

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: P562566

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562566
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-LD4-2HI-40-UNV-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7237.0 lumens
Efficiency: N/A
Efficacy: 83.8 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

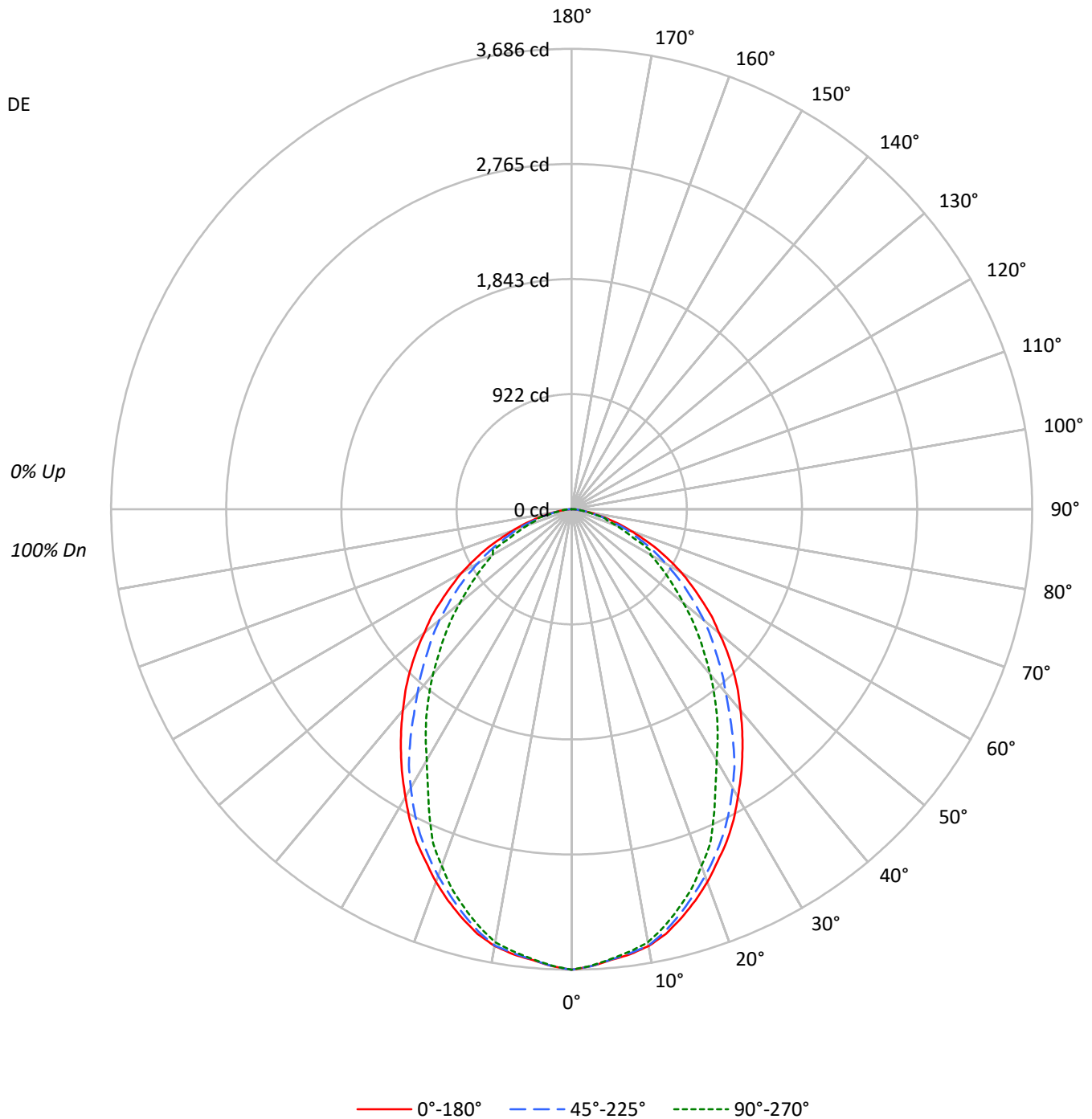
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4960	4960	4960
5°	4893	4887	4881
10°	4850	4844	4809
15°	4719	4672	4607
20°	4546	4473	4351
25°	4359	4264	3999
30°	4132	3999	3602
35°	3913	3696	3332
40°	3690	3368	3032
45°	3479	3114	2741
50°	3220	2890	2444
55°	2979	2619	2189
60°	2729	2340	1961
65°	2401	2049	1737
70°	1978	1794	1475
75°	1573	1373	1440
80°	1057	991	924
85°	658	789	922

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3479 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	343.2	4.7
10°-20°	941.8	13.0
20°-30°	1303.8	18.0
30°-40°	1390.2	19.2
40°-50°	1268.3	17.5
50°-60°	993.6	13.7
60°-70°	647.6	8.9
70°-80°	286.9	4.0
80°-90°	61.6	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°	2588.7	35.8
0°-40°	3979.0	55.0
0°-60°	6240.9	86.2
0°-90°	7237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7237.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3686	3686	3686	3686	3686	
5°	3622	3618	3618	3614	3614	344
15°	3388	3388	3354	3320	3307	952
25°	2936	2919	2872	2770	2693	1348
35°	2382	2365	2250	2080	2029	1489
45°	1828	1790	1636	1500	1440	1408
55°	1270	1232	1117	984	933	1139
65°	754	712	644	656	546	743
75°	303	281	264	251	277	324
85°	43	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°	3686.4	3686.4	3686.4	3686.4	3686.4
2.5°	3660.9	3660.9	3660.9	3656.6	3656.6
5°	3622.5	3618.2	3618.2	3614.0	3614.0
7.5°	3592.7	3588.4	3584.1	3579.9	3571.4
10°	3550.1	3550.1	3545.8	3524.5	3520.2
12.5°	3481.9	3477.6	3460.6	3430.7	3422.2
15°	3388.1	3388.1	3354.0	3319.9	3307.1
17.5°	3285.8	3281.6	3238.9	3204.9	3187.8
20°	3175.0	3166.5	3123.9	3068.5	3038.6
22.5°	3051.4	3051.4	3000.3	2927.8	2898.0
25°	2936.4	2919.3	2872.4	2770.2	2693.4
27.5°	2804.2	2778.7	2727.5	2582.6	2493.1
30°	2659.3	2646.6	2574.1	2386.6	2318.4
32.5°	2523.0	2501.7	2424.9	2228.9	2173.5
35°	2382.3	2365.3	2250.2	2079.7	2028.6
37.5°	2241.7	2220.4	2075.5	1939.1	1875.2
40°	2101.1	2075.5	1917.8	1794.2	1726.0
42.5°	1968.9	1934.8	1781.4	1649.3	1572.6
45°	1828.3	1789.9	1636.5	1500.1	1440.5
47.5°	1687.7	1653.6	1512.9	1372.3	1304.1
50°	1538.5	1508.7	1380.8	1240.2	1167.7
52.5°	1414.9	1368.0	1244.4	1103.8	1044.1
55°	1270.0	1231.7	1116.6	984.5	933.3
57.5°	1137.9	1099.5	993.0	869.4	826.8
60°	1014.3	958.9	869.4	762.9	728.8
62.5°	877.9	835.3	758.6	669.1	711.7
65°	754.3	711.7	643.5	656.3	545.5
67.5°	618.0	596.6	537.0	477.3	460.3
70°	502.9	477.3	456.0	392.1	375.0
72.5°	400.6	375.0	345.2	311.1	298.3
75°	302.6	281.3	264.2	251.4	277.0
77.5°	208.8	200.3	187.5	174.7	170.5
80°	136.4	132.1	127.9	123.6	119.3
82.5°	81.0	81.0	81.0	81.0	81.0
85°	42.6	46.9	51.1	55.4	59.7
87.5°	25.6	25.6	29.8	34.1	38.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)