

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: P562621

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562621
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-24-4-LD4-2HI-50-UNV-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

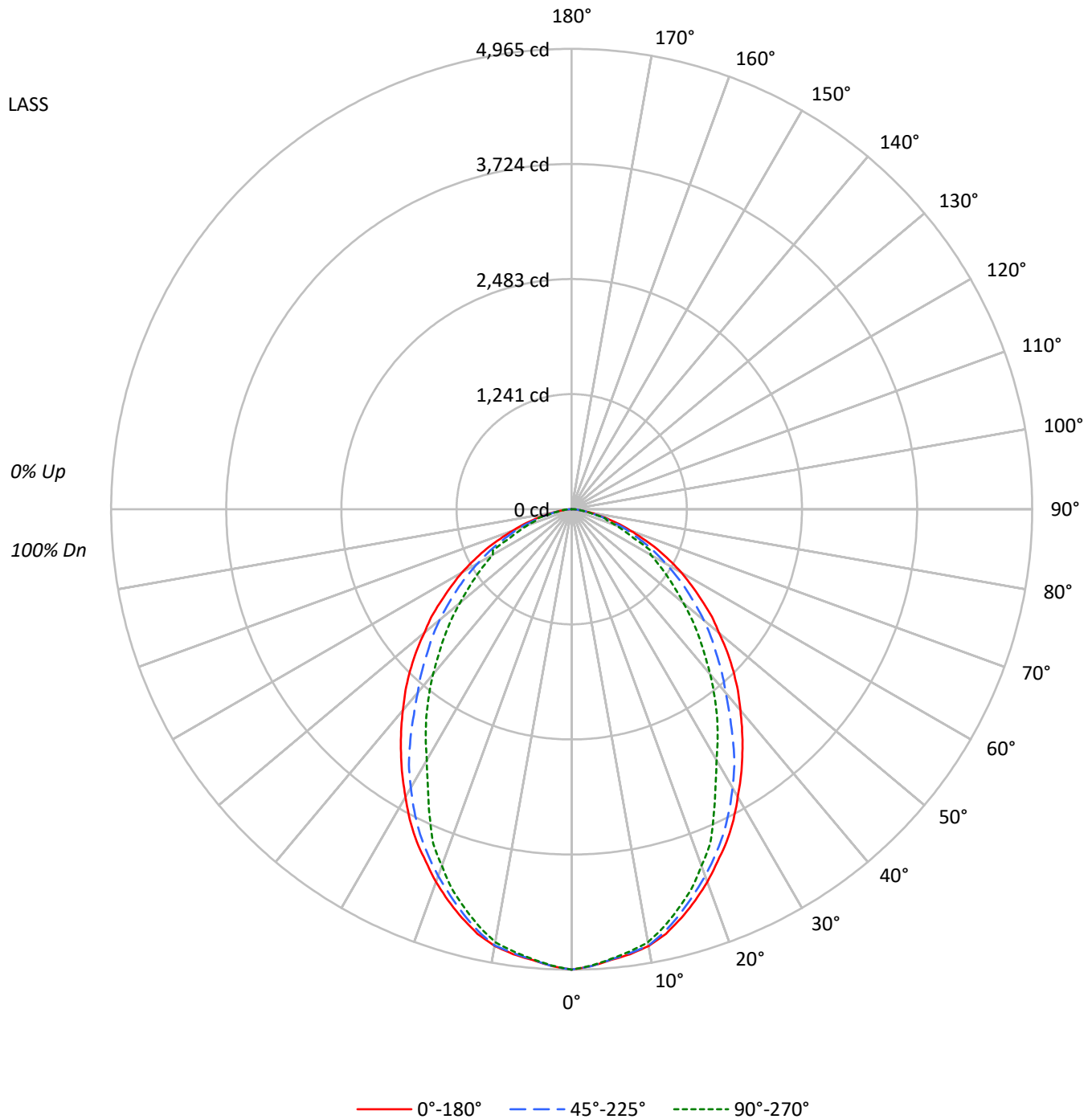
Lumens per Lamp: N/A
Luminaire Lumens: 9747.0 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6680	6680	6680
5°	6590	6582	6574
10°	6532	6525	6478
15°	6356	6292	6204
20°	6123	6024	5860
25°	5871	5743	5385
30°	5565	5386	4851
35°	5270	4978	4488
40°	4970	4537	4083
45°	4685	4194	3692
50°	4337	3893	3292
55°	4012	3528	2949
60°	3676	3151	2641
65°	3235	2759	2339
70°	2664	2416	1987
75°	2118	1850	1940
80°	1423	1334	1245
85°	886	1064	1241

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4685 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	462.2	4.7
10°-20°	1268.4	13.0
20°-30°	1756.0	18.0
30°-40°	1872.4	19.2
40°-50°	1708.2	17.5
50°-60°	1338.2	13.7
60°-70°	872.2	8.9
70°-80°	386.4	4.0
80°-90°	83.0	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°	3486.6	35.8
0°-40°	5359.0	55.0
0°-60°	8405.4	86.2
0°-90°	9747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9747.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4965	4965	4965	4965	4965	
5°	4879	4873	4873	4867	4867	463
15°	4563	4563	4517	4471	4454	1283
25°	3955	3932	3869	3731	3628	1816
35°	3209	3186	3031	2801	2732	2006
45°	2462	2411	2204	2020	1940	1897
55°	1710	1659	1504	1326	1257	1534
65°	1016	959	867	884	735	1001
75°	408	379	356	339	373	437
85°	57	63	69	75	80	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4965.0	4965.0	4965.0	4965.0	4965.0
2.5°	4930.6	4930.6	4930.6	4924.8	4924.8
5°	4878.9	4873.2	4873.2	4867.4	4867.4
7.5°	4838.7	4833.0	4827.2	4821.5	4810.0
10°	4781.3	4781.3	4775.6	4746.9	4741.1
12.5°	4689.5	4683.7	4660.8	4620.6	4609.1
15°	4563.2	4563.2	4517.3	4471.4	4454.1
17.5°	4425.4	4419.7	4362.3	4316.4	4293.4
20°	4276.2	4264.7	4207.3	4132.7	4092.5
22.5°	4109.8	4109.8	4040.9	3943.3	3903.1
25°	3954.8	3931.8	3868.7	3730.9	3627.6
27.5°	3776.8	3742.4	3673.5	3478.4	3357.8
30°	3581.7	3564.5	3466.9	3214.3	3122.5
32.5°	3398.0	3369.3	3266.0	3002.0	2927.3
35°	3208.6	3185.6	3030.7	2801.1	2732.2
37.5°	3019.2	2990.5	2795.3	2611.6	2525.5
40°	2829.8	2795.3	2582.9	2416.5	2324.6
42.5°	2651.8	2605.9	2399.3	2221.3	2118.0
45°	2462.4	2410.7	2204.1	2020.4	1940.1
47.5°	2273.0	2227.1	2037.7	1848.2	1756.4
50°	2072.1	2031.9	1859.7	1670.3	1572.7
52.5°	1905.6	1842.5	1676.0	1486.6	1406.3
55°	1710.5	1658.8	1503.8	1325.9	1257.0
57.5°	1532.5	1480.9	1337.4	1170.9	1113.5
60°	1366.1	1291.5	1170.9	1027.4	981.5
62.5°	1182.4	1125.0	1021.7	901.2	958.6
65°	1016.0	958.6	866.7	883.9	734.7
67.5°	832.3	803.6	723.2	642.9	619.9
70°	677.3	642.9	614.2	528.1	505.1
72.5°	539.5	505.1	464.9	419.0	401.8
75°	407.5	378.8	355.9	338.7	373.1
77.5°	281.3	269.8	252.6	235.3	229.6
80°	183.7	177.9	172.2	166.5	160.7
82.5°	109.1	109.1	109.1	109.1	109.1
85°	57.4	63.1	68.9	74.6	80.4
87.5°	34.4	34.4	40.2	45.9	51.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)