

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: P590835

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590835
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-35-UNV-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

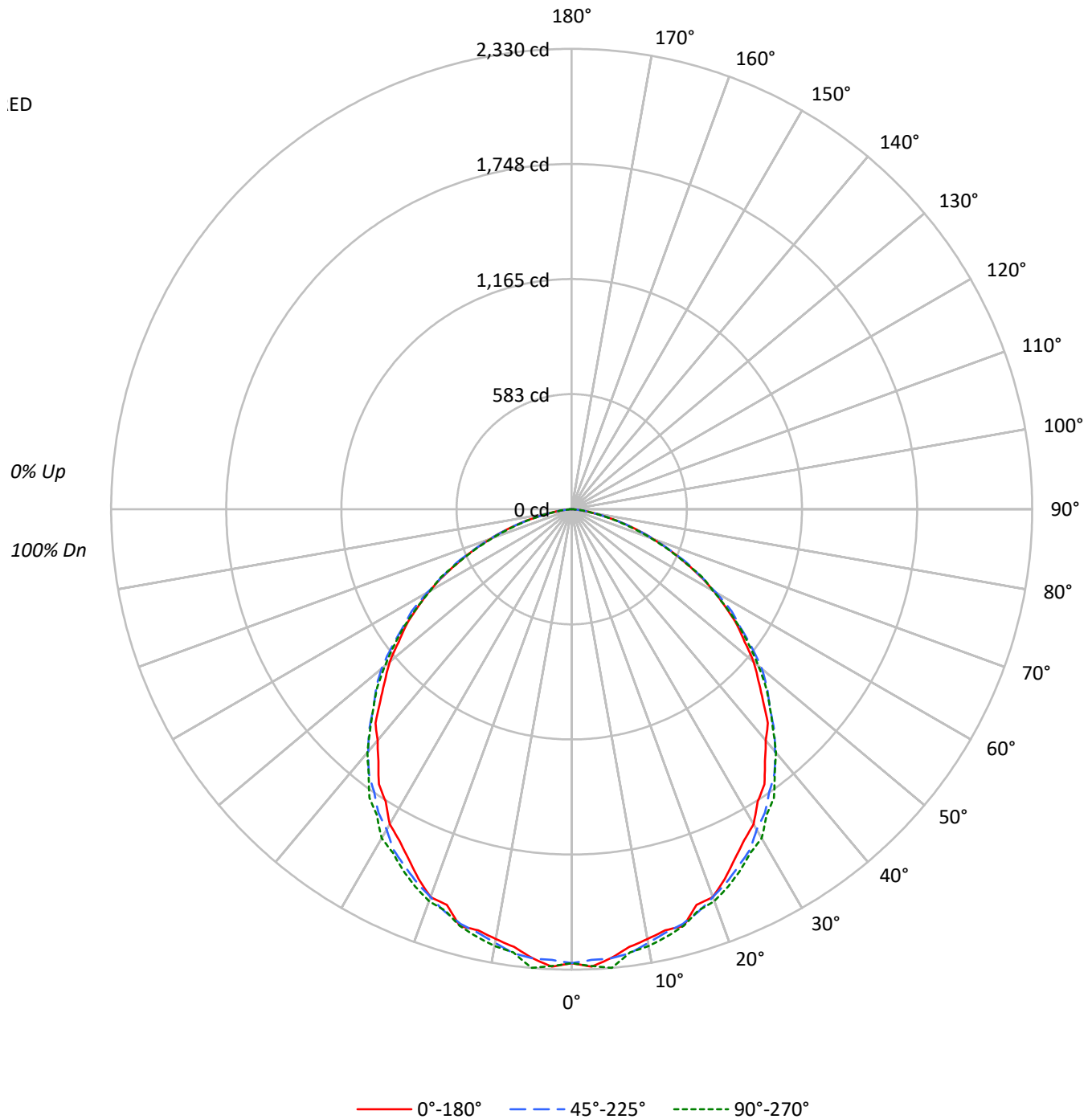
Lumens per Lamp: N/A
Luminaire Lumens: 5789.0 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	6181	6181	6181
5°	6160	6163	6293
10°	6036	6088	6131
15°	6083	6050	6084
20°	5981	5981	6044
25°	5797	5923	5989
30°	5717	5817	5972
35°	5582	5729	5857
40°	5365	5624	5649
45°	5203	5388	5396
50°	5032	5259	5159
55°	4795	4888	4853
60°	4484	4528	4447
65°	3997	4100	3969
70°	3430	3441	3346
75°	2717	2711	2606
80°	1819	1770	1700
85°	988	979	917

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5527 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.1	3.7
10°-20°	612.3	10.6
20°-30°	917.4	15.8
30°-40°	1087.3	18.8
40°-50°	1089.3	18.8
50°-60°	924.7	16.0
60°-70°	623.4	10.8
70°-80°	273.9	4.7
80°-90°	44.5	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°	1745.8	30.2
0°-40°	2833.1	48.9
0°-60°	4847.1	83.7
0°-90°	5789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5789.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2297	2297	2297	2297	2297	
5°	2281	2275	2282	2275	2330	215
15°	2184	2158	2172	2183	2184	608
25°	1952	1963	1995	2021	2017	903
35°	1699	1704	1744	1784	1783	1055
45°	1367	1393	1416	1452	1418	1058
55°	1022	1015	1042	1035	1034	909
65°	628	620	644	619	623	624
75°	261	256	261	242	251	280
85°	32	31	32	31	30	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2296.9	2296.9	2296.9	2296.9	2296.9
2.5°	2316.8	2299.3	2283.0	2302.0	2313.5
5°	2280.6	2275.3	2281.5	2274.7	2329.6
7.5°	2233.8	2254.2	2266.1	2258.7	2261.9
10°	2208.8	2201.7	2228.1	2246.5	2243.8
12.5°	2182.2	2192.8	2194.3	2214.2	2216.0
15°	2183.6	2158.4	2171.8	2183.0	2183.9
17.5°	2098.8	2126.1	2135.3	2161.1	2129.1
20°	2088.4	2068.6	2088.4	2114.8	2110.7
22.5°	2024.7	2002.4	2045.1	2068.6	2067.1
25°	1952.3	1963.0	1995.0	2021.1	2017.0
27.5°	1888.8	1901.3	1947.0	1982.9	1959.7
30°	1839.9	1833.7	1872.2	1904.3	1922.1
32.5°	1752.4	1775.0	1820.0	1851.8	1834.9
35°	1699.3	1704.4	1743.8	1784.2	1783.0
37.5°	1606.5	1629.9	1685.4	1696.7	1686.3
40°	1527.3	1550.8	1600.9	1613.0	1608.0
42.5°	1468.9	1473.1	1516.1	1530.0	1507.8
45°	1367.2	1392.7	1415.8	1452.3	1417.9
47.5°	1280.6	1292.4	1342.3	1352.1	1334.0
50°	1202.0	1206.1	1256.3	1244.1	1232.2
52.5°	1103.2	1120.7	1148.9	1146.5	1132.6
55°	1022.0	1015.2	1041.8	1034.7	1034.4
57.5°	924.4	936.3	958.2	946.9	928.9
60°	833.1	833.4	841.4	828.6	826.2
62.5°	731.3	734.9	736.7	721.0	746.5
65°	627.8	619.5	643.9	619.2	623.4
67.5°	532.6	536.8	534.4	519.0	524.9
70°	436.0	441.3	437.4	419.9	425.3
72.5°	347.6	341.1	345.2	323.3	333.3
75°	261.3	255.9	260.7	242.3	250.6
77.5°	177.9	182.1	179.1	169.3	175.0
80°	117.4	114.2	114.2	108.5	109.7
82.5°	68.5	65.2	64.4	62.6	65.2
85°	32.0	31.1	31.7	30.8	29.7
87.5°	11.6	11.9	11.9	11.3	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)