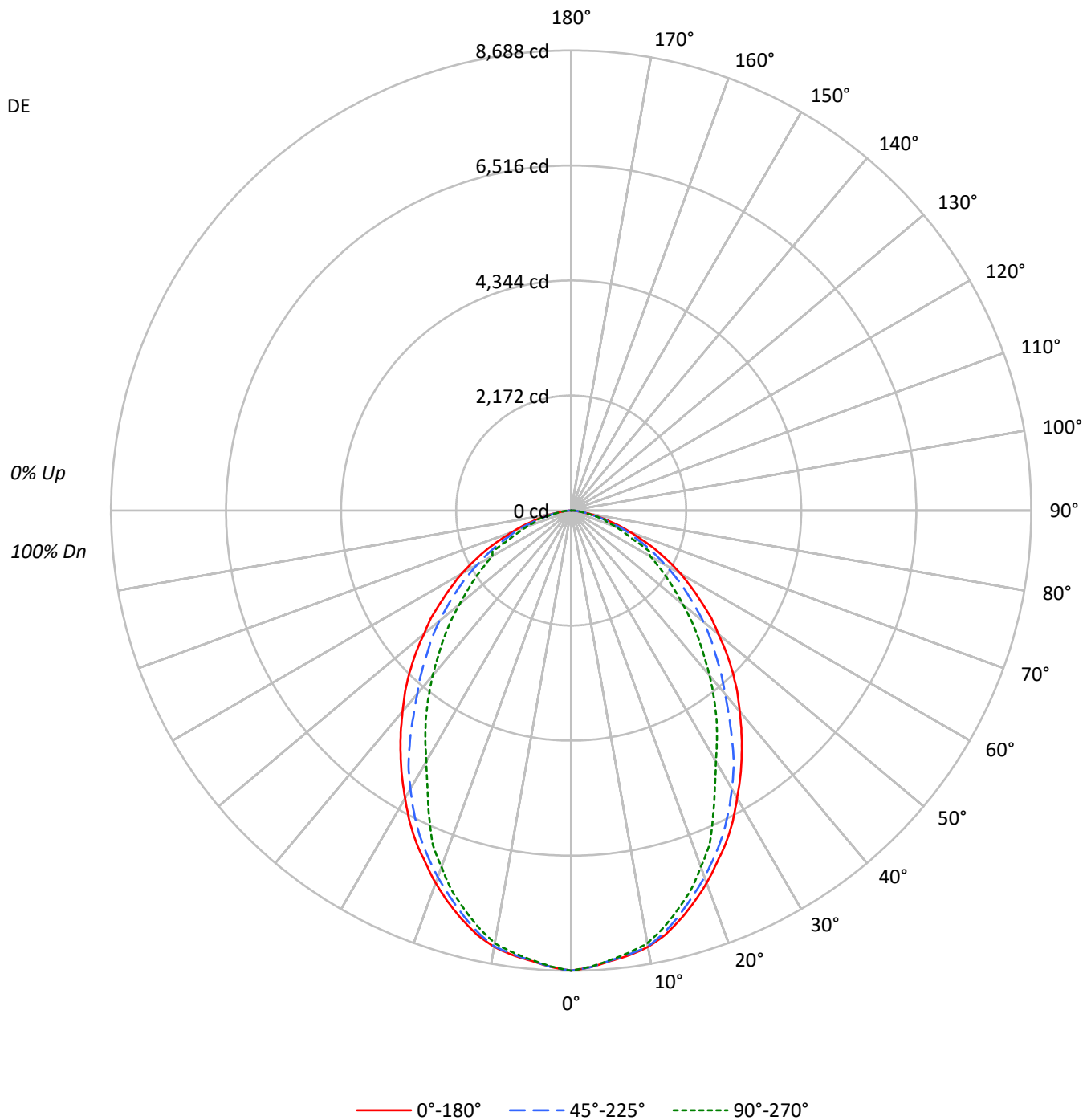
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563655

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-81-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563655

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-81-87-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°	11689	11689	11689
5°	11530	11517	11503
10°	11430	11417	11334
15°	11122	11010	10856
20°	10714	10541	10253
25°	10273	10050	9423
30°	9737	9425	8488
35°	9222	8710	7852
40°	8697	7938	7144
45°	8198	7339	6459
50°	7589	6812	5760
55°	7021	6173	5160
60°	6432	5514	4621
65°	5660	4828	4093
70°	4662	4227	3477
75°	3707	3237	3394
80°	2490	2335	2179
85°	1550	1860	2171

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8198 cd/sqm



TEST NUMBER: P563655

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-81-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	808.7	4.7
10°-20°	2219.4	13.0
20°-30°	3072.6	18.0
30°-40°	3276.3	19.2
40°-50°	2988.9	17.5
50°-60°	2341.6	13.7
60°-70°	1526.1	8.9
70°-80°	676.1	4.0
80°-90°	145.2	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°	6100.7	35.8
0°-40°	9377.0	55.0
0°-60°	14707.5	86.2
0°-90°	17055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17055.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8688	8688	8688	8688	8688	
5°	8537	8527	8527	8517	8517	810
15°	7984	7984	7904	7824	7794	2245
25°	6920	6880	6769	6528	6348	3177
35°	5614	5574	5303	4901	4781	3510
45°	4309	4218	3857	3535	3395	3319
55°	2993	2903	2631	2320	2200	2684
65°	1778	1677	1517	1547	1286	1752
75°	713	663	623	593	653	764
85°	100	110	120	131	141	139
90°	0	0	0	0	0	



TEST NUMBER: P563655

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-81-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8687.6	8687.6	8687.6	8687.6	8687.6
2.5°	8627.3	8627.3	8627.3	8617.3	8617.3
5°	8536.9	8526.9	8526.9	8516.9	8516.9
7.5°	8466.6	8456.6	8446.5	8436.5	8416.4
10°	8366.2	8366.2	8356.2	8305.9	8295.9
12.5°	8205.5	8195.5	8155.3	8085.0	8064.9
15°	7984.5	7984.5	7904.2	7823.9	7793.7
17.5°	7743.5	7733.5	7633.0	7552.7	7512.5
20°	7482.4	7462.3	7361.9	7231.3	7161.0
22.5°	7191.1	7191.1	7070.6	6899.9	6829.5
25°	6919.9	6879.8	6769.3	6528.2	6347.5
27.5°	6608.6	6548.3	6427.8	6086.3	5875.4
30°	6267.1	6237.0	6066.2	5624.3	5463.6
32.5°	5945.7	5895.5	5714.7	5252.7	5122.2
35°	5614.3	5574.1	5302.9	4901.2	4780.7
37.5°	5282.9	5232.6	4891.2	4569.8	4419.1
40°	4951.4	4891.2	4519.6	4228.3	4067.6
42.5°	4640.1	4559.7	4198.2	3886.8	3706.0
45°	4308.6	4218.3	3856.7	3535.3	3394.7
47.5°	3977.2	3896.9	3565.4	3234.0	3073.3
50°	3625.7	3555.4	3254.1	2922.6	2751.9
52.5°	3334.4	3223.9	2932.7	2601.3	2460.6
55°	2992.9	2902.6	2631.4	2320.0	2199.5
57.5°	2681.6	2591.2	2340.1	2048.9	1948.4
60°	2390.3	2259.8	2048.9	1797.8	1717.4
62.5°	2069.0	1968.5	1787.7	1576.8	1677.3
65°	1777.7	1677.3	1516.6	1546.7	1285.6
67.5°	1456.3	1406.1	1265.5	1124.9	1084.7
70°	1185.1	1124.9	1074.6	924.0	883.8
72.5°	944.1	883.8	813.5	733.2	703.0
75°	713.1	662.9	622.7	592.6	652.8
77.5°	492.1	472.0	441.9	411.8	401.7
80°	321.4	311.3	301.3	291.3	281.2
82.5°	190.8	190.8	190.8	190.8	190.8
85°	100.4	110.5	120.5	130.6	140.6
87.5°	60.3	60.3	70.3	80.3	90.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)