

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: P561597

Luminaire Tested: FSR-12-4-LD4-2LO-40-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561597
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-40-UNV-80-96-EDD
Description: 1X4 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

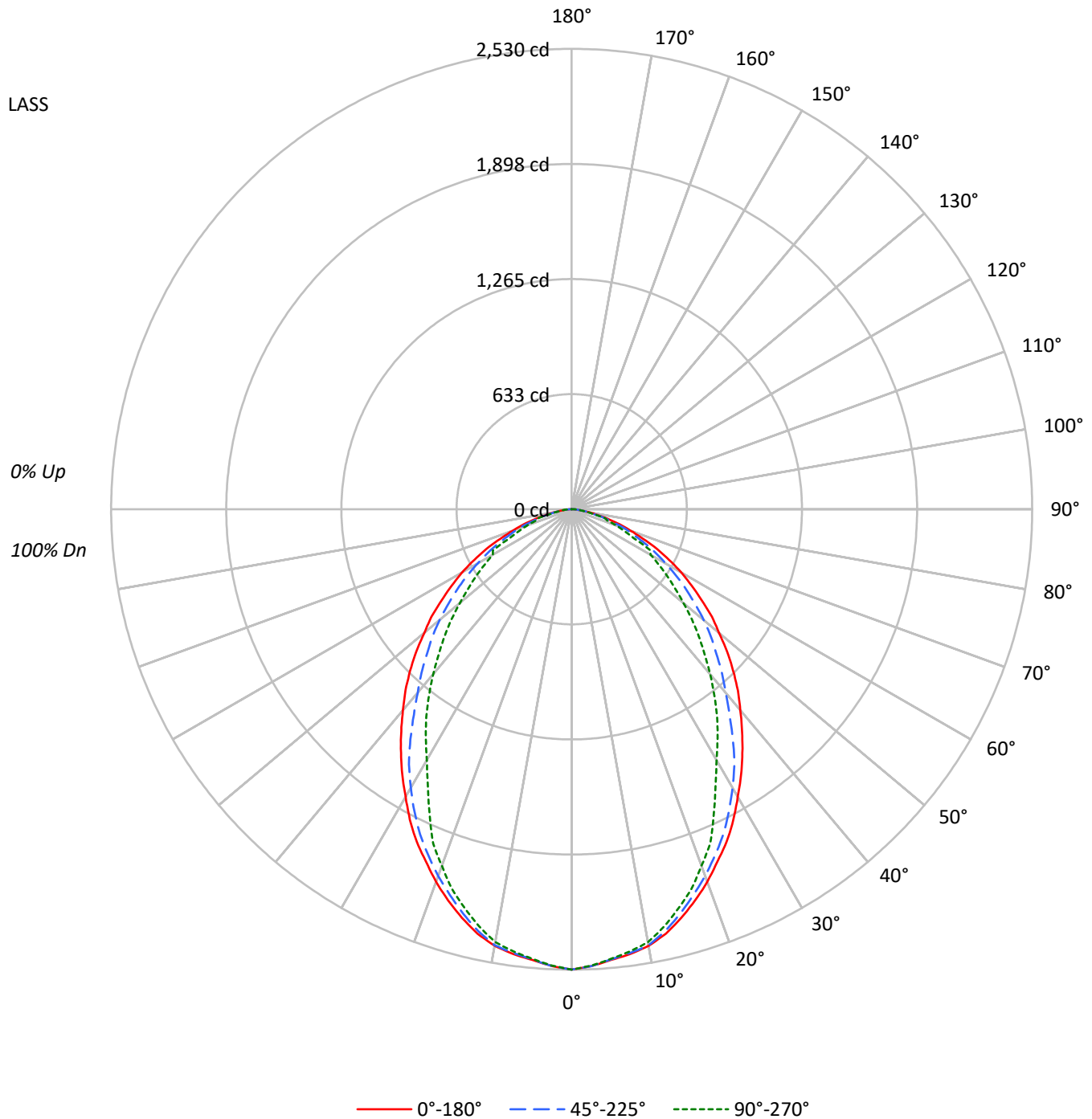
Lumens per Lamp: N/A
Luminaire Lumens: 4966.0 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	6807	6807	6807
5°	6715	6707	6699
10°	6656	6648	6601
15°	6477	6412	6322
20°	6239	6139	5971
25°	5983	5853	5488
30°	5670	5488	4943
35°	5370	5072	4573
40°	5064	4623	4161
45°	4775	4274	3762
50°	4420	3967	3355
55°	4089	3595	3004
60°	3746	3211	2692
65°	3296	2812	2383
70°	2715	2462	2024
75°	2158	1885	1976
80°	1450	1359	1269
85°	902	1084	1263

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4775 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.5	4.7
10°-20°	646.2	13.0
20°-30°	894.7	18.0
30°-40°	954.0	19.2
40°-50°	870.3	17.5
50°-60°	681.8	13.7
60°-70°	444.4	8.9
70°-80°	196.9	4.0
80°-90°	42.3	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°	1776.4	35.8
0°-40°	2730.4	55.0
0°-60°	4282.5	86.2
0°-90°	4966.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4966.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2530	2530	2530	2530	2530	
5°	2486	2483	2483	2480	2480	236
15°	2325	2325	2302	2278	2269	654
25°	2015	2003	1971	1901	1848	925
35°	1635	1623	1544	1427	1392	1022
45°	1255	1228	1123	1029	988	966
55°	872	845	766	676	640	782
65°	518	488	442	450	374	510
75°	208	193	181	172	190	223
85°	29	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2529.6	2529.6	2529.6	2529.6	2529.6
2.5°	2512.1	2512.1	2512.1	2509.1	2509.1
5°	2485.7	2482.8	2482.8	2479.9	2479.9
7.5°	2465.3	2462.4	2459.4	2456.5	2450.7
10°	2436.0	2436.0	2433.1	2418.5	2415.6
12.5°	2389.2	2386.3	2374.6	2354.1	2348.3
15°	2324.9	2324.9	2301.5	2278.1	2269.3
17.5°	2254.7	2251.8	2222.6	2199.2	2187.5
20°	2178.7	2172.8	2143.6	2105.6	2085.1
22.5°	2093.9	2093.9	2058.8	2009.1	1988.6
25°	2014.9	2003.2	1971.1	1900.9	1848.2
27.5°	1924.3	1906.7	1871.6	1772.2	1710.8
30°	1824.8	1816.1	1766.3	1637.7	1590.9
32.5°	1731.3	1716.6	1664.0	1529.5	1491.4
35°	1634.7	1623.0	1544.1	1427.1	1392.0
37.5°	1538.2	1523.6	1424.2	1330.6	1286.7
40°	1441.7	1424.2	1316.0	1231.2	1184.4
42.5°	1351.1	1327.7	1222.4	1131.7	1079.1
45°	1254.6	1228.3	1123.0	1029.4	988.5
47.5°	1158.1	1134.7	1038.2	941.7	894.9
50°	1055.7	1035.2	947.5	851.0	801.3
52.5°	970.9	938.7	853.9	757.4	716.5
55°	871.5	845.2	766.2	675.5	640.4
57.5°	780.8	754.5	681.4	596.6	567.3
60°	696.0	658.0	596.6	523.5	500.1
62.5°	602.4	573.2	520.5	459.1	488.4
65°	517.6	488.4	441.6	450.4	374.3
67.5°	424.0	409.4	368.5	327.5	315.8
70°	345.1	327.5	312.9	269.0	257.3
72.5°	274.9	257.3	236.9	213.5	204.7
75°	207.6	193.0	181.3	172.5	190.1
77.5°	143.3	137.4	128.7	119.9	117.0
80°	93.6	90.7	87.7	84.8	81.9
82.5°	55.6	55.6	55.6	55.6	55.6
85°	29.2	32.2	35.1	38.0	40.9
87.5°	17.5	17.5	20.5	23.4	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)