

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: P563105

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563105
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-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14388.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

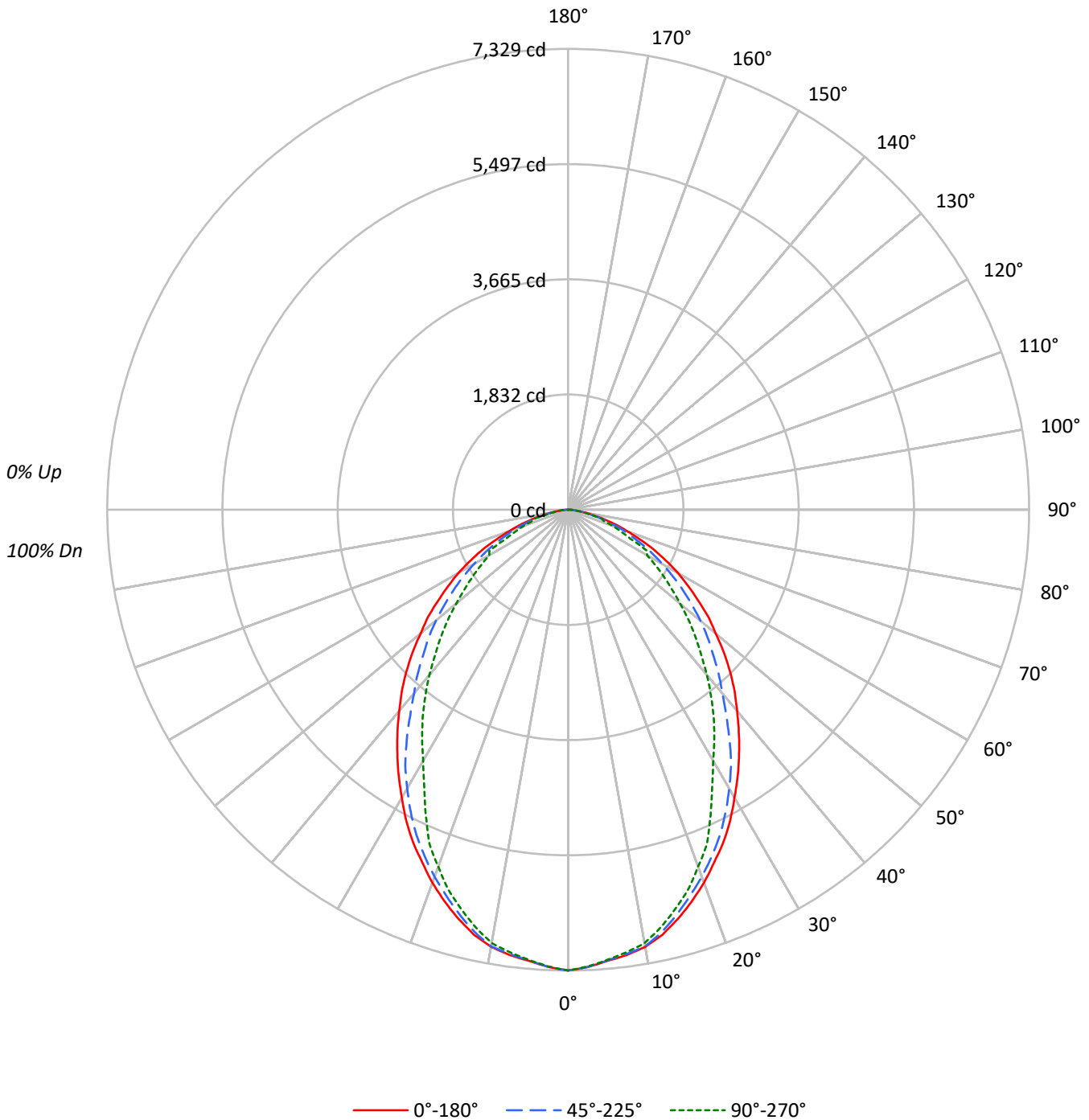
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9861	9861	9861
5°	9727	9716	9704
10°	9643	9631	9562
15°	9383	9288	9159
20°	9038	8893	8650
25°	8667	8478	7950
30°	8214	7951	7161
35°	7780	7348	6625
40°	7337	6697	6027
45°	6917	6191	5449
50°	6403	5746	4860
55°	5923	5207	4353
60°	5426	4651	3899
65°	4775	4073	3453
70°	3933	3567	2933
75°	3127	2731	2863
80°	2101	1970	1838
85°	1308	1570	1831

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6917 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	682.2	4.7
10°-20°	1872.3	13.0
20°-30°	2592.1	18.0
30°-40°	2764.0	19.2
40°-50°	2521.5	17.5
50°-60°	1975.4	13.7
60°-70°	1287.5	8.9
70°-80°	570.4	4.0
80°-90°	122.5	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°	5146.7	35.8
0°-40°	7910.7	55.0
0°-60°	12407.7	86.2
0°-90°	14388.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14388.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7329	7329	7329	7329	7329	
5°	7202	7194	7194	7185	7185	684
15°	6736	6736	6668	6600	6575	1894
25°	5838	5804	5711	5507	5355	2680
35°	4736	4702	4474	4135	4033	2961
45°	3635	3559	3254	2982	2864	2800
55°	2525	2449	2220	1957	1856	2265
65°	1500	1415	1279	1305	1084	1478
75°	602	559	525	500	551	645
85°	85	93	102	110	119	118
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7329.1	7329.1	7329.1	7329.1	7329.1
2.5°	7278.2	7278.2	7278.2	7269.7	7269.7
5°	7202.0	7193.5	7193.5	7185.0	7185.0
7.5°	7142.7	7134.2	7125.7	7117.2	7100.3
10°	7057.9	7057.9	7049.4	7007.1	6998.6
12.5°	6922.4	6913.9	6880.0	6820.7	6803.7
15°	6736.0	6736.0	6668.2	6600.4	6575.0
17.5°	6532.6	6524.1	6439.4	6371.6	6337.7
20°	6312.3	6295.4	6210.6	6100.5	6041.2
22.5°	6066.6	6066.6	5964.9	5820.9	5761.6
25°	5837.8	5803.9	5710.7	5507.4	5354.9
27.5°	5575.2	5524.3	5422.7	5134.6	4956.6
30°	5287.1	5261.7	5117.6	4744.8	4609.3
32.5°	5016.0	4973.6	4821.1	4431.3	4321.2
35°	4736.3	4702.5	4473.7	4134.8	4033.1
37.5°	4456.7	4414.4	4126.3	3855.2	3728.1
40°	4177.1	4126.3	3812.8	3567.1	3431.5
42.5°	3914.5	3846.7	3541.7	3279.0	3126.5
45°	3634.9	3558.6	3253.6	2982.5	2863.8
47.5°	3355.3	3287.5	3007.9	2728.3	2592.7
50°	3058.7	2999.4	2745.2	2465.6	2321.6
52.5°	2813.0	2719.8	2474.1	2194.5	2075.9
55°	2524.9	2448.7	2219.9	1957.2	1855.6
57.5°	2262.3	2186.0	1974.2	1728.5	1643.7
60°	2016.5	1906.4	1728.5	1516.6	1448.9
62.5°	1745.4	1660.7	1508.2	1330.2	1415.0
65°	1499.7	1415.0	1279.4	1304.8	1084.5
67.5°	1228.6	1186.2	1067.6	949.0	915.1
70°	999.8	949.0	906.6	779.5	745.6
72.5°	796.5	745.6	686.3	618.5	593.1
75°	601.6	559.2	525.3	499.9	550.7
77.5°	415.2	398.2	372.8	347.4	338.9
80°	271.1	262.7	254.2	245.7	237.2
82.5°	161.0	161.0	161.0	161.0	161.0
85°	84.7	93.2	101.7	110.1	118.6
87.5°	50.8	50.8	59.3	67.8	76.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)