

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: P563056

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563056
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-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12015.0 lumens
Efficiency: N/A
Efficacy: 92.7 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

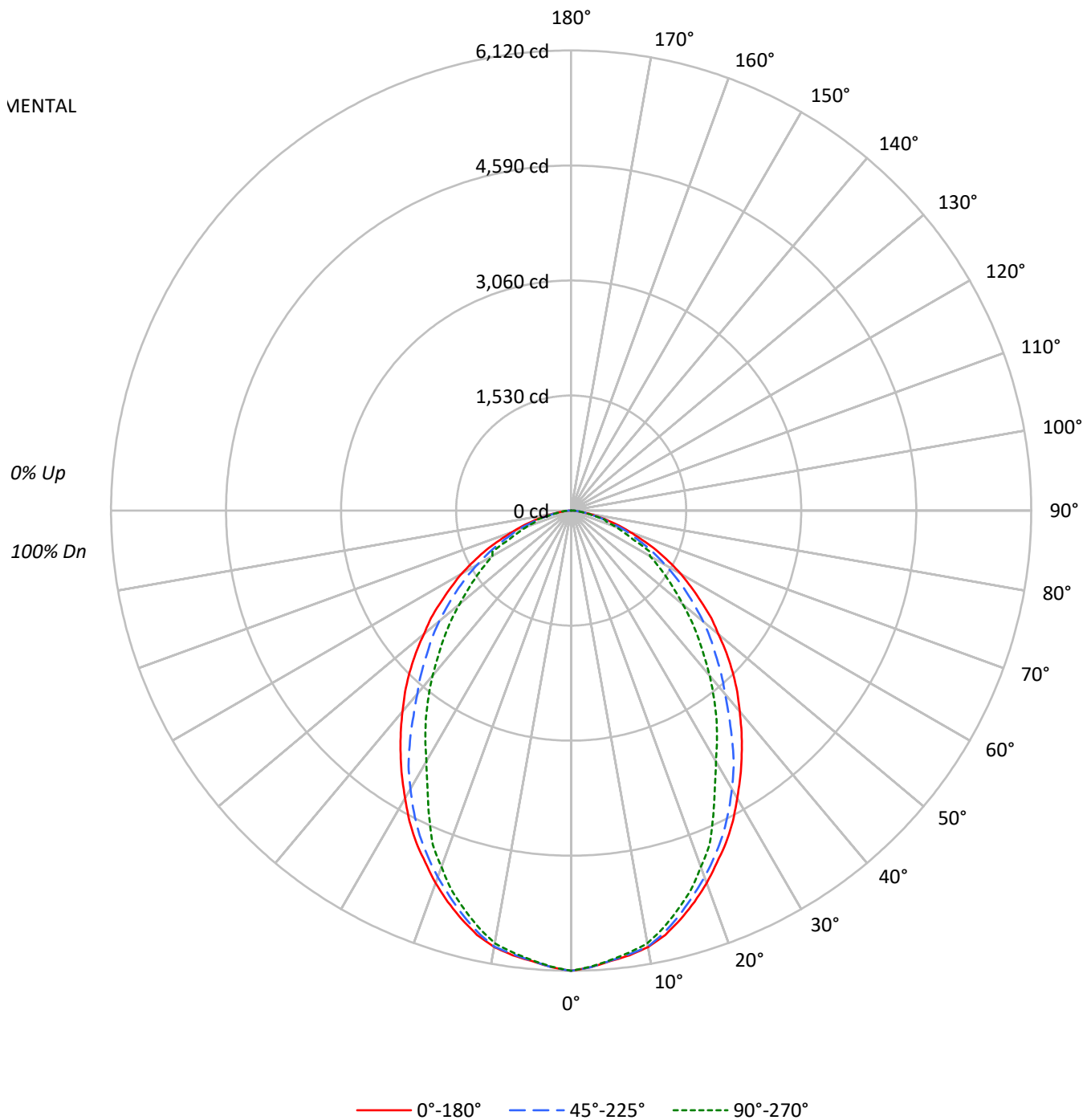
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563056

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-80-84-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563056

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-80-84-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	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°	8235	8235	8235
5°	8123	8113	8104
10°	8053	8043	7985
15°	7835	7757	7648
20°	7548	7426	7223
25°	7237	7080	6639
30°	6859	6640	5980
35°	6497	6136	5532
40°	6127	5592	5033
45°	5776	5170	4551
50°	5346	4799	4058
55°	4946	4349	3635
60°	4532	3884	3256
65°	3987	3401	2883
70°	3284	2978	2449
75°	2612	2281	2391
80°	1754	1645	1535
85°	1093	1311	1530

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5776 cd/sqm



TEST NUMBER: P563056

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-80-84-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.7	4.7
10°-20°	1563.5	13.0
20°-30°	2164.6	18.0
30°-40°	2308.1	19.2
40°-50°	2105.7	17.5
50°-60°	1649.6	13.7
60°-70°	1075.1	8.9
70°-80°	476.3	4.0
80°-90°	102.3	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°	4297.9	35.8
0°-40°	6606.0	55.0
0°-60°	10361.3	86.2
0°-90°	12015.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12015.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6120	6120	6120	6120	6120	
5°	6014	6007	6007	6000	6000	571
15°	5625	5625	5568	5512	5491	1581
25°	4875	4847	4769	4599	4472	2238
35°	3955	3927	3736	3453	3368	2473
45°	3035	2972	2717	2491	2392	2338
55°	2108	2045	1854	1634	1550	1891
65°	1252	1182	1068	1090	906	1234
75°	502	467	439	418	460	538
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



TEST NUMBER: P563056

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-80-84-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6120.3	6120.3	6120.3	6120.3	6120.3
2.5°	6077.8	6077.8	6077.8	6070.8	6070.8
5°	6014.1	6007.1	6007.1	6000.0	6000.0
7.5°	5964.6	5957.5	5950.5	5943.4	5929.2
10°	5893.9	5893.9	5886.8	5851.4	5844.3
12.5°	5780.7	5773.6	5745.3	5695.8	5681.6
15°	5625.0	5625.0	5568.4	5511.8	5490.6
17.5°	5455.2	5448.1	5377.4	5320.8	5292.5
20°	5271.2	5257.1	5186.3	5094.3	5044.8
22.5°	5066.0	5066.0	4981.1	4860.8	4811.3
25°	4875.0	4846.7	4768.9	4599.1	4471.7
27.5°	4655.7	4613.2	4528.3	4287.7	4139.1
30°	4415.1	4393.9	4273.6	3962.3	3849.1
32.5°	4188.7	4153.3	4025.9	3700.5	3608.5
35°	3955.2	3926.9	3735.8	3452.8	3367.9
37.5°	3721.7	3686.3	3445.8	3219.3	3113.2
40°	3488.2	3445.8	3184.0	2978.8	2865.6
42.5°	3268.9	3212.3	2957.5	2738.2	2610.8
45°	3035.4	2971.7	2717.0	2490.6	2391.5
47.5°	2801.9	2745.3	2511.8	2278.3	2165.1
50°	2554.2	2504.7	2292.5	2059.0	1938.7
52.5°	2349.1	2271.2	2066.0	1832.5	1733.5
55°	2108.5	2044.8	1853.8	1634.4	1549.5
57.5°	1889.2	1825.5	1648.6	1443.4	1372.6
60°	1684.0	1592.0	1443.4	1266.5	1209.9
62.5°	1457.5	1386.8	1259.4	1110.8	1181.6
65°	1252.4	1181.6	1068.4	1089.6	905.7
67.5°	1025.9	990.6	891.5	792.5	764.2
70°	834.9	792.5	757.1	650.9	622.6
72.5°	665.1	622.6	573.1	516.5	495.3
75°	502.4	467.0	438.7	417.5	459.9
77.5°	346.7	332.5	311.3	290.1	283.0
80°	226.4	219.3	212.3	205.2	198.1
82.5°	134.4	134.4	134.4	134.4	134.4
85°	70.8	77.8	84.9	92.0	99.1
87.5°	42.5	42.5	49.5	56.6	63.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)