

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: P590651

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590651
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-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

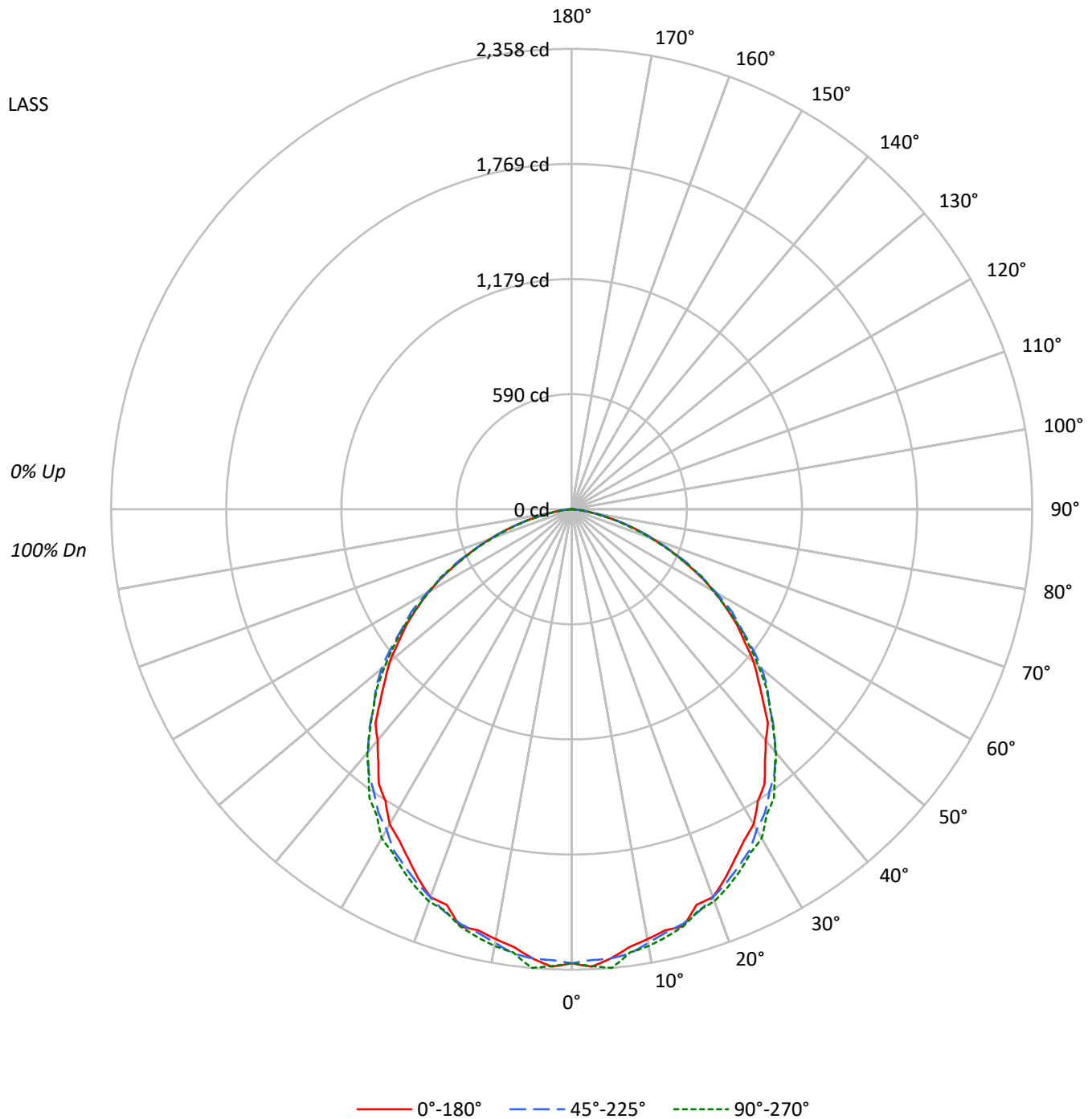
Lumens per Lamp: N/A
Luminaire Lumens: 5860.0 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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																												
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°	6257	6257	6257
5°	6236	6239	6370
10°	6110	6163	6207
15°	6158	6125	6159
20°	6054	6054	6119
25°	5868	5996	6062
30°	5787	5889	6046
35°	5651	5799	5929
40°	5431	5693	5718
45°	5267	5454	5462
50°	5094	5324	5222
55°	4853	4948	4913
60°	4539	4584	4501
65°	4046	4150	4018
70°	3472	3484	3387
75°	2750	2744	2638
80°	1843	1791	1722
85°	1000	991	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5595 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.7	3.7
10°-20°	619.9	10.6
20°-30°	928.7	15.8
30°-40°	1100.7	18.8
40°-50°	1102.7	18.8
50°-60°	936.0	16.0
60°-70°	631.1	10.8
70°-80°	277.3	4.7
80°-90°	45.0	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°	1767.2	30.2
0°-40°	2867.9	48.9
0°-60°	4906.6	83.7
0°-90°	5860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2325	2325	2325	2325	2325	
5°	2309	2303	2310	2303	2358	218
15°	2210	2185	2198	2210	2211	616
25°	1976	1987	2020	2046	2042	914
35°	1720	1725	1765	1806	1805	1068
45°	1384	1410	1433	1470	1435	1071
55°	1034	1028	1055	1047	1047	920
65°	636	627	652	627	631	632
75°	264	259	264	245	254	283
85°	32	32	32	31	30	47
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2325.1	2325.1	2325.1	2325.1	2325.1
2.5°	2345.2	2327.5	2311.0	2330.2	2341.9
5°	2308.6	2303.2	2309.5	2302.6	2358.1
7.5°	2261.2	2281.9	2293.9	2286.4	2289.7
10°	2235.9	2228.7	2255.5	2274.1	2271.4
12.5°	2208.9	2219.7	2221.2	2241.3	2243.1
15°	2210.4	2184.9	2198.4	2209.8	2210.7
17.5°	2124.6	2152.2	2161.5	2187.6	2155.2
20°	2114.1	2093.9	2114.1	2140.8	2136.6
22.5°	2049.5	2027.0	2070.2	2093.9	2092.4
25°	1976.3	1987.1	2019.5	2045.9	2041.7
27.5°	1912.0	1924.6	1970.9	2007.2	1983.8
30°	1862.5	1856.2	1895.2	1927.6	1945.6
32.5°	1773.9	1796.7	1842.4	1874.5	1857.4
35°	1720.2	1725.3	1765.2	1806.0	1804.8
37.5°	1626.2	1649.9	1706.1	1717.5	1707.0
40°	1546.1	1569.8	1620.5	1632.8	1627.7
42.5°	1486.9	1491.1	1534.7	1548.8	1526.3
45°	1384.0	1409.8	1433.2	1470.1	1435.3
47.5°	1296.3	1308.3	1358.7	1368.6	1350.3
50°	1216.7	1220.9	1271.7	1259.4	1247.4
52.5°	1116.8	1134.5	1163.0	1160.6	1146.5
55°	1034.5	1027.6	1054.6	1047.4	1047.1
57.5°	935.7	947.8	970.0	958.6	940.2
60°	843.3	843.6	851.7	838.8	836.4
62.5°	740.3	743.9	745.7	729.8	755.6
65°	635.5	627.1	651.7	626.8	631.0
67.5°	539.2	543.4	541.0	525.4	531.4
70°	441.3	446.7	442.8	425.1	430.5
72.5°	351.8	345.2	349.4	327.2	337.4
75°	264.5	259.1	263.9	245.3	253.7
77.5°	180.1	184.3	181.3	171.4	177.1
80°	118.9	115.6	115.6	109.9	111.1
82.5°	69.3	66.0	65.1	63.3	66.0
85°	32.4	31.5	32.1	31.2	30.0
87.5°	11.7	12.0	12.0	11.4	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)