

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: P561751

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561751
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-12-4-LD4-2STD-35-UNV-82-87-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5793.0 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

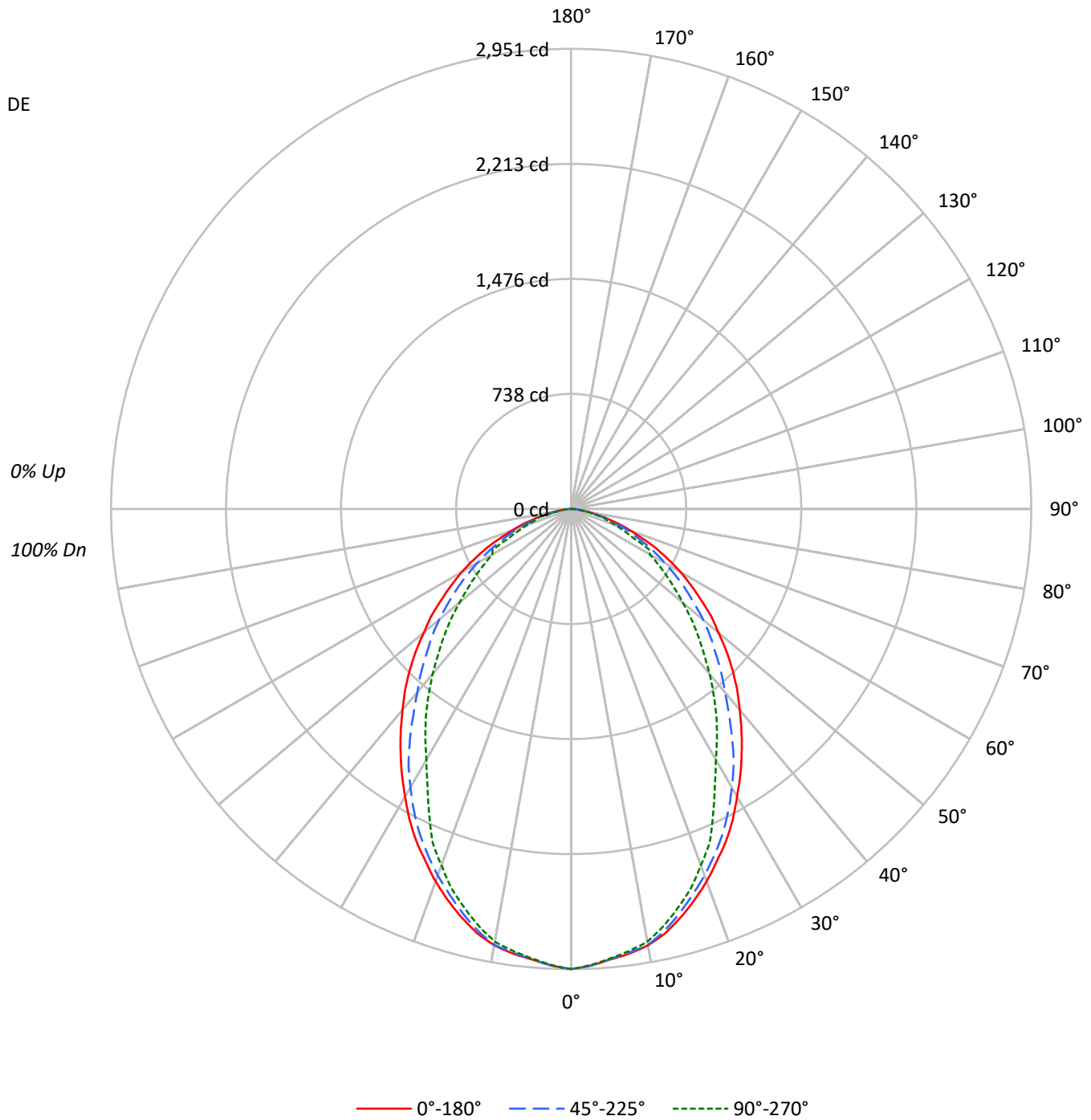
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7941	7941	7941
5°	7833	7824	7814
10°	7765	7756	7700
15°	7556	7480	7375
20°	7278	7161	6965
25°	6979	6827	6402
30°	6614	6403	5766
35°	6265	5917	5334
40°	5908	5393	4853
45°	5570	4985	4388
50°	5156	4627	3913
55°	4769	4193	3505
60°	4370	3745	3140
65°	3845	3280	2781
70°	3167	2872	2362
75°	2518	2199	2305
80°	1692	1585	1480
85°	1053	1263	1476

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5570 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.7	4.7
10°-20°	753.9	13.0
20°-30°	1043.7	18.0
30°-40°	1112.8	19.2
40°-50°	1015.2	17.5
50°-60°	795.4	13.7
60°-70°	518.4	8.9
70°-80°	229.7	4.0
80°-90°	49.3	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°	2072.2	35.8
0°-40°	3185.0	55.0
0°-60°	4995.6	86.2
0°-90°	5793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5793.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2951	2951	2951	2951	2951	
5°	2900	2896	2896	2893	2893	275
15°	2712	2712	2685	2658	2647	762
25°	2350	2337	2299	2217	2156	1079
35°	1907	1893	1801	1665	1624	1192
45°	1464	1433	1310	1201	1153	1127
55°	1017	986	894	788	747	912
65°	604	570	515	525	437	595
75°	242	225	212	201	222	260
85°	34	38	41	44	48	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2950.9	2950.9	2950.9	2950.9	2950.9
2.5°	2930.4	2930.4	2930.4	2927.0	2927.0
5°	2899.7	2896.3	2896.3	2892.9	2892.9
7.5°	2875.8	2872.4	2869.0	2865.6	2858.8
10°	2841.7	2841.7	2838.3	2821.2	2817.8
12.5°	2787.1	2783.7	2770.1	2746.2	2739.4
15°	2712.1	2712.1	2684.8	2657.5	2647.3
17.5°	2630.2	2626.8	2592.7	2565.4	2551.7
20°	2541.5	2534.7	2500.6	2456.2	2432.3
22.5°	2442.6	2442.6	2401.6	2343.6	2319.8
25°	2350.5	2336.8	2299.3	2217.4	2156.0
27.5°	2244.7	2224.2	2183.3	2067.3	1995.7
30°	2128.7	2118.5	2060.5	1910.4	1855.8
32.5°	2019.6	2002.5	1941.1	1784.2	1739.8
35°	1907.0	1893.3	1801.2	1664.8	1623.8
37.5°	1794.4	1777.3	1661.4	1552.2	1501.0
40°	1681.8	1661.4	1535.1	1436.2	1381.6
42.5°	1576.1	1548.8	1426.0	1320.2	1258.8
45°	1463.5	1432.8	1310.0	1200.8	1153.1
47.5°	1350.9	1323.6	1211.1	1098.5	1043.9
50°	1231.5	1207.6	1105.3	992.7	934.7
52.5°	1132.6	1095.1	996.1	883.6	835.8
55°	1016.6	985.9	893.8	788.0	747.1
57.5°	910.8	880.1	794.9	695.9	661.8
60°	811.9	767.6	695.9	610.6	583.4
62.5°	702.8	668.6	607.2	535.6	569.7
65°	603.8	569.7	515.1	525.4	436.7
67.5°	494.7	477.6	429.8	382.1	368.4
70°	402.5	382.1	365.0	313.9	300.2
72.5°	320.7	300.2	276.3	249.0	238.8
75°	242.2	225.2	211.5	201.3	221.7
77.5°	167.2	160.3	150.1	139.9	136.5
80°	109.2	105.8	102.3	98.9	95.5
82.5°	64.8	64.8	64.8	64.8	64.8
85°	34.1	37.5	40.9	44.3	47.8
87.5°	20.5	20.5	23.9	27.3	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)