

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: P590501

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590501
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-LD4-3HI-50-UNV-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6858.0 lumens
Efficiency: N/A
Efficacy: 105.8 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

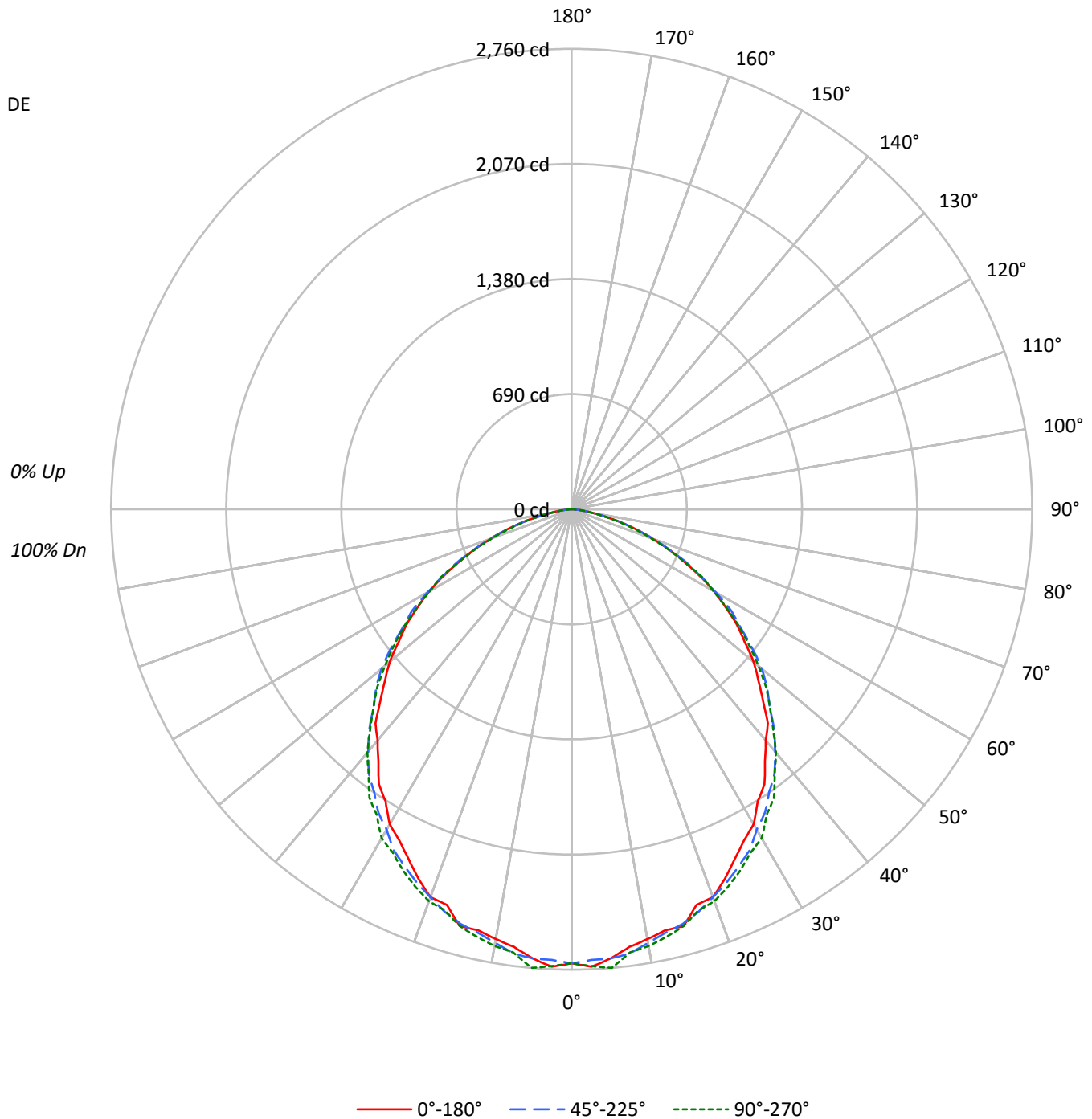
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									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°	7322	7322	7322
5°	7298	7301	7455
10°	7150	7213	7264
15°	7207	7168	7208
20°	7085	7085	7160
25°	6867	7017	7095
30°	6773	6892	7075
35°	6613	6786	6939
40°	6356	6662	6692
45°	6164	6383	6392
50°	5961	6231	6111
55°	5680	5790	5750
60°	5311	5364	5268
65°	4736	4856	4702
70°	4064	4077	3964
75°	3218	3211	3087
80°	2156	2097	2015
85°	1170	1161	1084

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6548 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.0	3.7
10°-20°	725.4	10.6
20°-30°	1086.8	15.8
30°-40°	1288.1	18.8
40°-50°	1290.5	18.8
50°-60°	1095.4	16.0
60°-70°	738.5	10.8
70°-80°	324.5	4.7
80°-90°	52.7	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°	2068.2	30.2
0°-40°	3356.3	48.9
0°-60°	5742.2	83.7
0°-90°	6858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6858.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2721	2721	2721	2721	2721	
5°	2702	2695	2703	2695	2760	255
15°	2587	2557	2573	2586	2587	721
25°	2313	2326	2363	2394	2389	1069
35°	2013	2019	2066	2114	2112	1250
45°	1620	1650	1677	1720	1680	1253
55°	1211	1203	1234	1226	1226	1077
65°	744	734	763	734	738	740
75°	310	303	309	287	297	332
85°	38	37	38	36	35	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2721.1	2721.1	2721.1	2721.1	2721.1
2.5°	2744.6	2723.9	2704.6	2727.1	2740.8
5°	2701.8	2695.4	2702.8	2694.7	2759.7
7.5°	2646.2	2670.5	2684.5	2675.8	2679.6
10°	2616.7	2608.3	2639.6	2661.4	2658.2
12.5°	2585.1	2597.8	2599.5	2623.1	2625.2
15°	2586.9	2557.0	2572.8	2586.2	2587.2
17.5°	2486.4	2518.7	2529.6	2560.2	2522.2
20°	2474.1	2450.6	2474.1	2505.4	2500.4
22.5°	2398.6	2372.2	2422.8	2450.6	2448.8
25°	2312.8	2325.5	2363.4	2394.3	2389.4
27.5°	2237.6	2252.4	2306.5	2349.0	2321.6
30°	2179.7	2172.3	2218.0	2255.9	2277.0
32.5°	2076.0	2102.7	2156.1	2193.7	2173.7
35°	2013.1	2019.1	2065.8	2113.6	2112.2
37.5°	1903.2	1930.9	1996.6	2010.0	1997.7
40°	1809.4	1837.1	1896.5	1910.9	1904.9
42.5°	1740.2	1745.1	1796.0	1812.5	1786.2
45°	1619.6	1649.9	1677.3	1720.5	1679.7
47.5°	1517.1	1531.1	1590.1	1601.7	1580.3
50°	1424.0	1428.9	1488.3	1473.8	1459.8
52.5°	1307.0	1327.7	1361.1	1358.3	1341.7
55°	1210.7	1202.6	1234.2	1225.8	1225.5
57.5°	1095.1	1109.2	1135.2	1121.8	1100.4
60°	986.9	987.2	996.7	981.6	978.8
62.5°	866.4	870.6	872.7	854.1	884.3
65°	743.8	733.9	762.7	733.6	738.5
67.5°	631.0	635.9	633.1	614.8	621.9
70°	516.5	522.8	518.2	497.5	503.8
72.5°	411.8	404.0	409.0	383.0	394.9
75°	309.5	303.2	308.8	287.0	296.9
77.5°	210.8	215.7	212.2	200.6	207.3
80°	139.1	135.3	135.3	128.6	130.0
82.5°	81.2	77.3	76.2	74.1	77.3
85°	37.9	36.9	37.6	36.5	35.1
87.5°	13.7	14.1	14.1	13.4	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)