

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: P562967

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562967
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-LD4-2STD-40-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6874.0 lumens
Efficiency: N/A
Efficacy: 103.2 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

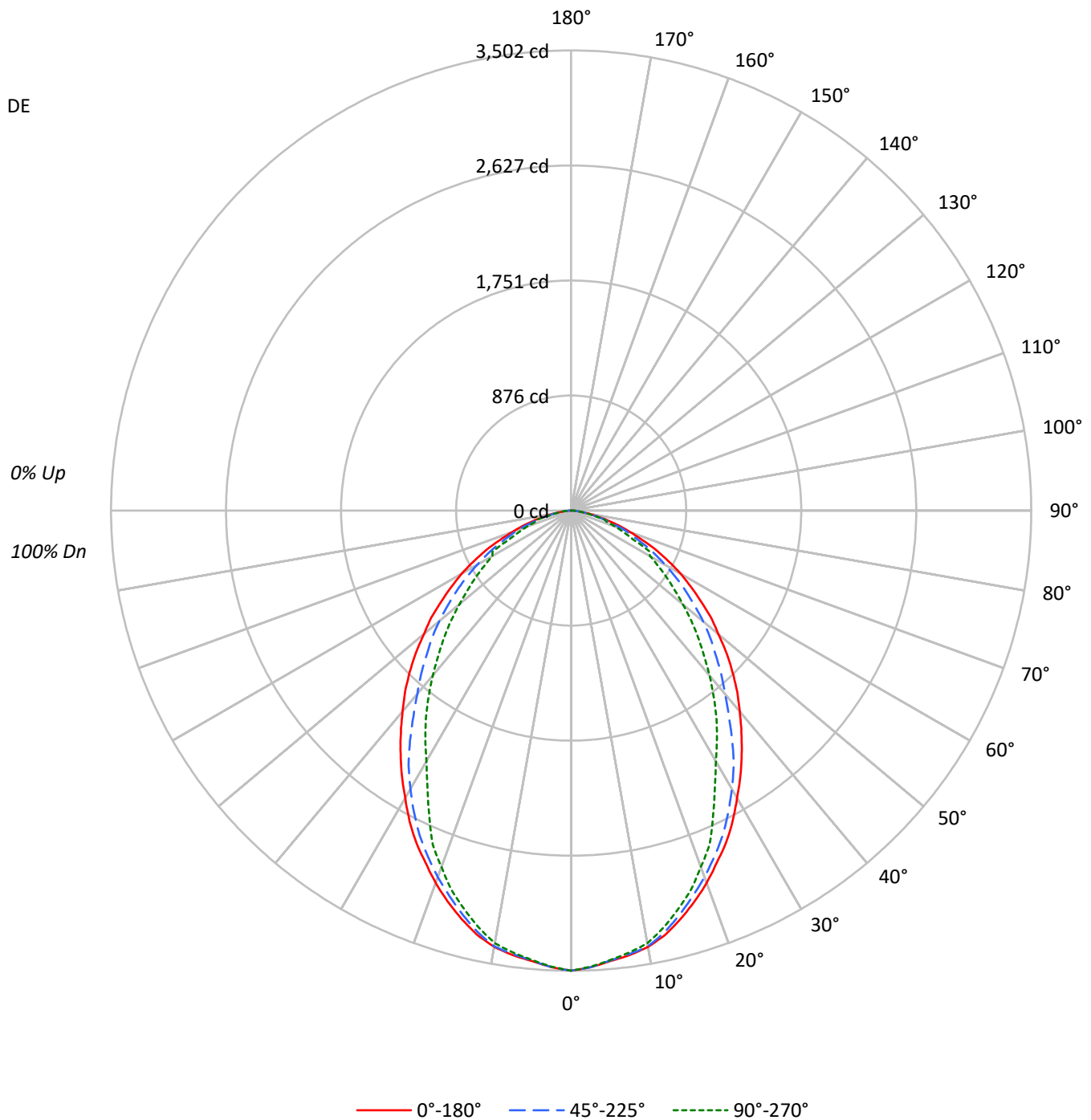
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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°	4711	4711	4711
5°	4647	4642	4636
10°	4607	4601	4568
15°	4483	4438	4376
20°	4318	4249	4133
25°	4141	4051	3798
30°	3924	3799	3421
35°	3717	3511	3165
40°	3505	3199	2879
45°	3304	2958	2603
50°	3059	2745	2322
55°	2830	2488	2080
60°	2592	2222	1863
65°	2281	1946	1649
70°	1879	1704	1401
75°	1494	1305	1368
80°	1003	941	878
85°	625	750	875

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3304 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.9	4.7
10°-20°	894.5	13.0
20°-30°	1238.4	18.0
30°-40°	1320.5	19.2
40°-50°	1204.7	17.5
50°-60°	943.8	13.7
60°-70°	615.1	8.9
70°-80°	272.5	4.0
80°-90°	58.5	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°	2458.9	35.8
0°-40°	3779.4	55.0
0°-60°	5927.9	86.2
0°-90°	6874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6874.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3502	3502	3502	3502	3502	
5°	3441	3437	3437	3433	3433	327
15°	3218	3218	3186	3153	3141	905
25°	2789	2773	2728	2631	2558	1280
35°	2263	2247	2137	1975	1927	1415
45°	1737	1700	1554	1425	1368	1338
55°	1206	1170	1061	935	886	1082
65°	716	676	611	623	518	706
75°	287	267	251	239	263	308
85°	40	44	49	53	57	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3501.5	3501.5	3501.5	3501.5	3501.5
2.5°	3477.2	3477.2	3477.2	3473.2	3473.2
5°	3440.8	3436.8	3436.8	3432.7	3432.7
7.5°	3412.5	3408.4	3404.4	3400.3	3392.2
10°	3372.0	3372.0	3367.9	3347.7	3343.7
12.5°	3307.2	3303.2	3287.0	3258.6	3250.5
15°	3218.2	3218.2	3185.8	3153.4	3141.3
17.5°	3121.0	3117.0	3076.5	3044.1	3027.9
20°	3015.8	3007.7	2967.2	2914.6	2886.2
22.5°	2898.4	2898.4	2849.8	2781.0	2752.6
25°	2789.1	2772.9	2728.4	2631.2	2558.3
27.5°	2663.6	2639.3	2590.7	2453.1	2368.1
30°	2526.0	2513.8	2445.0	2266.9	2202.1
32.5°	2396.4	2376.2	2303.3	2117.1	2064.5
35°	2262.8	2246.6	2137.3	1975.4	1926.9
37.5°	2129.3	2109.0	1971.4	1841.8	1781.1
40°	1995.7	1971.4	1821.6	1704.2	1639.4
42.5°	1870.2	1837.8	1692.1	1566.6	1493.7
45°	1736.6	1700.2	1554.4	1424.9	1368.2
47.5°	1603.0	1570.6	1437.0	1303.5	1238.7
50°	1461.3	1433.0	1311.6	1178.0	1109.2
52.5°	1343.9	1299.4	1182.0	1048.4	991.8
55°	1206.3	1169.9	1060.6	935.1	886.5
57.5°	1080.8	1044.4	943.2	825.8	785.3
60°	963.4	910.8	825.8	724.6	692.2
62.5°	833.9	793.4	720.5	635.5	676.0
65°	716.5	676.0	611.2	623.4	518.1
67.5°	587.0	566.7	510.0	453.4	437.2
70°	477.7	453.4	433.1	372.4	356.2
72.5°	380.5	356.2	327.9	295.5	283.4
75°	287.4	267.2	251.0	238.8	263.1
77.5°	198.4	190.3	178.1	166.0	161.9
80°	129.5	125.5	121.4	117.4	113.3
82.5°	76.9	76.9	76.9	76.9	76.9
85°	40.5	44.5	48.6	52.6	56.7
87.5°	24.3	24.3	28.3	32.4	36.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)