

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: P590983

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590983
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4STD-50-UNV-82-86-EDD
Description: 2X2 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): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

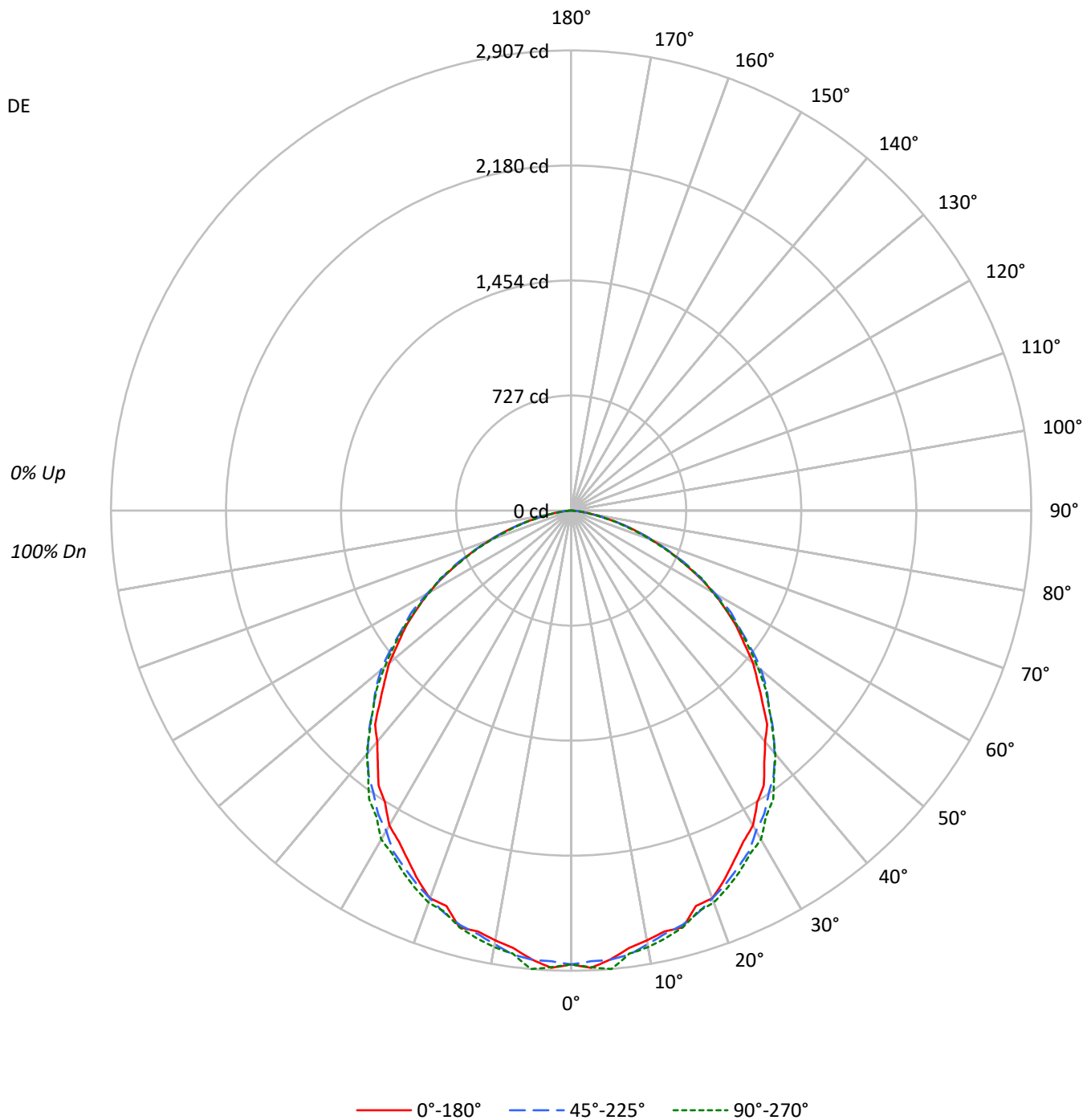
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7714	7714	7714
5°	7689	7692	7854
10°	7533	7599	7652
15°	7592	7551	7594
20°	7464	7464	7544
25°	7235	7393	7474
30°	7135	7261	7454
35°	6967	7150	7310
40°	6696	7019	7050
45°	6494	6725	6734
50°	6280	6564	6438
55°	5984	6100	6057
60°	5596	5652	5550
65°	4989	5117	4954
70°	4281	4295	4176
75°	3391	3382	3252
80°	2272	2208	2123
85°	1235	1223	1142

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6898 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.7	3.7
10°-20°	764.2	10.6
20°-30°	1145.0	15.8
30°-40°	1357.0	18.8
40°-50°	1359.5	18.8
50°-60°	1154.0	16.0
60°-70°	778.0	10.8
70°-80°	341.9	4.7
80°-90°	55.6	0.8
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°	2178.9	30.2
0°-40°	3535.9	48.9
0°-60°	6049.5	83.7
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°	2867	2867	2867	2867	2867	
5°	2846	2840	2848	2839	2907	268
15°	2725	2694	2710	2725	2726	759
25°	2437	2450	2490	2522	2517	1126
35°	2121	2127	2176	2227	2225	1317
45°	1706	1738	1767	1813	1770	1320
55°	1276	1267	1300	1291	1291	1135
65°	784	773	804	773	778	779
75°	326	319	325	302	313	349
85°	40	39	40	38	37	58
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2866.7	2866.7	2866.7	2866.7	2866.7
2.5°	2891.5	2869.7	2849.3	2873.0	2887.4
5°	2846.3	2839.7	2847.5	2838.9	2907.4
7.5°	2787.9	2813.4	2828.2	2819.0	2823.0
10°	2756.8	2747.9	2780.8	2803.8	2800.4
12.5°	2723.5	2736.8	2738.6	2763.4	2765.7
15°	2725.3	2693.8	2710.5	2724.6	2725.7
17.5°	2619.4	2653.5	2665.0	2697.2	2657.2
20°	2606.5	2581.7	2606.5	2639.4	2634.3
22.5°	2526.9	2499.2	2552.5	2581.7	2579.8
25°	2436.6	2449.9	2489.9	2522.5	2517.3
27.5°	2357.4	2372.9	2429.9	2474.7	2445.9
30°	2296.3	2288.5	2336.7	2376.6	2398.8
32.5°	2187.1	2215.3	2271.5	2311.1	2290.0
35°	2120.9	2127.2	2176.4	2226.7	2225.3
37.5°	2005.0	2034.3	2103.5	2117.5	2104.6
40°	1906.2	1935.4	1998.0	2013.2	2006.9
42.5°	1833.3	1838.5	1892.1	1909.5	1881.8
45°	1706.3	1738.2	1767.0	1812.6	1769.6
47.5°	1598.2	1613.0	1675.2	1687.4	1664.9
50°	1500.2	1505.3	1567.9	1552.7	1537.9
52.5°	1376.9	1398.7	1433.9	1430.9	1413.5
55°	1275.5	1267.0	1300.3	1291.4	1291.0
57.5°	1153.7	1168.5	1195.9	1181.8	1159.3
60°	1039.7	1040.1	1050.1	1034.2	1031.2
62.5°	912.8	917.2	919.4	899.8	931.6
65°	783.6	773.2	803.6	772.8	778.0
67.5°	664.8	669.9	667.0	647.7	655.1
70°	544.1	550.8	545.9	524.1	530.8
72.5°	433.8	425.7	430.8	403.4	416.0
75°	326.1	319.4	325.3	302.4	312.8
77.5°	222.1	227.3	223.6	211.3	218.4
80°	146.6	142.5	142.5	135.5	137.0
82.5°	85.5	81.4	80.3	78.1	81.4
85°	40.0	38.9	39.6	38.5	37.0
87.5°	14.4	14.8	14.8	14.1	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)