

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: P563329

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563329
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-40-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8388.0 lumens
Efficiency: N/A
Efficacy: 119.5 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

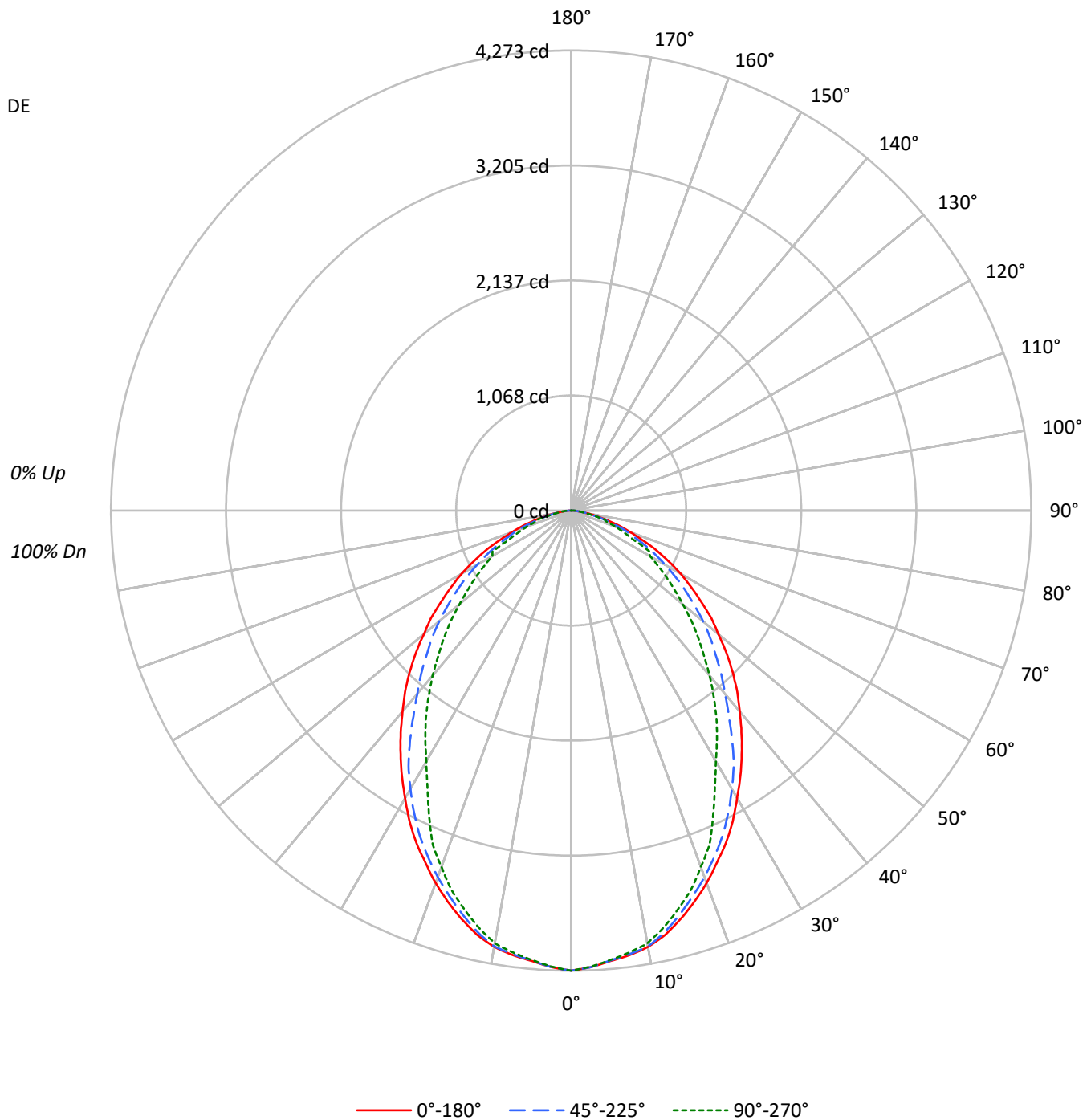
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	5749	5749	5749
5°	5671	5664	5658
10°	5622	5615	5574
15°	5470	5415	5339
20°	5269	5184	5043
25°	5053	4943	4635
30°	4789	4635	4175
35°	4535	4284	3862
40°	4277	3904	3514
45°	4032	3609	3177
50°	3733	3350	2833
55°	3453	3036	2538
60°	3164	2712	2273
65°	2784	2375	2013
70°	2293	2079	1710
75°	1823	1592	1669
80°	1225	1148	1072
85°	763	915	1068

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4032 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	397.7	4.7
10°-20°	1091.5	13.0
20°-30°	1511.2	18.0
30°-40°	1611.3	19.2
40°-50°	1470.0	17.5
50°-60°	1151.6	13.7
60°-70°	750.6	8.9
70°-80°	332.5	4.0
80°-90°	71.4	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°	3000.5	35.8
0°-40°	4611.8	55.0
0°-60°	7233.5	86.2
0°-90°	8388.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8388.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4273	4273	4273	4273	4273	
5°	4199	4194	4194	4189	4189	399
15°	3927	3927	3887	3848	3833	1104
25°	3403	3384	3329	3211	3122	1562
35°	2761	2742	2608	2410	2351	1726
45°	2119	2075	1897	1739	1670	1632
55°	1472	1428	1294	1141	1082	1320
65°	874	825	746	761	632	862
75°	351	326	306	291	321	376
85°	49	54	59	64	69	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4272.7	4272.7	4272.7	4272.7	4272.7
2.5°	4243.1	4243.1	4243.1	4238.2	4238.2
5°	4198.6	4193.7	4193.7	4188.8	4188.8
7.5°	4164.1	4159.1	4154.2	4149.2	4139.4
10°	4114.7	4114.7	4109.7	4085.0	4080.1
12.5°	4035.6	4030.7	4010.9	3976.4	3966.5
15°	3927.0	3927.0	3887.4	3847.9	3833.1
17.5°	3808.4	3803.5	3754.1	3714.6	3694.8
20°	3680.0	3670.1	3620.7	3556.5	3521.9
22.5°	3536.7	3536.7	3477.5	3393.5	3358.9
25°	3403.4	3383.6	3329.3	3210.7	3121.8
27.5°	3250.2	3220.6	3161.3	2993.4	2889.7
30°	3082.3	3067.5	2983.5	2766.2	2687.1
32.5°	2924.2	2899.5	2810.6	2583.4	2519.2
35°	2761.2	2741.5	2608.1	2410.5	2351.2
37.5°	2598.2	2573.5	2405.6	2247.5	2173.4
40°	2435.2	2405.6	2222.8	2079.6	2000.5
42.5°	2282.1	2242.6	2064.7	1911.6	1822.7
45°	2119.1	2074.6	1896.8	1738.7	1669.6
47.5°	1956.1	1916.6	1753.6	1590.5	1511.5
50°	1783.2	1748.6	1600.4	1437.4	1353.4
52.5°	1639.9	1585.6	1442.4	1279.4	1210.2
55°	1472.0	1427.5	1294.2	1141.0	1081.8
57.5°	1318.9	1274.4	1150.9	1007.7	958.3
60°	1175.6	1111.4	1007.7	884.2	844.7
62.5°	1017.6	968.2	879.2	775.5	824.9
65°	874.3	824.9	745.9	760.7	632.3
67.5°	716.2	691.5	622.4	553.2	533.5
70°	582.9	553.2	528.5	454.4	434.7
72.5°	464.3	434.7	400.1	360.6	345.8
75°	350.7	326.0	306.3	291.4	321.1
77.5°	242.0	232.2	217.3	202.5	197.6
80°	158.1	153.1	148.2	143.2	138.3
82.5°	93.9	93.9	93.9	93.9	93.9
85°	49.4	54.3	59.3	64.2	69.2
87.5°	29.6	29.6	34.6	39.5	44.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)