

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: P563029

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563029
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-50-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7225.0 lumens
Efficiency: N/A
Efficacy: 108.5 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

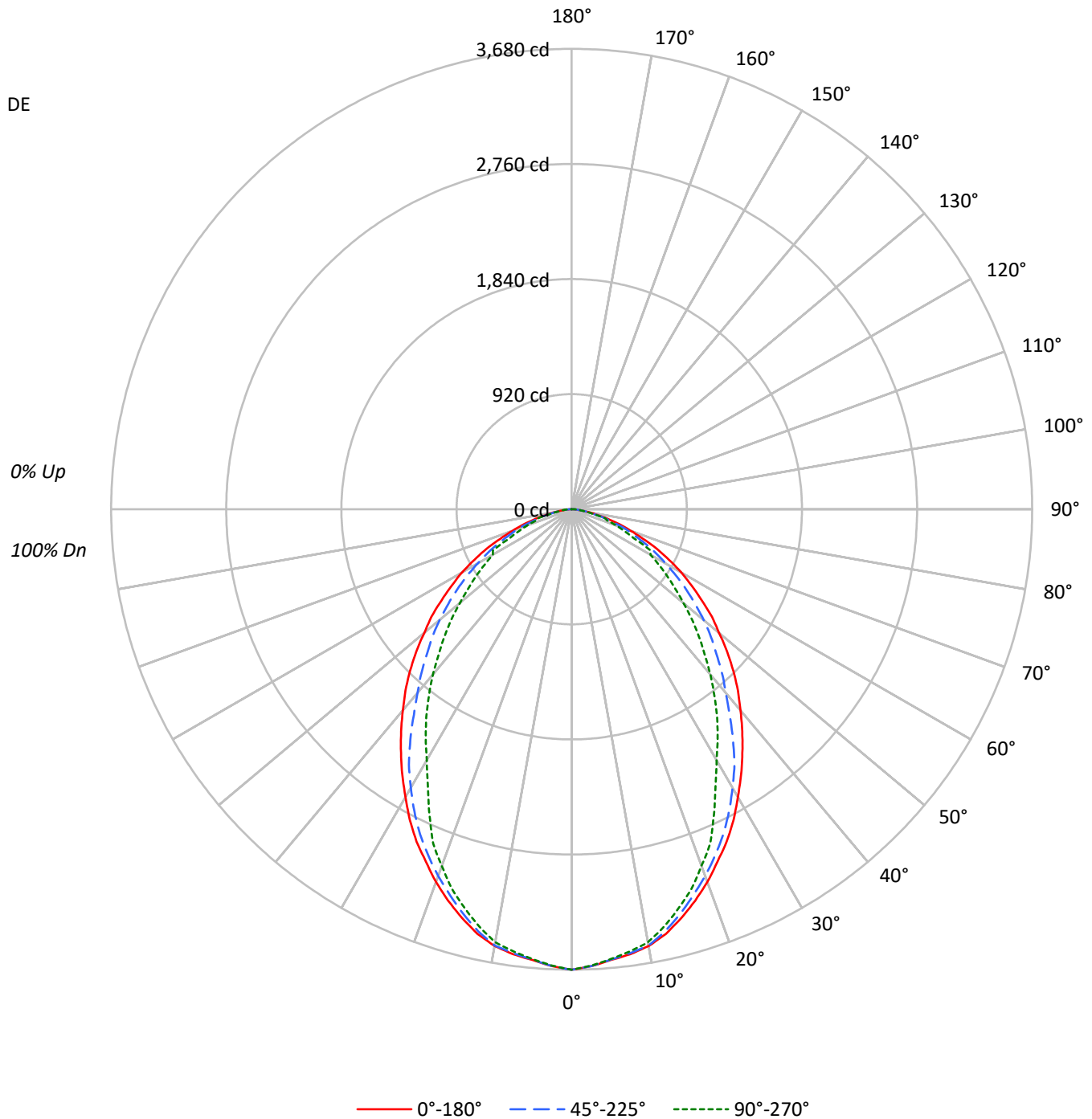
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	4952	4952	4952
5°	4885	4879	4873
10°	4842	4836	4802
15°	4712	4664	4599
20°	4539	4465	4344
25°	4352	4257	3992
30°	4125	3993	3596
35°	3907	3690	3326
40°	3684	3363	3027
45°	3473	3109	2736
50°	3215	2885	2440
55°	2974	2615	2186
60°	2725	2336	1958
65°	2398	2046	1734
70°	1975	1791	1473
75°	1570	1371	1438
80°	1055	989	923
85°	656	789	920

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3473 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.6	4.7
10°-20°	940.2	13.0
20°-30°	1301.7	18.0
30°-40°	1387.9	19.2
40°-50°	1266.2	17.5
50°-60°	992.0	13.7
60°-70°	646.5	8.9
70°-80°	286.4	4.0
80°-90°	61.5	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°	2584.4	35.8
0°-40°	3972.4	55.0
0°-60°	6230.6	86.2
0°-90°	7225.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7225.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3680	3680	3680	3680	3680	
5°	3616	3612	3612	3608	3608	343
15°	3382	3382	3348	3314	3302	951
25°	2932	2914	2868	2766	2689	1346
35°	2378	2361	2246	2076	2025	1487
45°	1825	1787	1634	1498	1438	1406
55°	1268	1230	1115	983	932	1137
65°	753	710	642	655	545	742
75°	302	281	264	251	277	324
85°	42	47	51	55	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3680.3	3680.3	3680.3	3680.3	3680.3
2.5°	3654.8	3654.8	3654.8	3650.5	3650.5
5°	3616.5	3612.2	3612.2	3608.0	3608.0
7.5°	3586.7	3582.5	3578.2	3574.0	3565.4
10°	3544.2	3544.2	3539.9	3518.6	3514.4
12.5°	3476.1	3471.8	3454.8	3425.0	3416.5
15°	3382.5	3382.5	3348.5	3314.4	3301.6
17.5°	3280.4	3276.1	3233.6	3199.5	3182.5
20°	3169.8	3161.2	3118.7	3063.4	3033.6
22.5°	3046.4	3046.4	2995.3	2923.0	2893.2
25°	2931.5	2914.5	2867.7	2765.6	2689.0
27.5°	2799.6	2774.1	2723.0	2578.4	2489.0
30°	2654.9	2642.2	2569.8	2382.6	2314.6
32.5°	2518.8	2497.5	2420.9	2225.2	2169.9
35°	2378.4	2361.4	2246.5	2076.3	2025.2
37.5°	2238.0	2216.7	2072.0	1935.9	1872.1
40°	2097.6	2072.0	1914.6	1791.2	1723.2
42.5°	1965.7	1931.6	1778.5	1646.6	1570.0
45°	1825.3	1787.0	1633.8	1497.7	1438.1
47.5°	1684.9	1650.8	1510.4	1370.0	1301.9
50°	1535.9	1506.2	1378.5	1238.1	1165.8
52.5°	1412.6	1365.8	1242.4	1102.0	1042.4
55°	1267.9	1229.6	1114.7	982.8	931.8
57.5°	1136.0	1097.7	991.3	868.0	825.4
60°	1012.6	957.3	868.0	761.6	727.6
62.5°	876.5	833.9	757.3	668.0	710.5
65°	753.1	710.5	642.5	655.2	544.6
67.5°	616.9	595.7	536.1	476.5	459.5
70°	502.1	476.5	455.3	391.4	374.4
72.5°	399.9	374.4	344.6	310.6	297.8
75°	302.1	280.8	263.8	251.0	276.6
77.5°	208.5	200.0	187.2	174.4	170.2
80°	136.2	131.9	127.6	123.4	119.1
82.5°	80.8	80.8	80.8	80.8	80.8
85°	42.5	46.8	51.1	55.3	59.6
87.5°	25.5	25.5	29.8	34.0	38.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)