

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: P590813

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590813
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-LD4-4LO-35-UNV-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5537.0 lumens
Efficiency: N/A
Efficacy: 118.3 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

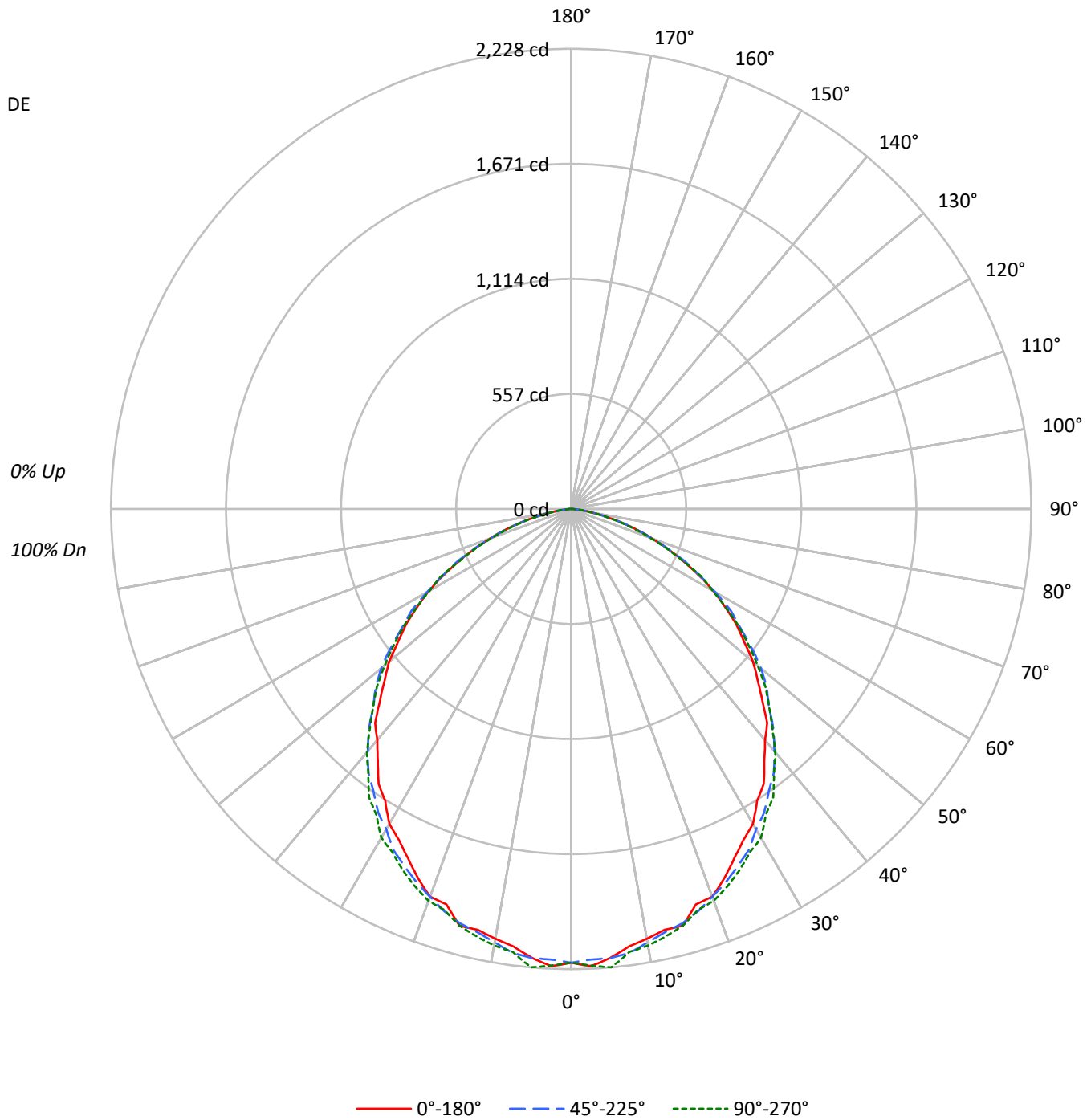
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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°	5912	5912	5912
5°	5892	5895	6019
10°	5773	5823	5864
15°	5819	5787	5819
20°	5720	5720	5781
25°	5544	5666	5728
30°	5468	5564	5712
35°	5340	5479	5602
40°	5132	5379	5403
45°	4977	5154	5161
50°	4813	5030	4934
55°	4586	4675	4642
60°	4288	4331	4253
65°	3824	3921	3797
70°	3281	3292	3201
75°	2598	2592	2492
80°	1740	1692	1627
85°	945	939	877

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5286 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.7	3.7
10°-20°	585.7	10.6
20°-30°	877.5	15.8
30°-40°	1040.0	18.8
40°-50°	1041.9	18.8
50°-60°	884.4	16.0
60°-70°	596.3	10.8
70°-80°	262.0	4.7
80°-90°	42.6	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°	1669.8	30.2
0°-40°	2709.8	48.9
0°-60°	4636.1	83.7
0°-90°	5537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5537.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2197	2197	2197	2197	2197	
5°	2181	2176	2182	2176	2228	206
15°	2089	2064	2077	2088	2089	582
25°	1867	1878	1908	1933	1929	863
35°	1625	1630	1668	1706	1705	1009
45°	1308	1332	1354	1389	1356	1012
55°	978	971	996	990	989	870
65°	600	593	616	592	596	597
75°	250	245	249	232	240	268
85°	31	30	30	30	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2196.9	2196.9	2196.9	2196.9	2196.9
2.5°	2215.9	2199.2	2183.6	2201.8	2212.8
5°	2181.3	2176.2	2182.2	2175.7	2228.1
7.5°	2136.5	2156.1	2167.4	2160.3	2163.5
10°	2112.7	2105.9	2131.1	2148.7	2146.2
12.5°	2087.2	2097.4	2098.8	2117.8	2119.5
15°	2088.6	2064.5	2077.2	2088.0	2088.9
17.5°	2007.5	2033.6	2042.3	2067.0	2036.4
20°	1997.5	1978.5	1997.5	2022.8	2018.8
22.5°	1936.5	1915.3	1956.1	1978.5	1977.1
25°	1867.3	1877.5	1908.2	1933.1	1929.2
27.5°	1806.6	1818.5	1862.2	1896.5	1874.4
30°	1759.8	1753.9	1790.7	1821.4	1838.4
32.5°	1676.1	1697.7	1740.8	1771.2	1755.0
35°	1625.4	1630.2	1667.9	1706.5	1705.4
37.5°	1536.6	1559.0	1612.0	1622.8	1612.9
40°	1460.8	1483.3	1531.2	1542.8	1538.0
42.5°	1405.0	1408.9	1450.1	1463.4	1442.1
45°	1307.7	1332.1	1354.2	1389.1	1356.2
47.5°	1224.8	1236.2	1283.8	1293.2	1275.9
50°	1149.7	1153.6	1201.6	1190.0	1178.6
52.5°	1055.2	1071.9	1098.9	1096.6	1083.3
55°	977.5	971.0	996.5	989.7	989.4
57.5°	884.2	895.5	916.5	905.7	888.4
60°	796.8	797.1	804.7	792.5	790.3
62.5°	699.5	702.9	704.6	689.6	714.0
65°	600.5	592.6	615.8	592.3	596.3
67.5°	509.5	513.4	511.2	496.4	502.1
70°	417.0	422.1	418.4	401.7	406.8
72.5°	332.4	326.2	330.2	309.2	318.8
75°	249.9	244.8	249.3	231.7	239.7
77.5°	170.2	174.2	171.3	162.0	167.4
80°	112.3	109.2	109.2	103.8	105.0
82.5°	65.5	62.4	61.6	59.9	62.4
85°	30.6	29.8	30.4	29.5	28.4
87.5°	11.1	11.3	11.3	10.8	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)