

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: P562902

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562902
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-35-UNV-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5695.0 lumens
Efficiency: N/A
Efficacy: 85.5 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

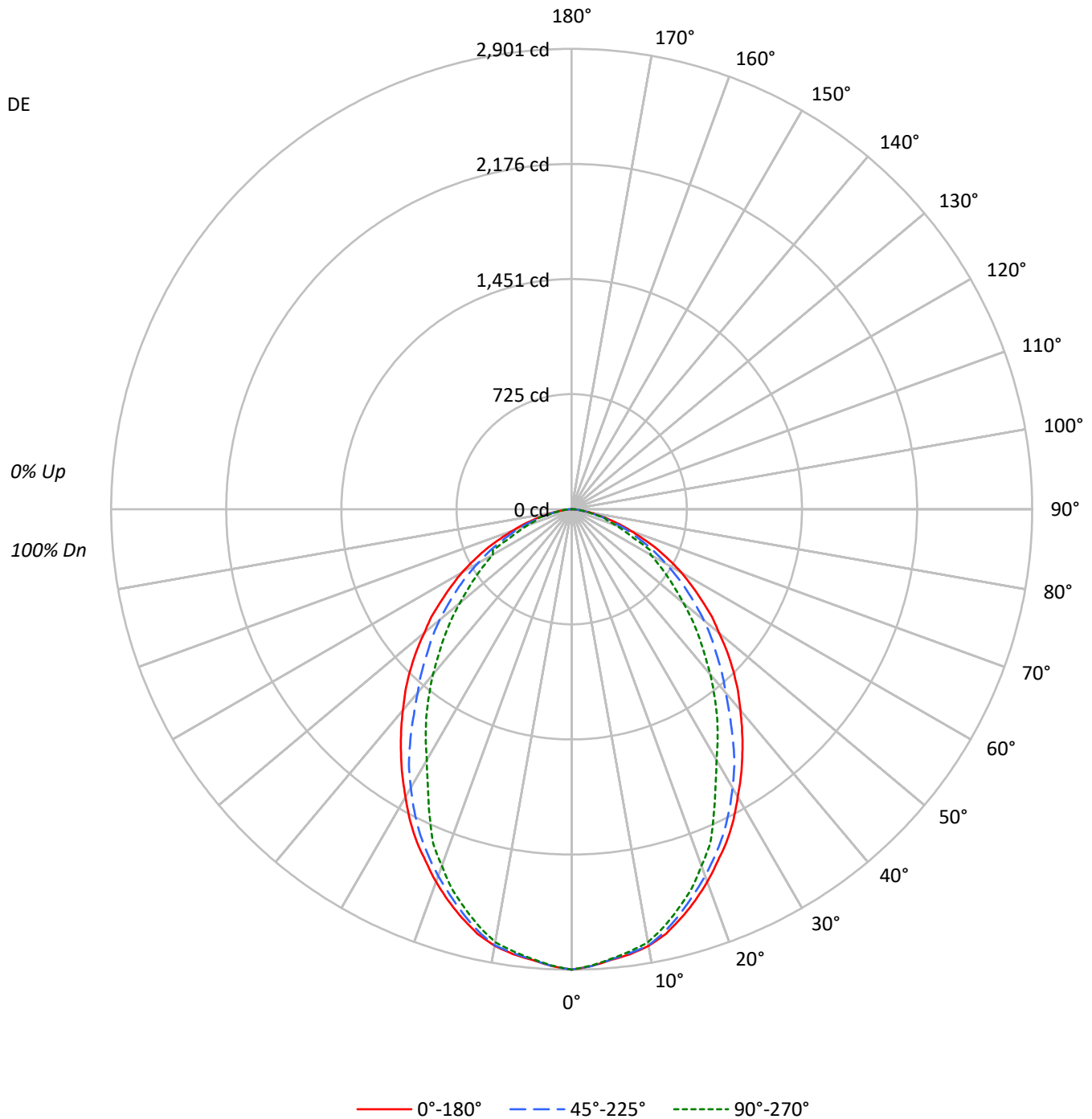
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3903	3903	3903
5°	3850	3846	3841
10°	3817	3812	3785
15°	3714	3677	3625
20°	3577	3520	3424
25°	3430	3356	3147
30°	3251	3147	2834
35°	3079	2909	2622
40°	2904	2651	2386
45°	2738	2450	2157
50°	2534	2274	1923
55°	2344	2061	1723
60°	2148	1841	1543
65°	1890	1612	1367
70°	1557	1412	1161
75°	1238	1081	1133
80°	831	779	728
85°	517	621	726

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2738 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	270.0	4.7
10°-20°	741.1	13.0
20°-30°	1026.0	18.0
30°-40°	1094.0	19.2
40°-50°	998.1	17.5
50°-60°	781.9	13.7
60°-70°	509.6	8.9
70°-80°	225.8	4.0
80°-90°	48.5	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°	2037.1	35.8
0°-40°	3131.2	55.0
0°-60°	4911.1	86.2
0°-90°	5695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5695.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2901	2901	2901	2901	2901	
5°	2851	2847	2847	2844	2844	271
15°	2666	2666	2639	2612	2602	750
25°	2311	2297	2260	2180	2120	1061
35°	1875	1861	1771	1637	1596	1172
45°	1439	1409	1288	1180	1134	1108
55°	999	969	879	775	734	896
65°	594	560	506	516	429	585
75°	238	221	208	198	218	255
85°	34	37	40	44	47	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2901.0	2901.0	2901.0	2901.0	2901.0
2.5°	2880.8	2880.8	2880.8	2877.5	2877.5
5°	2850.7	2847.3	2847.3	2843.9	2843.9
7.5°	2827.2	2823.8	2820.5	2817.1	2810.4
10°	2793.6	2793.6	2790.3	2773.5	2770.2
12.5°	2740.0	2736.6	2723.2	2699.7	2693.0
15°	2666.2	2666.2	2639.4	2612.5	2602.5
17.5°	2585.7	2582.4	2548.8	2522.0	2508.6
20°	2498.5	2491.8	2458.3	2414.7	2391.2
22.5°	2401.3	2401.3	2361.0	2304.0	2280.5
25°	2310.7	2297.3	2260.4	2179.9	2119.5
27.5°	2206.7	2186.6	2146.4	2032.3	1961.9
30°	2092.7	2082.7	2025.6	1878.1	1824.4
32.5°	1985.4	1968.6	1908.3	1754.0	1710.4
35°	1874.7	1861.3	1770.8	1636.6	1596.4
37.5°	1764.1	1747.3	1633.3	1525.9	1475.6
40°	1653.4	1633.3	1509.2	1411.9	1358.3
42.5°	1549.4	1522.6	1401.8	1297.9	1237.5
45°	1438.7	1408.6	1287.8	1180.5	1133.6
47.5°	1328.1	1301.2	1190.6	1079.9	1026.2
50°	1210.7	1187.2	1086.6	975.9	918.9
52.5°	1113.4	1076.5	979.3	868.6	821.7
55°	999.4	969.2	878.7	774.7	734.5
57.5°	895.4	865.3	781.4	684.2	650.6
60°	798.2	754.6	684.2	600.3	573.5
62.5°	690.9	657.3	597.0	526.5	560.1
65°	593.6	560.1	506.4	516.5	429.3
67.5°	486.3	469.5	422.6	375.6	362.2
70°	395.7	375.6	358.8	308.5	295.1
72.5°	315.2	295.1	271.7	244.8	234.8
75°	238.1	221.3	207.9	197.9	218.0
77.5°	164.3	157.6	147.6	137.5	134.1
80°	107.3	104.0	100.6	97.3	93.9
82.5°	63.7	63.7	63.7	63.7	63.7
85°	33.5	36.9	40.2	43.6	47.0
87.5°	20.1	20.1	23.5	26.8	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)