

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: P590898

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590898
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-50-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6012.0 lumens
Efficiency: N/A
Efficacy: 128.5 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

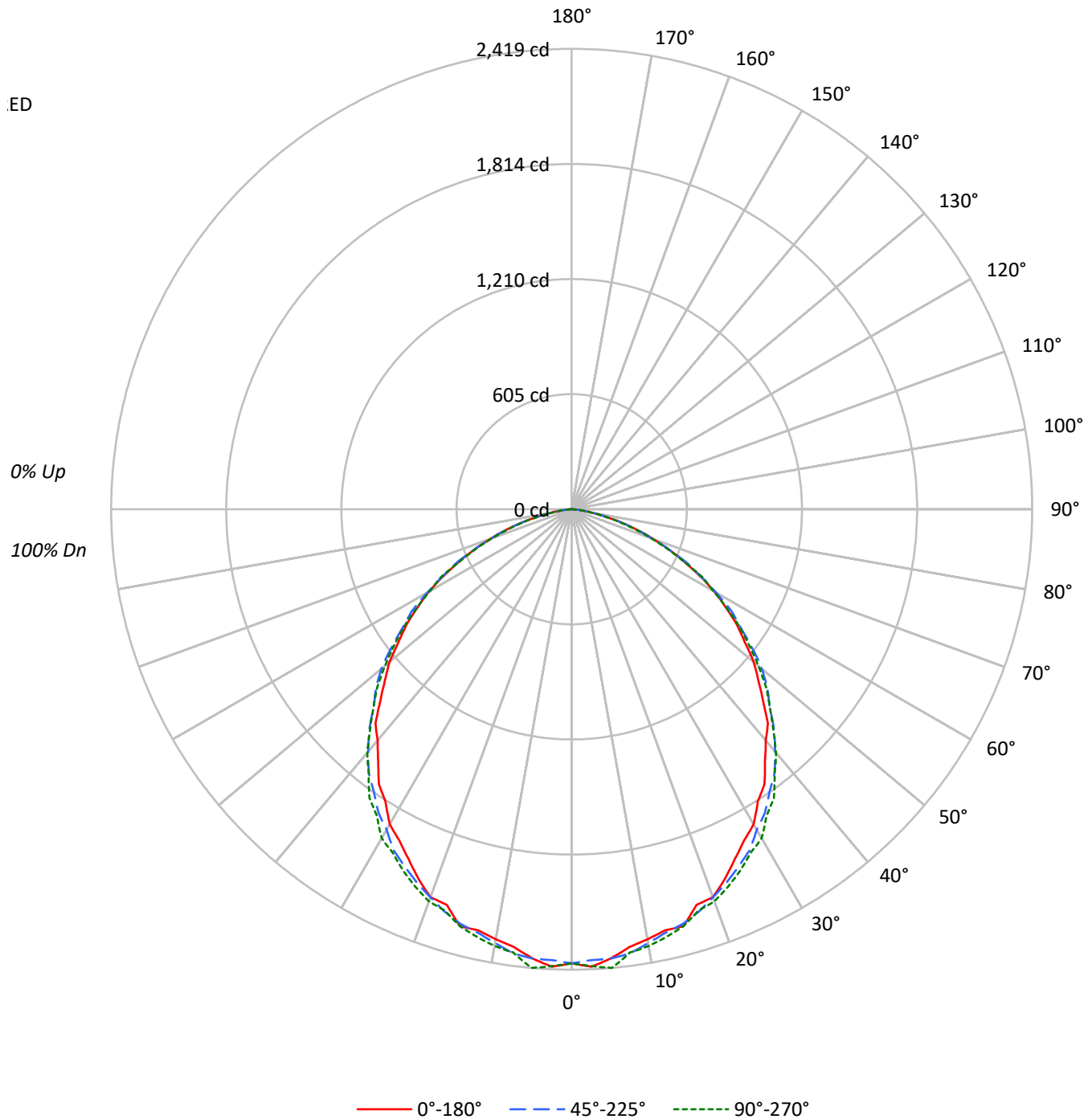
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6419	6419	6419
5°	6398	6400	6535
10°	6268	6323	6368
15°	6318	6283	6319
20°	6211	6211	6277
25°	6020	6152	6220
30°	5937	6042	6202
35°	5798	5949	6083
40°	5572	5840	5866
45°	5404	5596	5604
50°	5226	5462	5357
55°	4979	5076	5040
60°	4656	4703	4618
65°	4152	4258	4122
70°	3563	3574	3475
75°	2821	2815	2706
80°	1891	1838	1767
85°	1028	1019	951

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5740 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.4	3.7
10°-20°	635.9	10.6
20°-30°	952.8	15.8
30°-40°	1129.2	18.8
40°-50°	1131.3	18.8
50°-60°	960.3	16.0
60°-70°	647.4	10.8
70°-80°	284.5	4.7
80°-90°	46.2	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°	1813.1	30.2
0°-40°	2942.3	48.9
0°-60°	5033.9	83.7
0°-90°	6012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6012.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2385	2385	2385	2385	2385	
5°	2368	2363	2369	2362	2419	223
15°	2268	2242	2255	2267	2268	632
25°	2028	2039	2072	2099	2095	937
35°	1765	1770	1811	1853	1852	1096
45°	1420	1446	1470	1508	1472	1098
55°	1061	1054	1082	1075	1074	944
65°	652	643	669	643	647	648
75°	271	266	271	252	260	291
85°	33	32	33	32	31	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2385.4	2385.4	2385.4	2385.4	2385.4
2.5°	2406.0	2387.9	2370.9	2390.6	2402.7
5°	2368.5	2362.9	2369.4	2362.3	2419.3
7.5°	2319.8	2341.1	2353.4	2345.7	2349.1
10°	2293.9	2286.5	2314.0	2333.1	2330.3
12.5°	2266.2	2277.3	2278.8	2299.5	2301.3
15°	2267.8	2241.6	2255.4	2267.1	2268.1
17.5°	2179.7	2208.0	2217.6	2244.3	2211.1
20°	2168.9	2148.3	2168.9	2196.3	2192.0
22.5°	2102.7	2079.6	2123.9	2148.3	2146.7
25°	2027.5	2038.6	2071.9	2099.0	2094.7
27.5°	1961.6	1974.5	2022.0	2059.2	2035.2
30°	1910.8	1904.3	1944.4	1977.6	1996.1
32.5°	1819.9	1843.3	1890.2	1923.1	1905.6
35°	1764.8	1770.0	1811.0	1852.9	1851.7
37.5°	1668.4	1692.7	1750.3	1762.0	1751.3
40°	1586.2	1610.5	1662.5	1675.2	1669.9
42.5°	1525.5	1529.8	1574.5	1588.9	1565.8
45°	1419.9	1446.3	1470.4	1508.2	1472.5
47.5°	1329.9	1342.2	1394.0	1404.1	1385.4
50°	1248.3	1252.6	1304.7	1292.0	1279.7
52.5°	1145.7	1163.9	1193.2	1190.7	1176.2
55°	1061.3	1054.3	1082.0	1074.6	1074.3
57.5°	960.0	972.3	995.1	983.4	964.6
60°	865.2	865.5	873.8	860.5	858.1
62.5°	759.5	763.2	765.1	748.7	775.2
65°	652.0	643.4	668.7	643.1	647.4
67.5°	553.2	557.5	555.0	539.0	545.1
70°	452.8	458.3	454.3	436.1	441.7
72.5°	361.0	354.2	358.5	335.7	346.2
75°	271.3	265.8	270.7	251.6	260.3
77.5°	184.8	189.1	186.0	175.9	181.7
80°	122.0	118.6	118.6	112.7	114.0
82.5°	71.1	67.8	66.8	65.0	67.8
85°	33.3	32.3	33.0	32.0	30.8
87.5°	12.0	12.3	12.3	11.7	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)