

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: P563028

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563028
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-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6286.0 lumens
Efficiency: N/A
Efficacy: 94.4 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

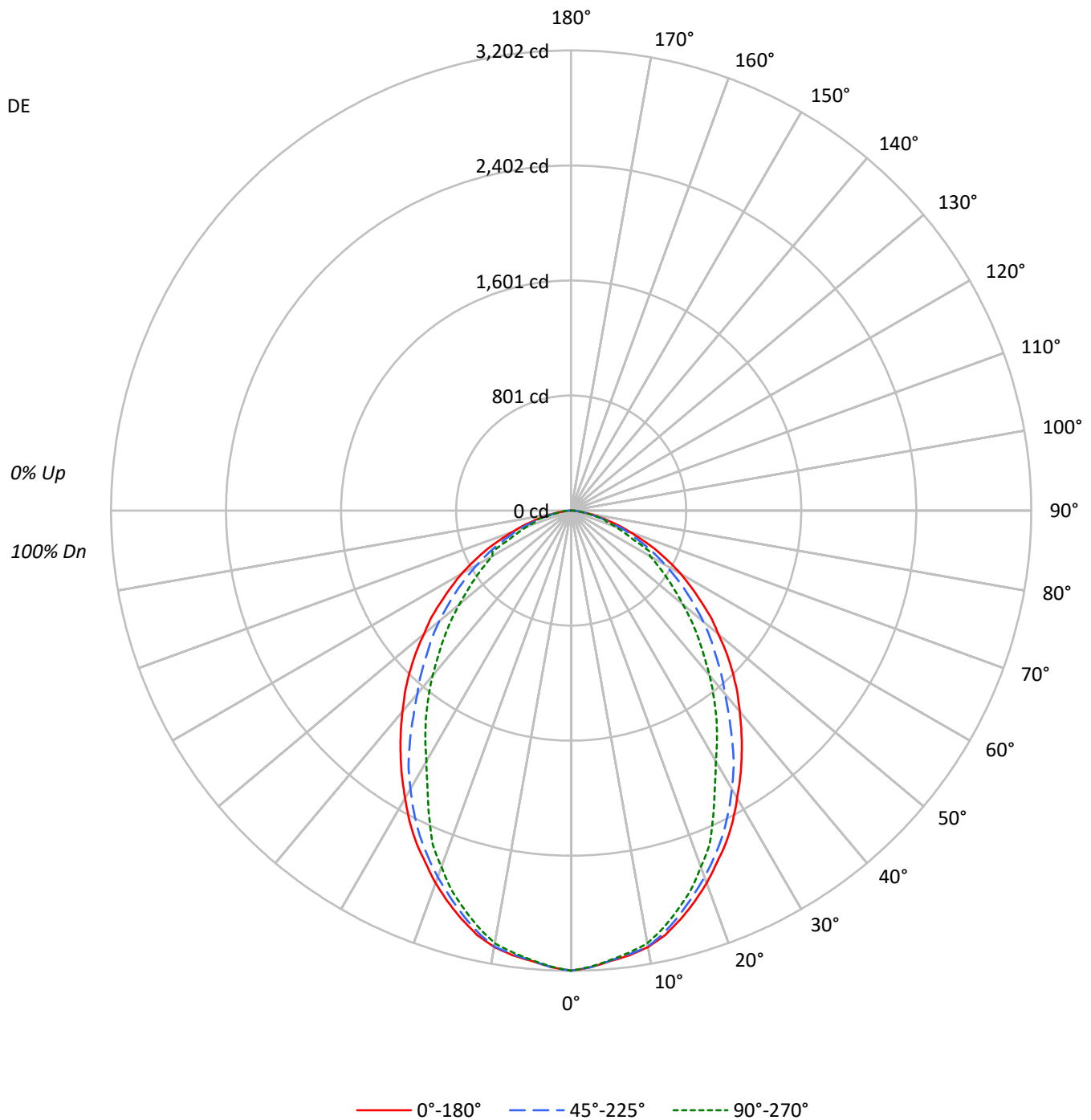
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4308	4308	4308
5°	4250	4245	4240
10°	4213	4208	4177
15°	4099	4058	4001
20°	3949	3885	3779
25°	3786	3704	3473
30°	3589	3474	3129
35°	3399	3210	2894
40°	3205	2926	2633
45°	3022	2705	2381
50°	2797	2511	2123
55°	2588	2275	1902
60°	2371	2032	1703
65°	2086	1780	1508
70°	1718	1558	1282
75°	1366	1193	1251
80°	918	861	803
85°	571	685	800

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3022 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.1	4.7
10°-20°	818.0	13.0
20°-30°	1132.5	18.0
30°-40°	1207.6	19.2
40°-50°	1101.6	17.5
50°-60°	863.1	13.7
60°-70°	562.5	8.9
70°-80°	249.2	4.0
80°-90°	53.5	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°	2248.6	35.8
0°-40°	3456.1	55.0
0°-60°	5420.8	86.2
0°-90°	6286.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6286.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3202	3202	3202	3202	3202	
5°	3146	3143	3143	3139	3139	299
15°	2943	2943	2913	2884	2872	827
25°	2550	2536	2495	2406	2340	1171
35°	2069	2054	1954	1806	1762	1294
45°	1588	1555	1422	1303	1251	1223
55°	1103	1070	970	855	811	989
65°	655	618	559	570	474	646
75°	263	244	230	218	241	282
85°	37	41	44	48	52	51
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3202.0	3202.0	3202.0	3202.0	3202.0
2.5°	3179.8	3179.8	3179.8	3176.1	3176.1
5°	3146.5	3142.8	3142.8	3139.1	3139.1
7.5°	3120.6	3116.9	3113.2	3109.5	3102.1
10°	3083.5	3083.5	3079.8	3061.3	3057.6
12.5°	3024.3	3020.6	3005.8	2979.9	2972.5
15°	2942.9	2942.9	2913.3	2883.7	2872.5
17.5°	2854.0	2850.3	2813.3	2783.7	2768.9
20°	2757.8	2750.4	2713.4	2665.3	2639.3
22.5°	2650.4	2650.4	2606.0	2543.1	2517.2
25°	2550.5	2535.7	2495.0	2406.1	2339.5
27.5°	2435.7	2413.5	2369.1	2243.3	2165.5
30°	2309.9	2298.8	2235.9	2073.0	2013.7
32.5°	2191.4	2172.9	2106.3	1936.0	1887.9
35°	2069.3	2054.5	1954.5	1806.4	1762.0
37.5°	1947.1	1928.6	1802.7	1684.3	1628.8
40°	1825.0	1802.7	1665.8	1558.4	1499.2
42.5°	1710.2	1680.6	1547.3	1432.6	1365.9
45°	1588.0	1554.7	1421.5	1303.0	1251.2
47.5°	1465.9	1436.3	1314.1	1192.0	1132.7
50°	1336.3	1310.4	1199.4	1077.2	1014.3
52.5°	1229.0	1188.3	1080.9	958.8	906.9
55°	1103.1	1069.8	969.9	855.1	810.7
57.5°	988.4	955.0	862.5	755.2	718.1
60°	881.0	832.9	755.2	662.6	633.0
62.5°	762.6	725.5	658.9	581.2	618.2
65°	655.2	618.2	559.0	570.1	473.8
67.5°	536.8	518.2	466.4	414.6	399.8
70°	436.8	414.6	396.1	340.6	325.8
72.5°	348.0	325.8	299.8	270.2	259.1
75°	262.8	244.3	229.5	218.4	240.6
77.5°	181.4	174.0	162.9	151.8	148.1
80°	118.5	114.8	111.1	107.4	103.6
82.5°	70.3	70.3	70.3	70.3	70.3
85°	37.0	40.7	44.4	48.1	51.8
87.5°	22.2	22.2	25.9	29.6	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)