

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: P590676

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590676
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-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5661.0 lumens
Efficiency: N/A
Efficacy: 113.2 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

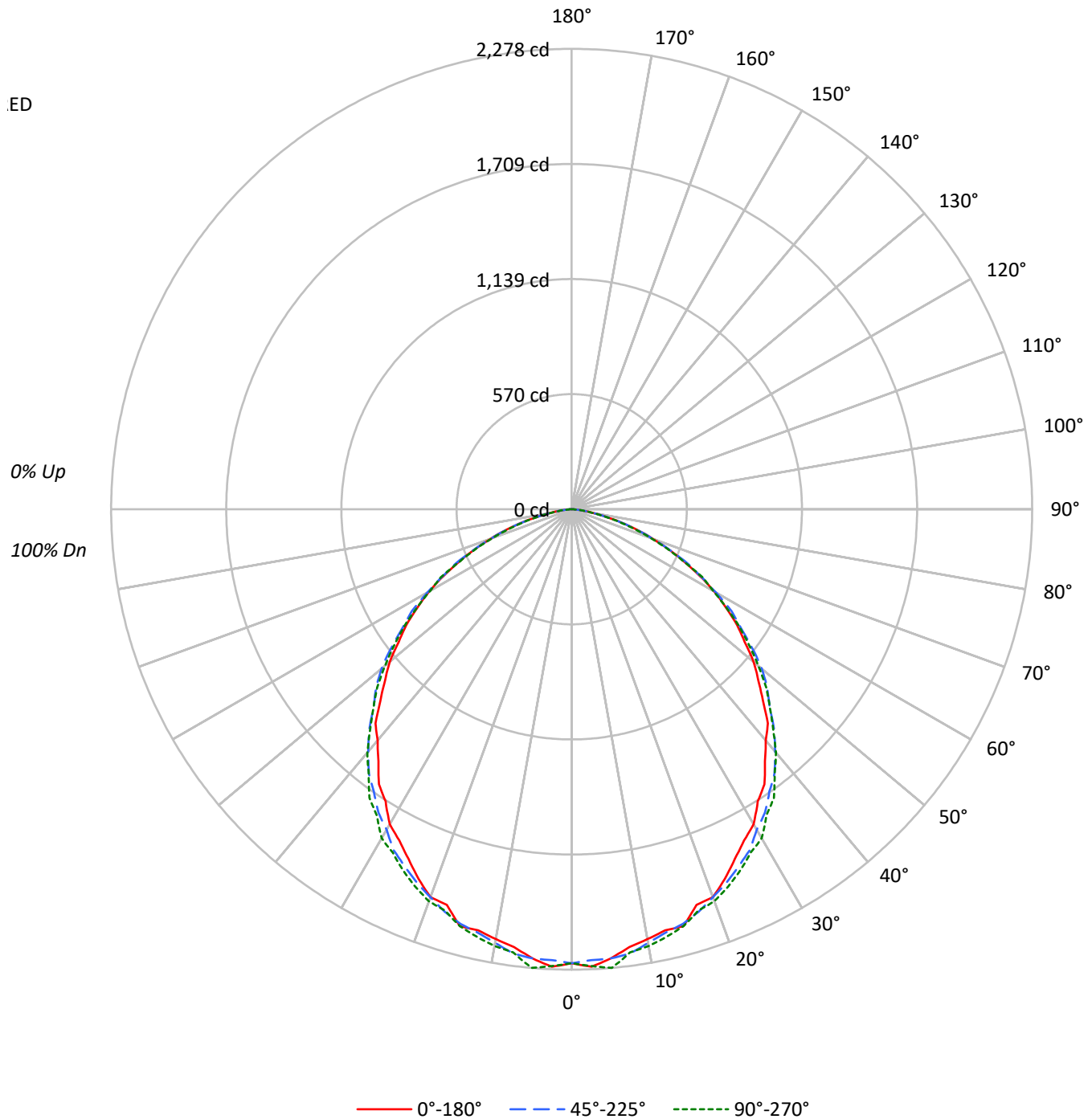
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6044	6044	6044
5°	6024	6027	6153
10°	5902	5954	5996
15°	5949	5917	5950
20°	5848	5848	5911
25°	5668	5793	5856
30°	5591	5689	5840
35°	5459	5602	5728
40°	5247	5499	5524
45°	5088	5269	5276
50°	4921	5143	5045
55°	4689	4780	4746
60°	4384	4428	4349
65°	3910	4009	3882
70°	3354	3366	3272
75°	2656	2650	2548
80°	1779	1731	1663
85°	966	957	895

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5405 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.3	3.7
10°-20°	598.8	10.6
20°-30°	897.1	15.8
30°-40°	1063.3	18.8
40°-50°	1065.3	18.8
50°-60°	904.2	16.0
60°-70°	609.6	10.8
70°-80°	267.9	4.7
80°-90°	43.5	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°	1707.2	30.2
0°-40°	2770.5	48.9
0°-60°	4740.0	83.7
0°-90°	5661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2246	2246	2246	2246	2246	
5°	2230	2225	2231	2224	2278	210
15°	2135	2111	2124	2135	2136	595
25°	1909	1920	1951	1976	1972	883
35°	1662	1667	1705	1745	1744	1032
45°	1337	1362	1384	1420	1386	1034
55°	999	993	1019	1012	1012	889
65°	614	606	630	606	610	611
75°	256	250	255	237	245	274
85°	31	30	31	30	29	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2246.1	2246.1	2246.1	2246.1	2246.1
2.5°	2265.6	2248.5	2232.5	2251.1	2262.4
5°	2230.2	2225.0	2231.1	2224.4	2278.0
7.5°	2184.4	2204.4	2216.0	2208.7	2211.9
10°	2160.0	2153.0	2178.9	2196.8	2194.2
12.5°	2133.9	2144.3	2145.8	2165.2	2167.0
15°	2135.4	2110.7	2123.8	2134.8	2135.6
17.5°	2052.4	2079.1	2088.1	2113.3	2082.0
20°	2042.3	2022.8	2042.3	2068.1	2064.0
22.5°	1979.9	1958.2	1999.9	2022.8	2021.4
25°	1909.1	1919.6	1950.9	1976.4	1972.4
27.5°	1847.1	1859.3	1903.9	1939.0	1916.4
30°	1799.2	1793.1	1830.8	1862.2	1879.6
32.5°	1713.7	1735.7	1779.8	1810.8	1794.3
35°	1661.8	1666.7	1705.3	1744.7	1743.6
37.5°	1571.0	1593.9	1648.1	1659.2	1649.0
40°	1493.6	1516.5	1565.5	1577.4	1572.4
42.5°	1436.4	1440.5	1482.5	1496.2	1474.4
45°	1337.0	1361.9	1384.5	1420.2	1386.5
47.5°	1252.3	1263.9	1312.6	1322.2	1304.5
50°	1175.4	1179.5	1228.5	1216.6	1205.0
52.5°	1078.8	1096.0	1123.5	1121.2	1107.6
55°	999.4	992.7	1018.8	1011.9	1011.6
57.5°	904.0	915.6	937.0	926.0	908.3
60°	814.6	814.9	822.8	810.3	808.0
62.5°	715.2	718.6	720.4	705.0	730.0
65°	614.0	605.8	629.6	605.5	609.6
67.5°	520.9	524.9	522.6	507.5	513.3
70°	426.3	431.5	427.8	410.7	415.9
72.5°	339.9	333.5	337.6	316.1	326.0
75°	255.5	250.3	254.9	236.9	245.1
77.5°	174.0	178.1	175.2	165.6	171.1
80°	114.8	111.7	111.7	106.1	107.3
82.5°	67.0	63.8	62.9	61.2	63.8
85°	31.3	30.5	31.0	30.2	29.0
87.5°	11.3	11.6	11.6	11.0	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)