

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: P561523

Luminaire Tested: FSR-12-4-LD4-2LO-35-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561523
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-2LO-35-UNV-80-85-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

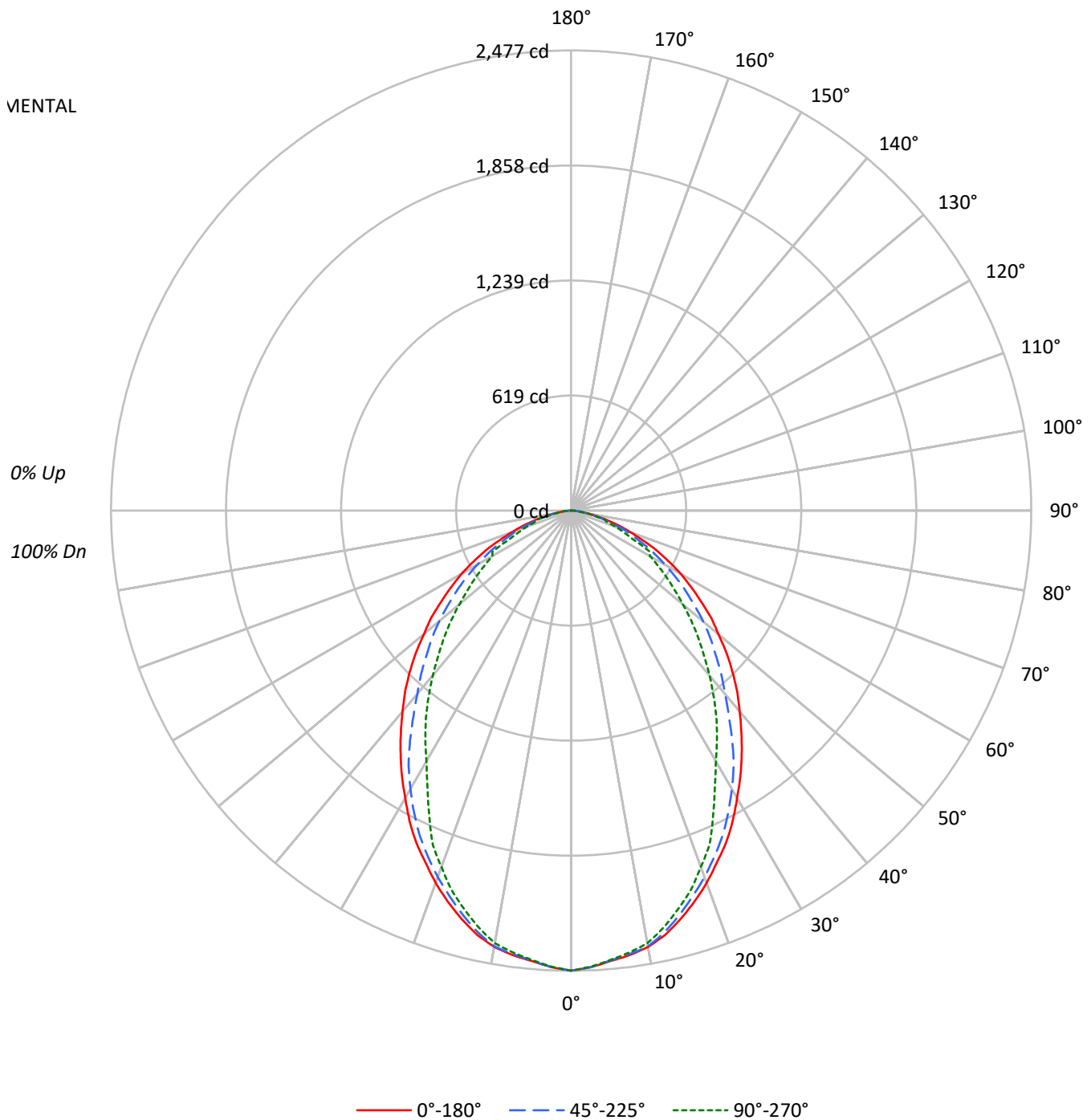
Lumens per Lamp: N/A
Luminaire Lumens: 4862.0 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6664	6664	6664
5°	6574	6566	6559
10°	6517	6509	6462
15°	6341	6277	6190
20°	6109	6010	5846
25°	5857	5730	5373
30°	5551	5374	4840
35°	5258	4966	4477
40°	4958	4526	4073
45°	4674	4184	3683
50°	4327	3884	3284
55°	4003	3519	2942
60°	3667	3144	2635
65°	3227	2753	2334
70°	2659	2411	1983
75°	2114	1845	1935
80°	1420	1331	1243
85°	883	1062	1238

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4674 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.5	4.7
10°-20°	632.7	13.0
20°-30°	875.9	18.0
30°-40°	934.0	19.2
40°-50°	852.1	17.5
50°-60°	667.5	13.7
60°-70°	435.1	8.9
70°-80°	192.8	4.0
80°-90°	41.4	0.9
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°	1739.2	35.8
0°-40°	2673.2	55.0
0°-60°	4192.8	86.2
0°-90°	4862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4862.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2477	2477	2477	2477	2477	
5°	2434	2431	2431	2428	2428	231
15°	2276	2276	2253	2230	2222	640
25°	1973	1961	1930	1861	1810	906
35°	1600	1589	1512	1397	1363	1001
45°	1228	1202	1100	1008	968	946
55°	853	828	750	661	627	765
65°	507	478	432	441	366	499
75°	203	189	178	169	186	218
85°	29	32	34	37	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2476.6	2476.6	2476.6	2476.6	2476.6
2.5°	2459.5	2459.5	2459.5	2456.6	2456.6
5°	2433.7	2430.8	2430.8	2428.0	2428.0
7.5°	2413.6	2410.8	2407.9	2405.1	2399.3
10°	2385.0	2385.0	2382.2	2367.8	2365.0
12.5°	2339.2	2336.3	2324.9	2304.8	2299.1
15°	2276.2	2276.2	2253.3	2230.4	2221.8
17.5°	2207.5	2204.6	2176.0	2153.1	2141.6
20°	2133.1	2127.3	2098.7	2061.5	2041.4
22.5°	2050.0	2050.0	2015.7	1967.0	1947.0
25°	1972.7	1961.3	1929.8	1861.1	1809.5
27.5°	1884.0	1866.8	1832.4	1735.1	1675.0
30°	1786.6	1778.0	1729.4	1603.4	1557.6
32.5°	1695.0	1680.7	1629.1	1497.4	1460.2
35°	1600.5	1589.1	1511.8	1397.2	1362.9
37.5°	1506.0	1491.7	1394.4	1302.7	1259.8
40°	1411.5	1394.4	1288.4	1205.4	1159.6
42.5°	1322.8	1299.9	1196.8	1108.0	1056.5
45°	1228.3	1202.5	1099.5	1007.8	967.7
47.5°	1133.8	1110.9	1016.4	921.9	876.1
50°	1033.6	1013.6	927.7	833.2	784.5
52.5°	950.6	919.1	836.0	741.6	701.5
55°	853.2	827.5	750.1	661.4	627.0
57.5°	764.5	738.7	667.1	584.1	555.5
60°	681.4	644.2	584.1	512.5	489.6
62.5°	589.8	561.2	509.6	449.5	478.1
65°	506.8	478.1	432.3	440.9	366.5
67.5°	415.2	400.8	360.8	320.7	309.2
70°	337.9	320.7	306.4	263.4	252.0
72.5°	269.1	252.0	231.9	209.0	200.4
75°	203.3	189.0	177.5	168.9	186.1
77.5°	140.3	134.6	126.0	117.4	114.5
80°	91.6	88.8	85.9	83.0	80.2
82.5°	54.4	54.4	54.4	54.4	54.4
85°	28.6	31.5	34.4	37.2	40.1
87.5°	17.2	17.2	20.0	22.9	25.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)