

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: P561791

Luminaire Tested: FSR-12-4-LD4-2STD-40-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561791
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-LD4-2STD-40-UNV-80-97-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

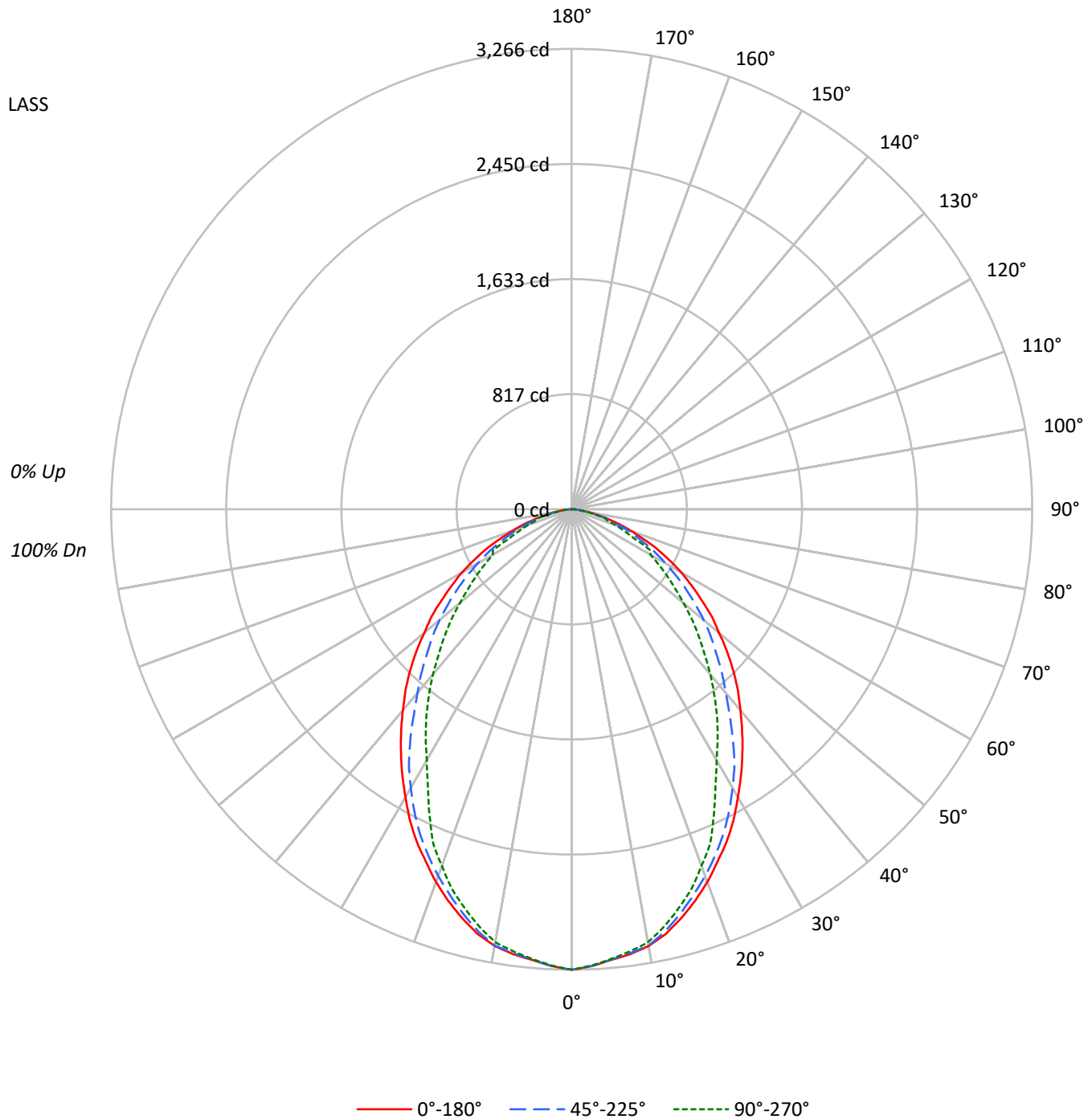
Lumens per Lamp: N/A
Luminaire Lumens: 6412.0 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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	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°	8789	8789	8789
5°	8670	8660	8649
10°	8595	8584	8522
15°	8363	8279	8163
20°	8056	7926	7710
25°	7725	7557	7086
30°	7321	7087	6383
35°	6934	6549	5904
40°	6539	5969	5372
45°	6165	5518	4857
50°	5707	5122	4331
55°	5279	4641	3879
60°	4837	4146	3475
65°	4255	3631	3077
70°	3506	3179	2615
75°	2787	2434	2551
80°	1872	1756	1638
85°	1167	1399	1633

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6165 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.0	4.7
10°-20°	834.4	13.0
20°-30°	1155.2	18.0
30°-40°	1231.8	19.2
40°-50°	1123.7	17.5
50°-60°	880.3	13.7
60°-70°	573.8	8.9
70°-80°	254.2	4.0
80°-90°	54.6	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°	2293.6	35.8
0°-40°	3525.4	55.0
0°-60°	5529.5	86.2
0°-90°	6412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6412.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3266	3266	3266	3266	3266	
5°	3210	3206	3206	3202	3202	305
15°	3002	3002	2972	2942	2930	844
25°	2602	2586	2545	2454	2386	1194
35°	2111	2096	1994	1843	1797	1320
45°	1620	1586	1450	1329	1276	1248
55°	1125	1091	989	872	827	1009
65°	668	631	570	582	483	659
75°	268	249	234	223	245	287
85°	38	42	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3266.2	3266.2	3266.2	3266.2	3266.2
2.5°	3243.5	3243.5	3243.5	3239.8	3239.8
5°	3209.5	3205.8	3205.8	3202.0	3202.0
7.5°	3183.1	3179.3	3175.6	3171.8	3164.2
10°	3145.4	3145.4	3141.6	3122.7	3118.9
12.5°	3084.9	3081.2	3066.1	3039.6	3032.1
15°	3001.9	3001.9	2971.7	2941.5	2930.1
17.5°	2911.2	2907.5	2869.7	2839.5	2824.4
20°	2813.1	2805.5	2767.8	2718.7	2692.2
22.5°	2703.6	2703.6	2658.3	2594.1	2567.6
25°	2601.6	2586.5	2545.0	2454.4	2386.4
27.5°	2484.6	2461.9	2416.6	2288.2	2208.9
30°	2356.2	2344.9	2280.7	2114.5	2054.1
32.5°	2235.4	2216.5	2148.5	1974.8	1925.7
35°	2110.7	2095.6	1993.7	1842.7	1797.3
37.5°	1986.1	1967.3	1838.9	1718.1	1661.4
40°	1861.5	1838.9	1699.2	1589.7	1529.3
42.5°	1744.5	1714.3	1578.3	1461.3	1393.3
45°	1619.9	1585.9	1450.0	1329.1	1276.3
47.5°	1495.3	1465.1	1340.5	1215.9	1155.4
50°	1363.1	1336.7	1223.4	1098.8	1034.6
52.5°	1253.6	1212.1	1102.6	978.0	925.1
55°	1125.2	1091.2	989.3	872.2	826.9
57.5°	1008.2	974.2	879.8	770.3	732.5
60°	898.7	849.6	770.3	675.9	645.7
62.5°	777.8	740.1	672.1	592.8	630.6
65°	668.3	630.6	570.2	581.5	483.3
67.5°	547.5	528.6	475.8	422.9	407.8
70°	445.6	422.9	404.0	347.4	332.3
72.5°	354.9	332.3	305.9	275.6	264.3
75°	268.1	249.2	234.1	222.8	245.4
77.5°	185.0	177.5	166.1	154.8	151.0
80°	120.8	117.1	113.3	109.5	105.7
82.5°	71.7	71.7	71.7	71.7	71.7
85°	37.8	41.5	45.3	49.1	52.9
87.5°	22.7	22.7	26.4	30.2	34.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)