

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: P563083

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563083
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-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 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: 13673.0 lumens
Efficiency: N/A
Efficacy: 105.5 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

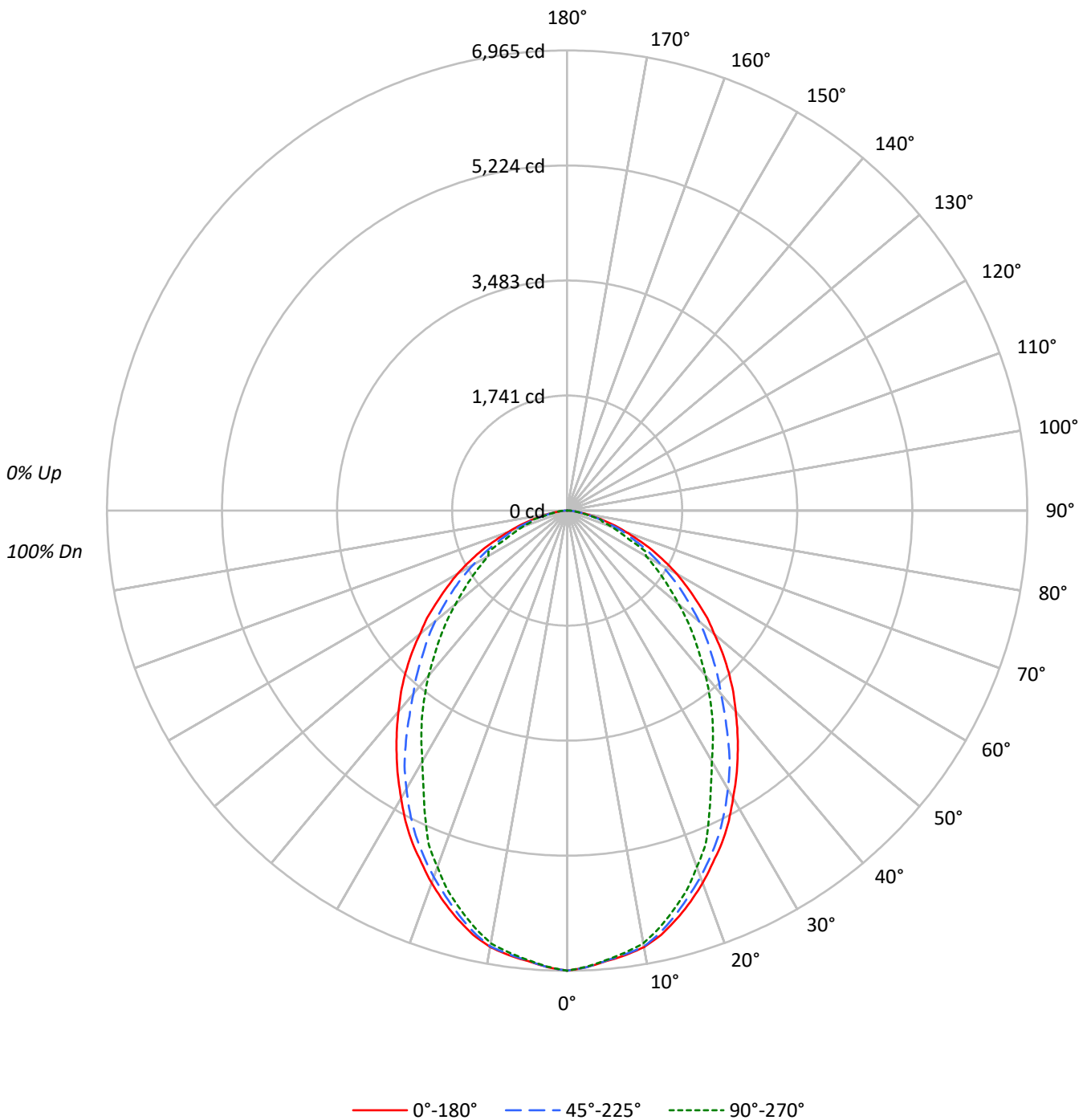
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9371	9371	9371
5°	9244	9233	9222
10°	9164	9153	9087
15°	8917	8827	8703
20°	8589	8451	8220
25°	8236	8057	7555
30°	7806	7556	6805
35°	7393	6983	6295
40°	6972	6364	5728
45°	6573	5883	5178
50°	6084	5461	4618
55°	5628	4949	4137
60°	5157	4420	3705
65°	4537	3871	3281
70°	3738	3389	2788
75°	2972	2595	2721
80°	1997	1872	1747
85°	1243	1491	1740

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	648.3	4.7
10°-20°	1779.3	13.0
20°-30°	2463.3	18.0
30°-40°	2626.6	19.2
40°-50°	2396.2	17.5
50°-60°	1877.3	13.7
60°-70°	1223.5	8.9
70°-80°	542.1	4.0
80°-90°	116.4	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°	4890.9	35.8
0°-40°	7517.5	55.0
0°-60°	11791.0	86.2
0°-90°	13673.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6965	6965	6965	6965	6965	
5°	6844	6836	6836	6828	6828	650
15°	6401	6401	6337	6272	6248	1800
25°	5548	5516	5427	5234	5089	2547
35°	4501	4469	4251	3929	3833	2814
45°	3454	3382	3092	2834	2722	2661
55°	2399	2327	2110	1860	1763	2152
65°	1425	1345	1216	1240	1031	1405
75°	572	531	499	475	523	613
85°	80	89	97	105	113	112
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6964.8	6964.8	6964.8	6964.8	6964.8
2.5°	6916.5	6916.5	6916.5	6908.5	6908.5
5°	6844.1	6836.0	6836.0	6828.0	6828.0
7.5°	6787.7	6779.7	6771.6	6763.5	6747.4
10°	6707.2	6707.2	6699.1	6658.9	6650.8
12.5°	6578.4	6570.3	6538.1	6481.7	6465.6
15°	6401.2	6401.2	6336.8	6272.4	6248.2
17.5°	6208.0	6199.9	6119.4	6055.0	6022.8
20°	5998.6	5982.5	5902.0	5797.3	5741.0
22.5°	5765.1	5765.1	5668.5	5531.6	5475.3
25°	5547.7	5515.5	5426.9	5233.7	5088.8
27.5°	5298.1	5249.8	5153.2	4879.4	4710.3
30°	5024.3	5000.2	4863.3	4509.0	4380.2
32.5°	4766.7	4726.4	4581.5	4211.1	4106.4
35°	4501.0	4468.8	4251.4	3929.3	3832.7
37.5°	4235.3	4195.0	3921.2	3663.6	3542.8
40°	3969.6	3921.2	3623.3	3389.8	3261.0
42.5°	3720.0	3655.5	3365.7	3116.1	2971.1
45°	3454.2	3381.8	3091.9	2834.2	2721.5
47.5°	3188.5	3124.1	2858.4	2592.7	2463.9
50°	2906.7	2850.4	2608.8	2343.1	2206.2
52.5°	2673.2	2584.6	2351.1	2085.4	1972.7
55°	2399.4	2327.0	2109.6	1860.0	1763.4
57.5°	2149.8	2077.4	1876.1	1642.6	1562.1
60°	1916.3	1811.7	1642.6	1441.3	1376.9
62.5°	1658.7	1578.2	1433.2	1264.1	1344.7
65°	1425.2	1344.7	1215.8	1240.0	1030.6
67.5°	1167.5	1127.3	1014.5	901.8	869.6
70°	950.1	901.8	861.5	740.8	708.6
72.5°	756.9	708.6	652.2	587.8	563.6
75°	571.7	531.4	499.2	475.1	523.4
77.5°	394.5	378.4	354.3	330.1	322.1
80°	257.7	249.6	241.6	233.5	225.5
82.5°	153.0	153.0	153.0	153.0	153.0
85°	80.5	88.6	96.6	104.7	112.7
87.5°	48.3	48.3	56.4	64.4	72.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)