

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: P563087

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563087
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-LD4-3HI-35-UNV-81-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13037.0 lumens
Efficiency: N/A
Efficacy: 100.6 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

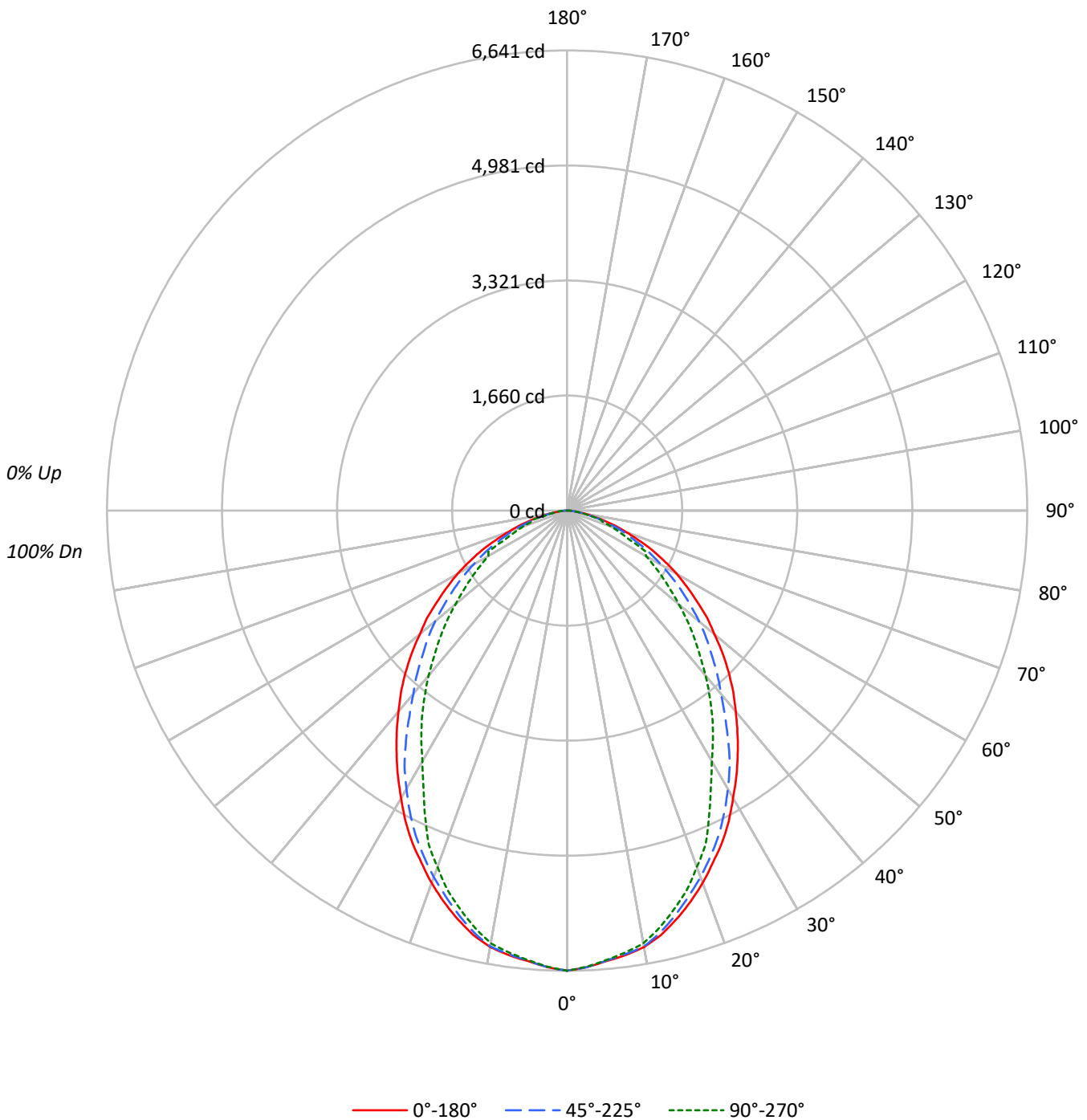
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8935	8935	8935
5°	8814	8803	8793
10°	8737	8727	8664
15°	8502	8416	8299
20°	8190	8058	7838
25°	7853	7682	7203
30°	7443	7204	6489
35°	7049	6658	6002
40°	6648	6068	5461
45°	6267	5610	4938
50°	5801	5207	4403
55°	5367	4719	3944
60°	4917	4215	3533
65°	4326	3691	3129
70°	3564	3232	2658
75°	2834	2475	2594
80°	1904	1784	1666
85°	1186	1422	1660

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6267 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	618.2	4.7
10°-20°	1696.5	13.0
20°-30°	2348.7	18.0
30°-40°	2504.4	19.2
40°-50°	2284.8	17.5
50°-60°	1789.9	13.7
60°-70°	1166.6	8.9
70°-80°	516.9	4.0
80°-90°	111.0	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°	4663.4	35.8
0°-40°	7167.9	55.0
0°-60°	11242.6	86.2
0°-90°	13037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6641	6641	6641	6641	6641	
5°	6526	6518	6518	6510	6510	619
15°	6104	6104	6042	5981	5958	1716
25°	5290	5259	5174	4990	4852	2428
35°	4292	4261	4054	3746	3654	2683
45°	3294	3224	2948	2702	2595	2537
55°	2288	2219	2012	1774	1681	2052
65°	1359	1282	1159	1182	983	1339
75°	545	507	476	453	499	584
85°	77	84	92	100	108	107
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6640.9	6640.9	6640.9	6640.9	6640.9
2.5°	6594.8	6594.8	6594.8	6587.1	6587.1
5°	6525.7	6518.0	6518.0	6510.4	6510.4
7.5°	6472.0	6464.3	6456.6	6448.9	6433.6
10°	6395.2	6395.2	6387.5	6349.1	6341.5
12.5°	6272.4	6264.7	6234.0	6180.2	6164.9
15°	6103.5	6103.5	6042.0	5980.6	5957.6
17.5°	5919.2	5911.5	5834.8	5773.3	5742.6
20°	5719.6	5704.2	5627.5	5527.7	5473.9
22.5°	5497.0	5497.0	5404.8	5274.3	5220.6
25°	5289.7	5259.0	5174.5	4990.3	4852.1
27.5°	5051.7	5005.6	4913.5	4652.5	4491.2
30°	4790.6	4767.6	4637.1	4299.3	4176.5
32.5°	4545.0	4506.6	4368.4	4015.2	3915.4
35°	4291.6	4260.9	4053.6	3746.5	3654.4
37.5°	4038.3	3999.9	3738.9	3493.2	3378.0
40°	3784.9	3738.9	3454.8	3232.1	3109.3
42.5°	3546.9	3485.5	3209.1	2971.1	2832.9
45°	3293.6	3224.5	2948.1	2702.4	2594.9
47.5°	3040.2	2978.8	2725.4	2472.1	2349.3
50°	2771.5	2717.8	2487.4	2234.1	2103.6
52.5°	2548.9	2464.4	2241.8	1988.4	1880.9
55°	2287.8	2218.7	2011.5	1773.5	1681.3
57.5°	2049.8	1980.7	1788.8	1566.2	1489.4
60°	1827.2	1727.4	1566.2	1374.2	1312.8
62.5°	1581.5	1504.8	1366.6	1205.3	1282.1
65°	1358.9	1282.1	1159.3	1182.3	982.7
67.5°	1113.2	1074.8	967.3	859.9	829.1
70°	905.9	859.9	821.5	706.3	675.6
72.5°	721.7	675.6	621.9	560.4	537.4
75°	545.1	506.7	476.0	453.0	499.0
77.5°	376.2	360.8	337.8	314.8	307.1
80°	245.7	238.0	230.3	222.6	215.0
82.5°	145.9	145.9	145.9	145.9	145.9
85°	76.8	84.5	92.1	99.8	107.5
87.5°	46.1	46.1	53.7	61.4	69.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)