

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: P564095

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564095
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-LD4-4STD-40-UNV-80-97-EDD
Description: 2X4 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: 15067.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

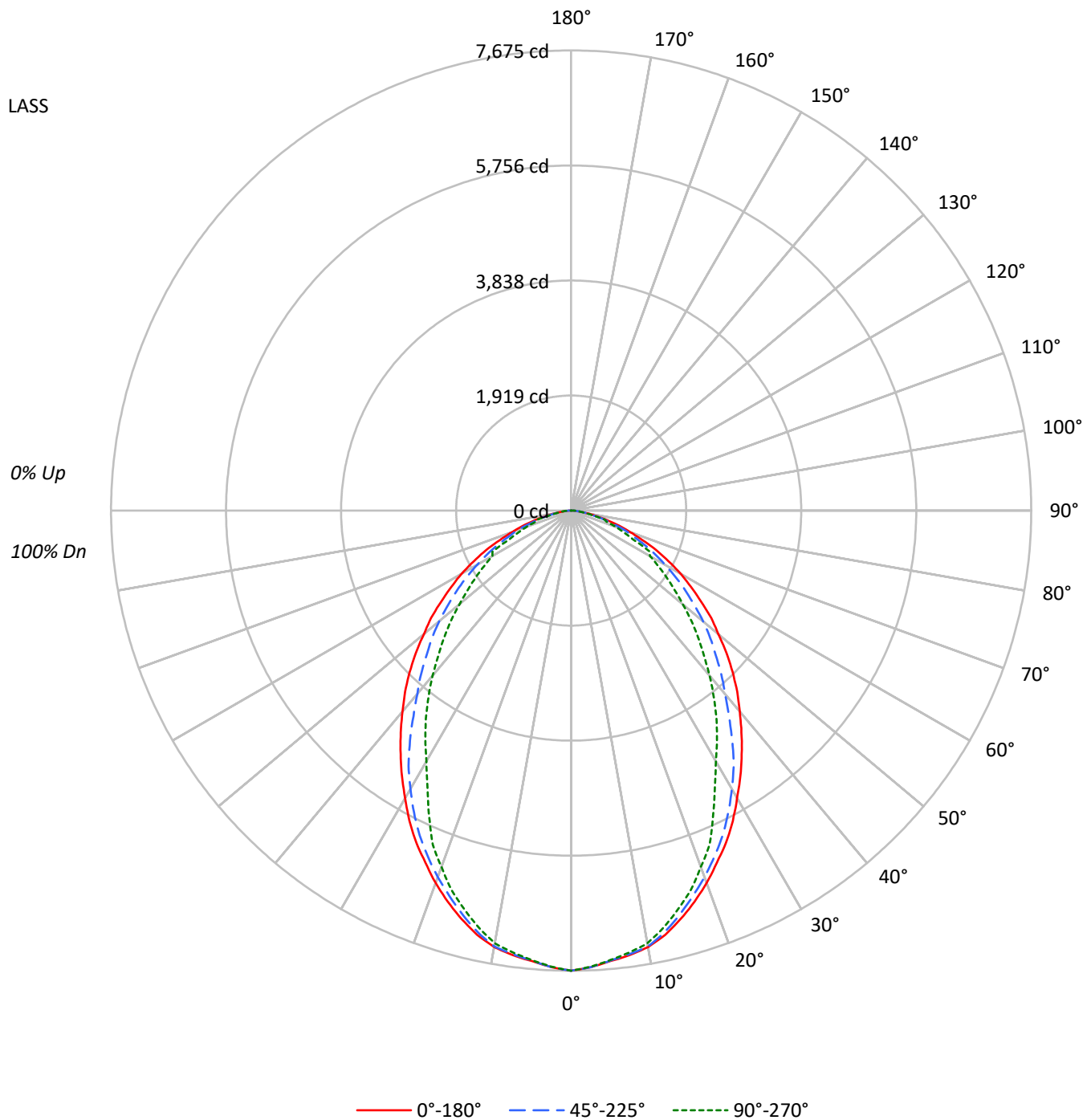
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	10326	10326	10326
5°	10186	10174	10162
10°	10098	10086	10013
15°	9826	9727	9591
20°	9465	9312	9058
25°	9076	8878	8325
30°	8602	8326	7499
35°	8147	7695	6937
40°	7683	7013	6312
45°	7243	6483	5707
50°	6705	6018	5089
55°	6203	5453	4558
60°	5683	4871	4083
65°	5000	4266	3616
70°	4119	3735	3072
75°	3275	2860	2998
80°	2200	2063	1925
85°	1369	1644	1917

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7243 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	714.4	4.7
10°-20°	1960.7	13.0
20°-30°	2714.5	18.0
30°-40°	2894.4	19.2
40°-50°	2640.5	17.5
50°-60°	2068.7	13.7
60°-70°	1348.2	8.9
70°-80°	597.3	4.0
80°-90°	128.2	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°	5389.6	35.8
0°-40°	8284.0	55.0
0°-60°	12993.2	86.2
0°-90°	15067.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15067.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7675	7675	7675	7675	7675	
5°	7542	7533	7533	7524	7524	716
15°	7054	7054	6983	6912	6885	1983
25°	6113	6078	5980	5767	5608	2807
35°	4960	4924	4685	4330	4223	3101
45°	3806	3727	3407	3123	2999	2932
55°	2644	2564	2325	2050	1943	2372
65°	1570	1482	1340	1366	1136	1548
75°	630	586	550	524	577	675
85°	89	98	106	115	124	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7674.9	7674.9	7674.9	7674.9	7674.9
2.5°	7621.7	7621.7	7621.7	7612.8	7612.8
5°	7541.8	7533.0	7533.0	7524.1	7524.1
7.5°	7479.7	7470.9	7462.0	7453.1	7435.4
10°	7391.0	7391.0	7382.1	7337.8	7328.9
12.5°	7249.0	7240.2	7204.7	7142.6	7124.8
15°	7053.8	7053.8	6982.9	6911.9	6885.3
17.5°	6840.9	6832.0	6743.3	6672.3	6636.8
20°	6610.2	6592.5	6503.7	6388.4	6326.3
22.5°	6352.9	6352.9	6246.4	6095.6	6033.5
25°	6113.3	6077.8	5980.2	5767.3	5607.6
27.5°	5838.3	5785.0	5678.6	5376.9	5190.6
30°	5536.6	5510.0	5359.1	4968.7	4826.8
32.5°	5252.7	5208.3	5048.6	4640.4	4525.1
35°	4959.9	4924.4	4684.8	4329.9	4223.4
37.5°	4667.1	4622.7	4321.0	4037.1	3904.0
40°	4374.3	4321.0	3992.7	3735.4	3593.5
42.5°	4099.2	4028.2	3708.8	3433.8	3274.0
45°	3806.4	3726.6	3407.1	3123.2	2999.0
47.5°	3513.6	3442.6	3149.8	2857.0	2715.1
50°	3203.1	3141.0	2874.8	2582.0	2431.1
52.5°	2945.8	2848.2	2590.8	2298.0	2173.8
55°	2644.1	2564.2	2324.7	2049.6	1943.1
57.5°	2369.0	2289.2	2067.4	1810.0	1721.3
60°	2111.7	1996.4	1810.0	1588.2	1517.2
62.5°	1827.8	1739.1	1579.3	1393.0	1481.7
65°	1570.5	1481.7	1339.8	1366.4	1135.7
67.5°	1286.5	1242.2	1118.0	993.7	958.3
70°	1047.0	993.7	949.4	816.3	780.8
72.5°	834.0	780.8	718.7	647.7	621.1
75°	630.0	585.6	550.1	523.5	576.7
77.5°	434.8	417.0	390.4	363.8	354.9
80°	283.9	275.1	266.2	257.3	248.4
82.5°	168.6	168.6	168.6	168.6	168.6
85°	88.7	97.6	106.5	115.3	124.2
87.5°	53.2	53.2	62.1	71.0	79.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)