

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: P563274

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563274
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-35-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6965.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

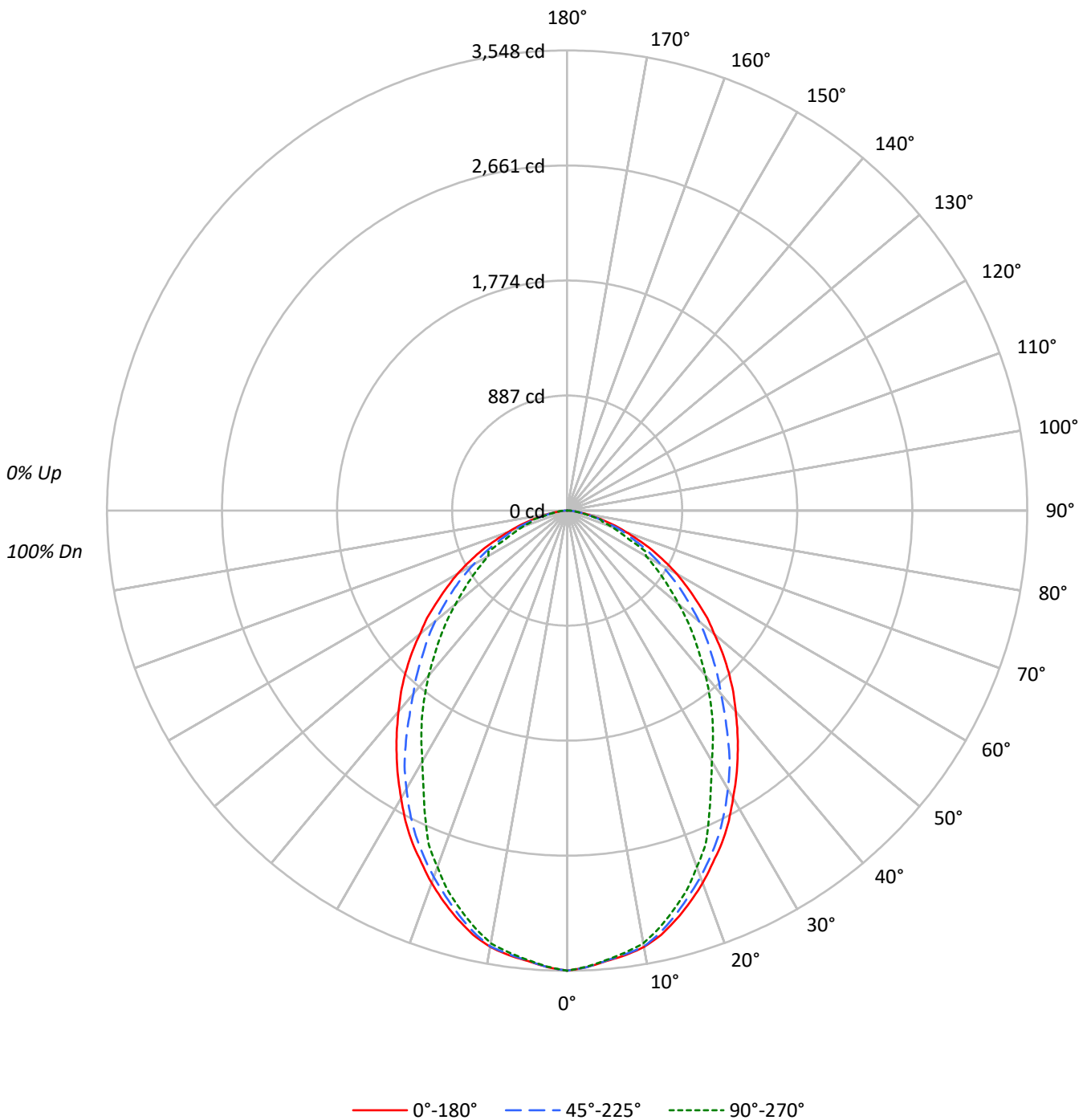
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4774	4774	4774
5°	4709	4703	4698
10°	4668	4662	4629
15°	4542	4496	4433
20°	4375	4305	4187
25°	4195	4104	3848
30°	3976	3849	3467
35°	3766	3557	3207
40°	3552	3242	2918
45°	3348	2997	2638
50°	3099	2782	2352
55°	2867	2521	2107
60°	2627	2252	1887
65°	2311	1972	1671
70°	1904	1727	1420
75°	1514	1322	1386
80°	1017	953	890
85°	633	760	886

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3348 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	330.3	4.7
10°-20°	906.4	13.0
20°-30°	1254.8	18.0
30°-40°	1338.0	19.2
40°-50°	1220.6	17.5
50°-60°	956.3	13.7
60°-70°	623.3	8.9
70°-80°	276.1	4.0
80°-90°	59.3	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°	2491.4	35.8
0°-40°	3829.4	55.0
0°-60°	6006.3	86.2
0°-90°	6965.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6965.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3548	3548	3548	3548	3548	
5°	3486	3482	3482	3478	3478	331
15°	3261	3261	3228	3195	3183	917
25°	2826	2810	2764	2666	2592	1297
35°	2293	2276	2166	2002	1952	1433
45°	1760	1723	1575	1444	1386	1355
55°	1222	1185	1075	948	898	1096
65°	726	685	619	632	525	715
75°	291	271	254	242	267	312
85°	41	45	49	53	57	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3547.9	3547.9	3547.9	3547.9	3547.9
2.5°	3523.3	3523.3	3523.3	3519.2	3519.2
5°	3486.4	3482.3	3482.3	3478.2	3478.2
7.5°	3457.6	3453.5	3449.4	3445.3	3437.1
10°	3416.6	3416.6	3412.5	3392.0	3387.9
12.5°	3351.0	3346.9	3330.5	3301.8	3293.6
15°	3260.8	3260.8	3228.0	3195.1	3182.8
17.5°	3162.3	3158.2	3117.2	3084.4	3068.0
20°	3055.7	3047.5	3006.5	2953.1	2924.4
22.5°	2936.7	2936.7	2887.5	2817.8	2789.1
25°	2826.0	2809.6	2764.5	2666.0	2592.2
27.5°	2698.8	2674.2	2625.0	2485.6	2399.4
30°	2559.4	2547.1	2477.4	2296.9	2231.3
32.5°	2428.1	2407.6	2333.8	2145.1	2091.8
35°	2292.8	2276.4	2165.6	2001.6	1952.4
37.5°	2157.4	2136.9	1997.5	1866.2	1804.7
40°	2022.1	1997.5	1845.7	1726.8	1661.1
42.5°	1894.9	1862.1	1714.5	1587.3	1513.5
45°	1759.6	1722.7	1575.0	1443.8	1386.3
47.5°	1624.2	1591.4	1456.1	1320.7	1255.1
50°	1480.7	1452.0	1328.9	1193.6	1123.8
52.5°	1361.7	1316.6	1197.7	1062.3	1004.9
55°	1222.3	1185.4	1074.6	947.5	898.2
57.5°	1095.1	1058.2	955.7	836.7	795.7
60°	976.2	922.9	836.7	734.2	701.4
62.5°	844.9	803.9	730.1	644.0	685.0
65°	726.0	685.0	619.3	631.6	525.0
67.5°	594.7	574.2	516.8	459.4	443.0
70°	484.0	459.4	438.9	377.3	360.9
72.5°	385.5	360.9	332.2	299.4	287.1
75°	291.2	270.7	254.3	242.0	266.6
77.5°	201.0	192.8	180.5	168.2	164.1
80°	131.3	127.1	123.0	118.9	114.8
82.5°	77.9	77.9	77.9	77.9	77.9
85°	41.0	45.1	49.2	53.3	57.4
87.5°	24.6	24.6	28.7	32.8	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)