

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: P590621

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590621
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-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: 5561.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

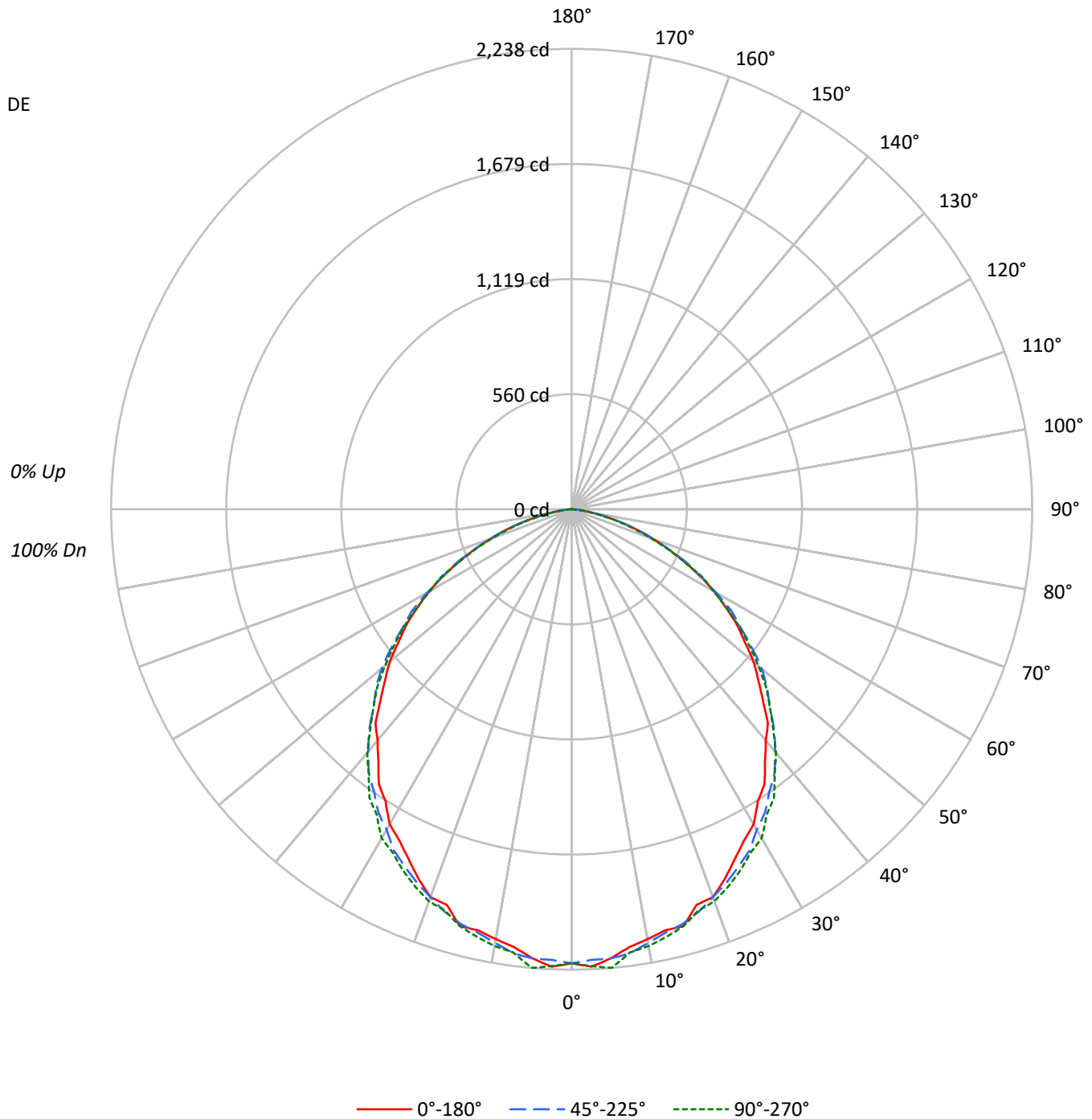
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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°	5938	5938	5938
5°	5918	5920	6045
10°	5798	5849	5890
15°	5844	5812	5845
20°	5745	5745	5806
25°	5568	5690	5753
30°	5492	5588	5737
35°	5363	5503	5627
40°	5154	5402	5426
45°	4998	5176	5184
50°	4834	5052	4955
55°	4606	4695	4662
60°	4307	4350	4272
65°	3840	3938	3813
70°	3295	3306	3214
75°	2610	2603	2503
80°	1748	1700	1633
85°	951	942	880

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5309 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.6	3.7
10°-20°	588.2	10.6
20°-30°	881.3	15.8
30°-40°	1044.5	18.8
40°-50°	1046.4	18.8
50°-60°	888.3	16.0
60°-70°	598.9	10.8
70°-80°	263.1	4.7
80°-90°	42.8	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°	1677.1	30.2
0°-40°	2721.6	48.9
0°-60°	4656.2	83.7
0°-90°	5561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5561.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2206	2206	2206	2206	2206	
5°	2191	2186	2192	2185	2238	207
15°	2098	2073	2086	2097	2098	584
25°	1875	1886	1916	1942	1938	867
35°	1632	1637	1675	1714	1713	1014
45°	1313	1338	1360	1395	1362	1016
55°	982	975	1001	994	994	873
65°	603	595	618	595	599	600
75°	251	246	250	233	241	269
85°	31	30	30	30	28	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2206.5	2206.5	2206.5	2206.5	2206.5
2.5°	2225.6	2208.7	2193.1	2211.3	2222.4
5°	2190.8	2185.7	2191.7	2185.1	2237.8
7.5°	2145.8	2165.4	2176.8	2169.7	2172.8
10°	2121.9	2115.0	2140.4	2158.0	2155.5
12.5°	2096.2	2106.5	2107.9	2127.0	2128.7
15°	2097.6	2073.4	2086.2	2097.1	2097.9
17.5°	2016.2	2042.4	2051.2	2076.0	2045.2
20°	2006.2	1987.1	2006.2	2031.5	2027.6
22.5°	1944.9	1923.6	1964.6	1987.1	1985.7
25°	1875.4	1885.7	1916.4	1941.5	1937.5
27.5°	1814.5	1826.4	1870.3	1904.8	1882.5
30°	1767.5	1761.5	1798.5	1829.3	1846.4
32.5°	1683.4	1705.1	1748.4	1778.8	1762.6
35°	1632.4	1637.3	1675.1	1713.9	1712.8
37.5°	1543.2	1565.7	1619.0	1629.8	1619.9
40°	1467.2	1489.7	1537.8	1549.5	1544.7
42.5°	1411.1	1415.0	1456.4	1469.7	1448.4
45°	1313.3	1337.8	1360.1	1395.1	1362.1
47.5°	1230.2	1241.5	1289.4	1298.8	1281.4
50°	1154.7	1158.6	1206.8	1195.1	1183.7
52.5°	1059.8	1076.6	1103.7	1101.4	1088.0
55°	981.7	975.2	1000.8	994.0	993.7
57.5°	888.0	899.4	920.5	909.7	892.3
60°	800.3	800.5	808.2	796.0	793.7
62.5°	702.5	706.0	707.7	692.6	717.1
65°	603.1	595.1	618.5	594.8	598.8
67.5°	511.7	515.6	513.4	498.6	504.3
70°	418.8	423.9	420.2	403.4	408.5
72.5°	333.9	327.6	331.6	310.5	320.2
75°	251.0	245.9	250.4	232.8	240.7
77.5°	170.9	174.9	172.1	162.7	168.1
80°	112.8	109.7	109.7	104.3	105.4
82.5°	65.8	62.7	61.8	60.1	62.7
85°	30.8	29.9	30.5	29.6	28.5
87.5°	11.1	11.4	11.4	10.8	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)