

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: P563013

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563013
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-LD4-2STD-50-UNV-81-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7380.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

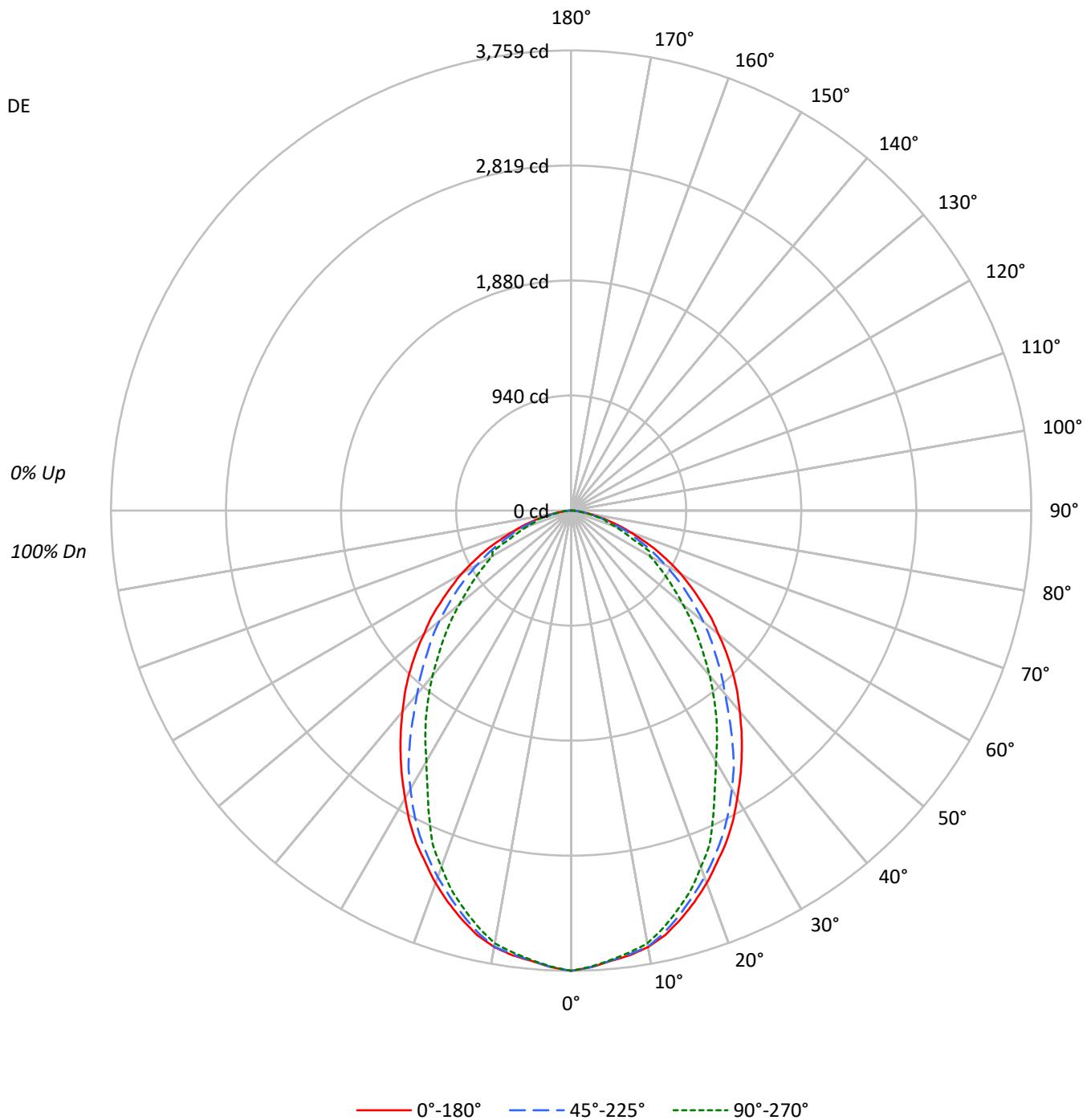
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				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°	5058	5058	5058
5°	4989	4983	4978
10°	4946	4940	4905
15°	4813	4764	4698
20°	4636	4561	4437
25°	4445	4349	4078
30°	4213	4078	3673
35°	3990	3769	3398
40°	3763	3435	3091
45°	3548	3176	2795
50°	3284	2947	2493
55°	3038	2671	2233
60°	2783	2386	2000
65°	2449	2089	1771
70°	2017	1829	1504
75°	1604	1401	1469
80°	1078	1010	943
85°	672	806	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3548 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	349.9	4.7
10°-20°	960.4	13.0
20°-30°	1329.6	18.0
30°-40°	1417.7	19.2
40°-50°	1293.4	17.5
50°-60°	1013.3	13.7
60°-70°	660.4	8.9
70°-80°	292.6	4.0
80°-90°	62.8	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°	2639.9	35.8
0°-40°	4057.6	55.0
0°-60°	6364.2	86.2
0°-90°	7380.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7380.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3759	3759	3759	3759	3759	
5°	3694	3690	3690	3685	3685	351
15°	3455	3455	3420	3386	3372	971
25°	2994	2977	2929	2825	2747	1375
35°	2429	2412	2295	2121	2069	1519
45°	1864	1825	1669	1530	1469	1436
55°	1295	1256	1139	1004	952	1162
65°	769	726	656	669	556	758
75°	309	287	270	256	282	331
85°	44	48	52	56	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3759.3	3759.3	3759.3	3759.3	3759.3
2.5°	3733.2	3733.2	3733.2	3728.9	3728.9
5°	3694.1	3689.7	3689.7	3685.4	3685.4
7.5°	3663.7	3659.3	3655.0	3650.6	3641.9
10°	3620.2	3620.2	3615.9	3594.1	3589.8
12.5°	3550.7	3546.3	3528.9	3498.5	3489.8
15°	3455.1	3455.1	3420.3	3385.5	3372.5
17.5°	3350.8	3346.4	3302.9	3268.2	3250.8
20°	3237.8	3229.1	3185.6	3129.1	3098.7
22.5°	3111.7	3111.7	3059.6	2985.7	2955.3
25°	2994.4	2977.0	2929.2	2824.9	2746.7
27.5°	2859.7	2833.6	2781.4	2633.7	2542.4
30°	2711.9	2698.9	2625.0	2433.7	2364.2
32.5°	2572.8	2551.1	2472.9	2272.9	2216.5
35°	2429.4	2412.0	2294.7	2120.8	2068.7
37.5°	2286.0	2264.3	2116.5	1977.4	1912.2
40°	2142.6	2116.5	1955.7	1829.7	1760.1
42.5°	2007.8	1973.1	1816.6	1681.9	1603.7
45°	1864.4	1825.3	1668.9	1529.8	1468.9
47.5°	1721.0	1686.2	1542.8	1399.4	1329.9
50°	1568.9	1538.5	1408.1	1264.7	1190.8
52.5°	1442.9	1395.1	1269.0	1125.6	1064.8
55°	1295.1	1256.0	1138.6	1003.9	951.8
57.5°	1160.4	1121.3	1012.6	886.6	843.1
60°	1034.3	977.8	886.6	777.9	743.2
62.5°	895.3	851.8	773.6	682.3	725.8
65°	769.2	725.8	656.2	669.3	556.3
67.5°	630.2	608.4	547.6	486.7	469.4
70°	512.8	486.7	465.0	399.8	382.4
72.5°	408.5	382.4	352.0	317.3	304.2
75°	308.6	286.8	269.5	256.4	282.5
77.5°	213.0	204.3	191.2	178.2	173.8
80°	139.1	134.7	130.4	126.0	121.7
82.5°	82.6	82.6	82.6	82.6	82.6
85°	43.5	47.8	52.2	56.5	60.8
87.5°	26.1	26.1	30.4	34.8	39.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)