

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: P590669

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590669
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-LD4-3STD-40-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5924.0 lumens
Efficiency: N/A
Efficacy: 118.5 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

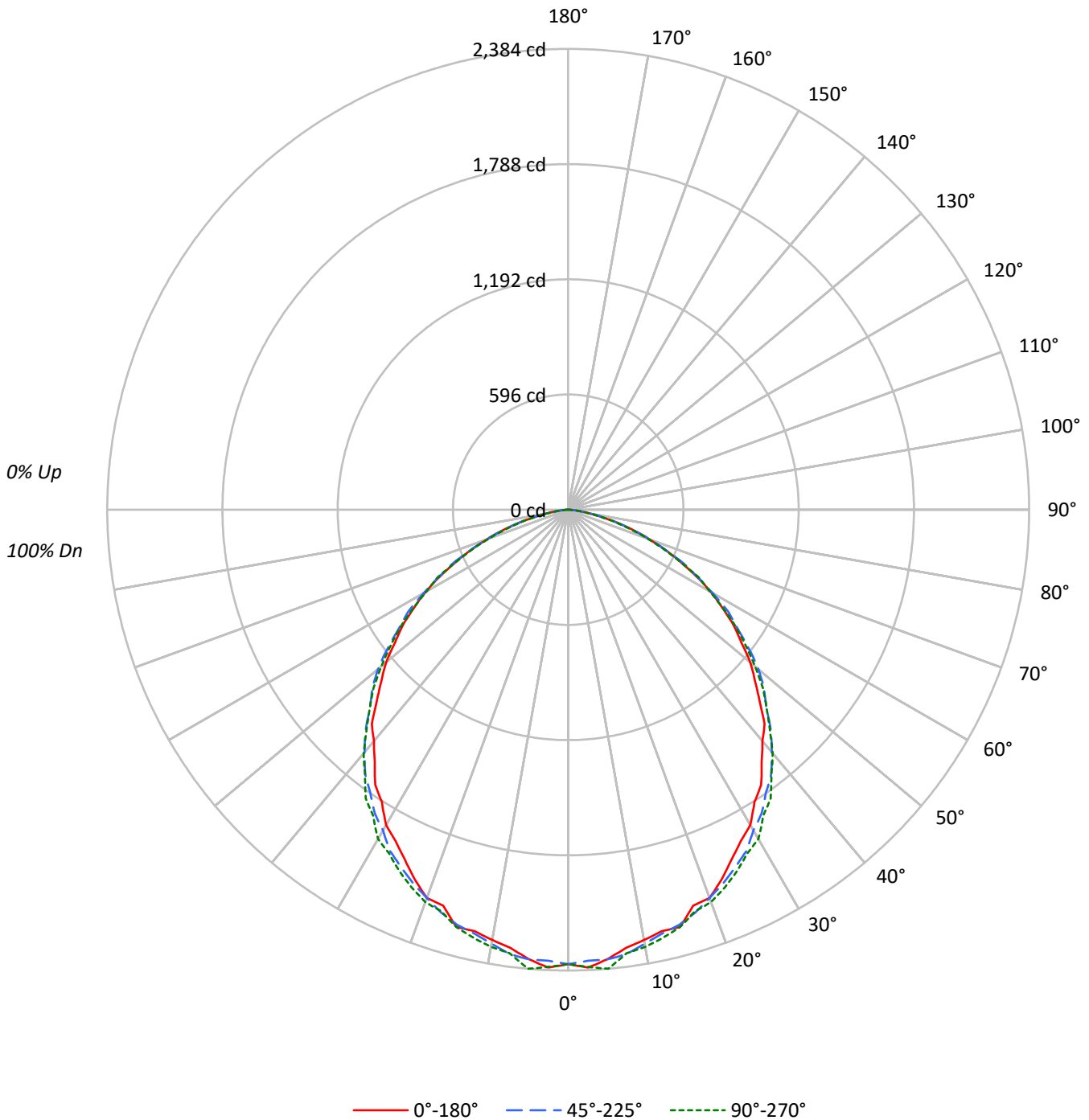
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6325	6325	6325
5°	6304	6307	6440
10°	6177	6230	6274
15°	6225	6191	6226
20°	6120	6120	6185
25°	5932	6062	6128
30°	5850	5953	6112
35°	5713	5862	5994
40°	5490	5755	5780
45°	5324	5514	5522
50°	5149	5382	5279
55°	4906	5002	4967
60°	4588	4634	4550
65°	4091	4195	4062
70°	3510	3522	3424
75°	2780	2774	2666
80°	1863	1810	1740
85°	1013	1003	936

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5656 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.1	3.7
10°-20°	626.6	10.6
20°-30°	938.8	15.8
30°-40°	1112.7	18.8
40°-50°	1114.7	18.8
50°-60°	946.2	16.0
60°-70°	638.0	10.8
70°-80°	280.3	4.7
80°-90°	45.6	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°	1786.5	30.2
0°-40°	2899.2	48.9
0°-60°	4960.2	83.7
0°-90°	5924.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5924.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2350	2350	2350	2350	2350	
5°	2334	2328	2335	2328	2384	220
15°	2235	2209	2222	2234	2235	623
25°	1998	2009	2042	2068	2064	924
35°	1739	1744	1784	1826	1825	1080
45°	1399	1425	1449	1486	1451	1082
55°	1046	1039	1066	1059	1059	930
65°	642	634	659	634	638	639
75°	267	262	267	248	256	287
85°	33	32	32	32	30	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2350.5	2350.5	2350.5	2350.5	2350.5
2.5°	2370.8	2352.9	2336.2	2355.7	2367.5
5°	2333.8	2328.3	2334.7	2327.7	2383.9
7.5°	2285.9	2306.8	2318.9	2311.3	2314.7
10°	2260.4	2253.1	2280.1	2298.9	2296.2
12.5°	2233.0	2244.0	2245.5	2265.8	2267.6
15°	2234.6	2208.8	2222.4	2234.0	2234.9
17.5°	2147.8	2175.7	2185.1	2211.5	2178.7
20°	2137.1	2116.8	2137.1	2164.2	2159.9
22.5°	2071.9	2049.1	2092.8	2116.8	2115.3
25°	1997.8	2008.8	2041.5	2068.3	2064.0
27.5°	1932.9	1945.6	1992.4	2029.1	2005.4
30°	1882.8	1876.4	1915.9	1948.7	1966.9
32.5°	1793.3	1816.4	1862.5	1895.0	1877.7
35°	1739.0	1744.1	1784.5	1825.8	1824.6
37.5°	1644.0	1668.0	1724.7	1736.2	1725.6
40°	1562.9	1586.9	1638.2	1650.7	1645.5
42.5°	1503.2	1507.4	1551.4	1565.7	1542.9
45°	1399.1	1425.2	1448.8	1486.2	1451.0
47.5°	1310.4	1322.6	1373.6	1383.6	1365.1
50°	1230.0	1234.3	1285.6	1273.1	1261.0
52.5°	1129.0	1146.9	1175.7	1173.3	1159.0
55°	1045.8	1038.8	1066.1	1058.9	1058.6
57.5°	946.0	958.1	980.6	969.0	950.5
60°	852.5	852.8	861.0	847.9	845.5
62.5°	748.4	752.0	753.9	737.8	763.9
65°	642.5	634.0	658.9	633.7	637.9
67.5°	545.1	549.3	546.9	531.1	537.2
70°	446.1	451.6	447.6	429.7	435.2
72.5°	355.7	349.0	353.3	330.8	341.1
75°	267.4	261.9	266.8	247.9	256.4
77.5°	182.1	186.3	183.3	173.3	179.1
80°	120.2	116.8	116.8	111.1	112.3
82.5°	70.1	66.8	65.9	64.0	66.8
85°	32.8	31.9	32.5	31.6	30.3
87.5°	11.8	12.1	12.1	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)