

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: P564067

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564067
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-35-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15330.0 lumens
Efficiency: N/A
Efficacy: 115.1 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

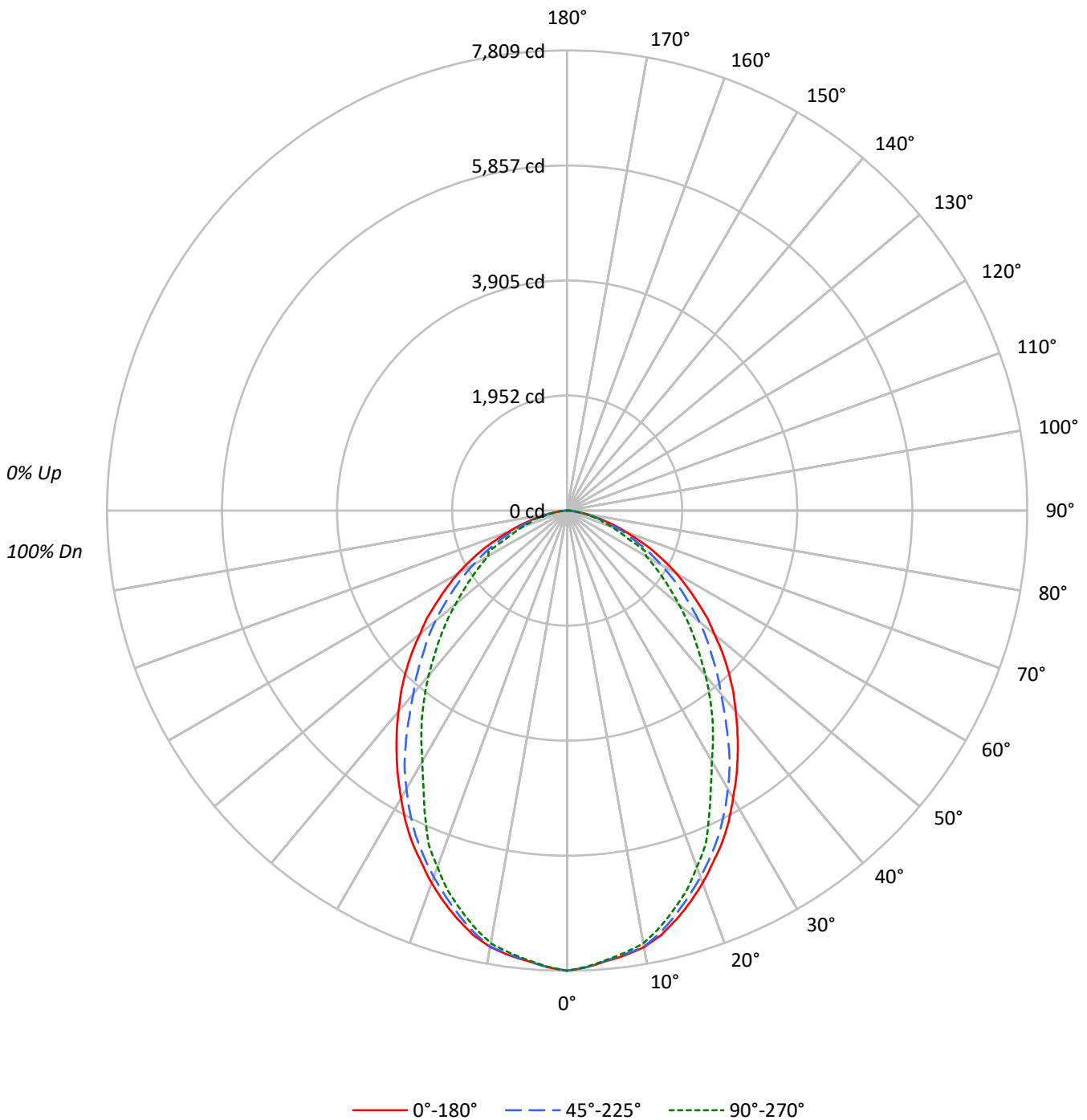
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10507	10507	10507
5°	10364	10352	10340
10°	10274	10262	10188
15°	9997	9897	9758
20°	9630	9475	9216
25°	9234	9033	8470
30°	8752	8472	7630
35°	8289	7829	7058
40°	7817	7135	6422
45°	7369	6596	5806
50°	6822	6123	5178
55°	6311	5548	4638
60°	5782	4956	4154
65°	5087	4340	3679
70°	4191	3800	3125
75°	3332	2910	3051
80°	2239	2098	1959
85°	1394	1672	1951

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7369 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	726.9	4.7
10°-20°	1994.9	13.0
20°-30°	2761.8	18.0
30°-40°	2944.9	19.2
40°-50°	2686.6	17.5
50°-60°	2104.8	13.7
60°-70°	1371.8	8.9
70°-80°	607.7	4.0
80°-90°	130.5	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°	5483.7	35.8
0°-40°	8428.6	55.0
0°-60°	13220.0	86.2
0°-90°	15330.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7809	7809	7809	7809	7809	
5°	7674	7664	7664	7655	7655	728
15°	7177	7177	7105	7032	7005	2018
25°	6220	6184	6085	5868	5706	2856
35°	5046	5010	4767	4406	4297	3155
45°	3873	3792	3467	3178	3051	2983
55°	2690	2609	2365	2085	1977	2413
65°	1598	1508	1363	1390	1156	1575
75°	641	596	560	533	587	687
85°	90	99	108	117	126	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7808.9	7808.9	7808.9	7808.9	7808.9
2.5°	7754.7	7754.7	7754.7	7745.7	7745.7
5°	7673.5	7664.5	7664.5	7655.4	7655.4
7.5°	7610.3	7601.3	7592.2	7583.2	7565.2
10°	7520.0	7520.0	7511.0	7465.8	7456.8
12.5°	7375.6	7366.5	7330.4	7267.2	7249.2
15°	7177.0	7177.0	7104.7	7032.5	7005.4
17.5°	6960.3	6951.3	6861.0	6788.8	6752.7
20°	6725.6	6707.5	6617.3	6499.9	6436.7
22.5°	6463.8	6463.8	6355.4	6202.0	6138.8
25°	6220.0	6183.9	6084.6	5868.0	5705.5
27.5°	5940.2	5886.0	5777.7	5470.7	5281.2
30°	5633.2	5606.2	5452.7	5055.5	4911.0
32.5°	5344.4	5299.2	5136.7	4721.4	4604.1
35°	5046.4	5010.3	4766.6	4405.5	4297.2
37.5°	4748.5	4703.4	4396.5	4107.6	3972.2
40°	4450.6	4396.5	4062.4	3800.6	3656.2
42.5°	4170.8	4098.5	3773.5	3493.7	3331.2
45°	3872.9	3791.6	3466.6	3177.7	3051.3
47.5°	3574.9	3502.7	3204.8	2906.9	2762.5
50°	3259.0	3195.8	2925.0	2627.0	2473.6
52.5°	2997.2	2897.9	2636.1	2338.2	2211.8
55°	2690.2	2609.0	2365.2	2085.4	1977.1
57.5°	2410.4	2329.1	2103.4	1841.6	1751.4
60°	2148.6	2031.2	1841.6	1615.9	1543.7
62.5°	1859.7	1769.4	1606.9	1417.3	1507.6
65°	1597.9	1507.6	1363.2	1390.3	1155.5
67.5°	1309.0	1263.9	1137.5	1011.1	975.0
70°	1065.3	1011.1	966.0	830.5	794.4
72.5°	848.6	794.4	731.2	659.0	631.9
75°	641.0	595.8	559.7	532.6	586.8
77.5°	442.4	424.3	397.2	370.1	361.1
80°	288.9	279.9	270.8	261.8	252.8
82.5°	171.5	171.5	171.5	171.5	171.5
85°	90.3	99.3	108.3	117.4	126.4
87.5°	54.2	54.2	63.2	72.2	81.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)