

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: P563410

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563410
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-LD4-3LO-50-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7121.0 lumens
Efficiency: N/A
Efficacy: 101.4 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

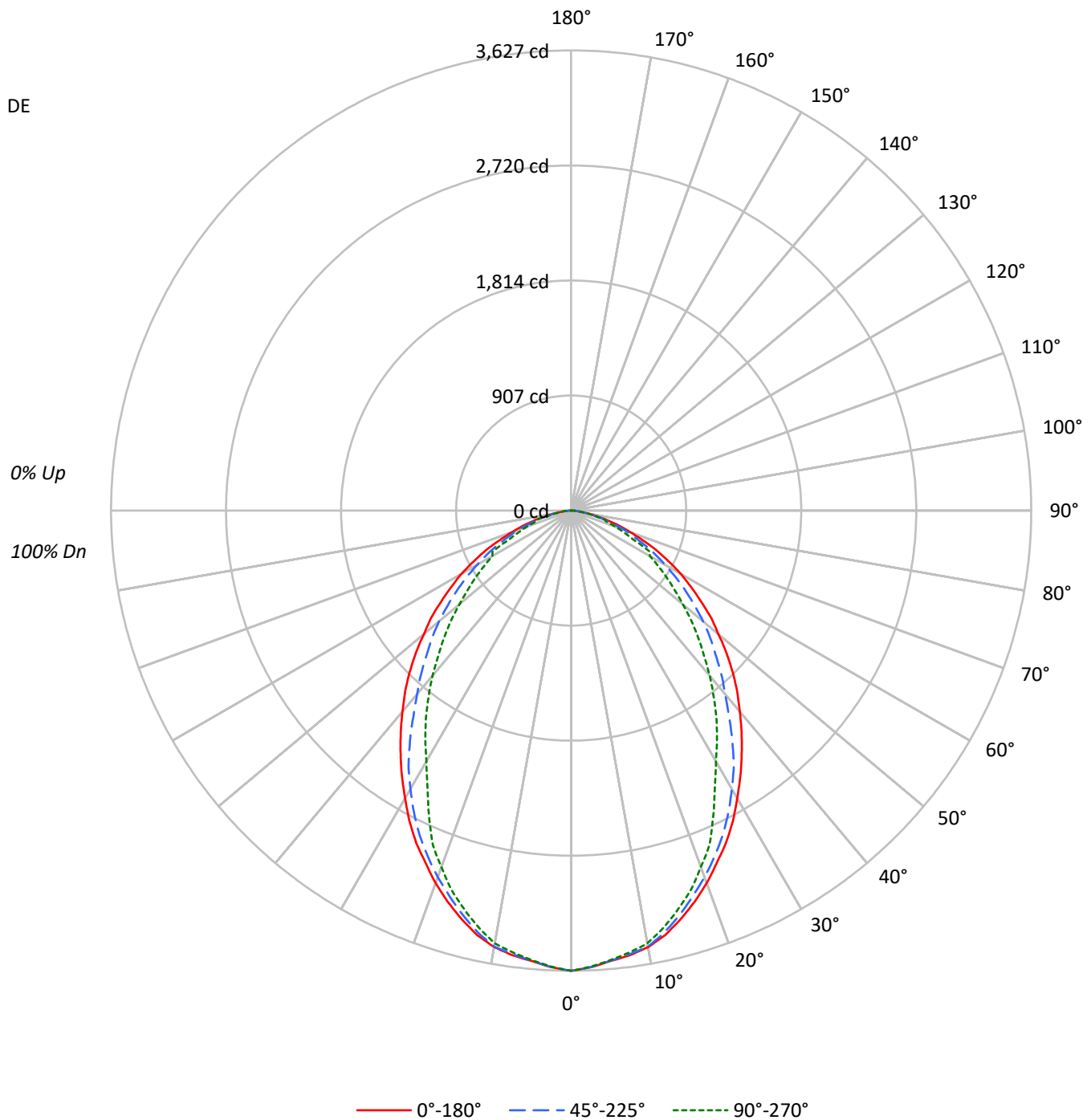
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4880	4880	4880
5°	4814	4809	4803
10°	4773	4767	4732
15°	4644	4597	4533
20°	4473	4401	4281
25°	4289	4196	3935
30°	4065	3935	3544
35°	3850	3637	3279
40°	3631	3315	2983
45°	3423	3064	2697
50°	3169	2844	2405
55°	2932	2577	2154
60°	2686	2302	1930
65°	2363	2016	1709
70°	1947	1765	1452
75°	1548	1352	1417
80°	1040	975	910
85°	647	777	906

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3423 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.7	4.7
10°-20°	926.7	13.0
20°-30°	1282.9	18.0
30°-40°	1368.0	19.2
40°-50°	1248.0	17.5
50°-60°	977.7	13.7
60°-70°	637.2	8.9
70°-80°	282.3	4.0
80°-90°	60.6	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°	2547.2	35.8
0°-40°	3915.2	55.0
0°-60°	6140.9	86.2
0°-90°	7121.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7121.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3627	3627	3627	3627	3627	
5°	3564	3560	3560	3556	3556	338
15°	3334	3334	3300	3267	3254	937
25°	2889	2872	2826	2726	2650	1326
35°	2344	2327	2214	2046	1996	1466
45°	1799	1761	1610	1476	1417	1386
55°	1250	1212	1099	969	918	1121
65°	742	700	633	646	537	731
75°	298	277	260	247	273	319
85°	42	46	50	54	59	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3627.3	3627.3	3627.3	3627.3	3627.3
2.5°	3602.2	3602.2	3602.2	3598.0	3598.0
5°	3564.4	3560.2	3560.2	3556.1	3556.1
7.5°	3535.1	3530.9	3526.7	3522.5	3514.1
10°	3493.2	3493.2	3489.0	3468.0	3463.8
12.5°	3426.1	3421.9	3405.1	3375.7	3367.3
15°	3333.8	3333.8	3300.3	3266.7	3254.1
17.5°	3233.2	3229.0	3187.0	3153.5	3136.7
20°	3124.1	3115.7	3073.8	3019.3	2989.9
22.5°	3002.5	3002.5	2952.2	2880.9	2851.6
25°	2889.3	2872.5	2826.4	2725.7	2650.3
27.5°	2759.3	2734.1	2683.8	2541.2	2453.2
30°	2616.7	2604.1	2532.8	2348.3	2281.2
32.5°	2482.5	2461.6	2386.1	2193.2	2138.7
35°	2344.1	2327.4	2214.1	2046.4	1996.1
37.5°	2205.8	2184.8	2042.2	1908.0	1845.1
40°	2067.4	2042.2	1887.1	1765.4	1698.4
42.5°	1937.4	1903.8	1752.9	1622.9	1547.4
45°	1799.0	1761.3	1610.3	1476.1	1417.4
47.5°	1660.6	1627.1	1488.7	1350.3	1283.2
50°	1513.8	1484.5	1358.7	1220.3	1149.0
52.5°	1392.2	1346.1	1224.5	1086.1	1027.4
55°	1249.7	1211.9	1098.7	968.7	918.4
57.5°	1119.7	1081.9	977.1	855.5	813.5
60°	998.0	943.5	855.5	750.6	717.1
62.5°	863.9	821.9	746.4	658.4	700.3
65°	742.2	700.3	633.2	645.8	536.8
67.5°	608.1	587.1	528.4	469.7	452.9
70°	494.8	469.7	448.7	385.8	369.0
72.5°	394.2	369.0	339.7	306.1	293.5
75°	297.7	276.8	260.0	247.4	272.6
77.5°	205.5	197.1	184.5	171.9	167.7
80°	134.2	130.0	125.8	121.6	117.4
82.5°	79.7	79.7	79.7	79.7	79.7
85°	41.9	46.1	50.3	54.5	58.7
87.5°	25.2	25.2	29.4	33.5	37.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)