

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: P563393

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563393
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-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8530.0 lumens
Efficiency: N/A
Efficacy: 121.5 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

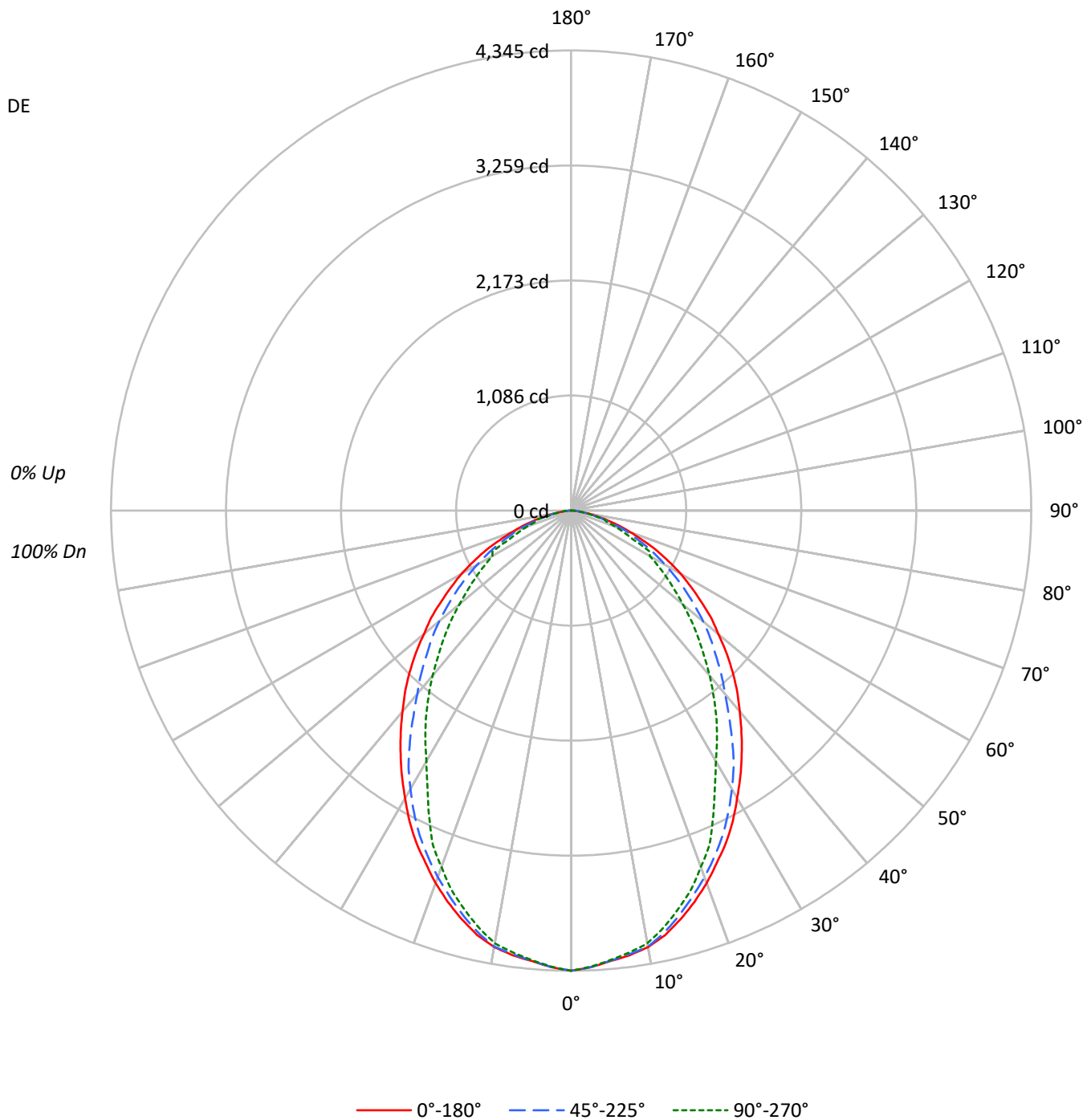
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	5846	5846	5846
5°	5767	5760	5753
10°	5717	5710	5669
15°	5563	5507	5430
20°	5358	5272	5128
25°	5138	5026	4713
30°	4870	4714	4245
35°	4612	4356	3927
40°	4350	3970	3573
45°	4101	3670	3231
50°	3796	3407	2881
55°	3511	3087	2581
60°	3217	2757	2312
65°	2831	2415	2047
70°	2332	2114	1739
75°	1854	1619	1697
80°	1245	1168	1089
85°	775	931	1085

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4101 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	404.5	4.7
10°-20°	1110.0	13.0
20°-30°	1536.8	18.0
30°-40°	1638.6	19.2
40°-50°	1494.9	17.5
50°-60°	1171.1	13.7
60°-70°	763.3	8.9
70°-80°	338.2	4.0
80°-90°	72.6	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°	3051.2	35.8
0°-40°	4689.9	55.0
0°-60°	7355.9	86.2
0°-90°	8530.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8530.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4345	4345	4345	4345	4345	
5°	4270	4265	4265	4260	4260	405
15°	3993	3993	3953	3913	3898	1123
25°	3461	3441	3386	3265	3175	1589
35°	2808	2788	2652	2451	2391	1755
45°	2155	2110	1929	1768	1698	1660
55°	1497	1452	1316	1160	1100	1343
65°	889	839	758	774	643	876
75°	357	332	311	296	326	382
85°	50	55	60	65	70	70
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4345.1	4345.1	4345.1	4345.1	4345.1
2.5°	4314.9	4314.9	4314.9	4309.9	4309.9
5°	4269.7	4264.7	4264.7	4259.7	4259.7
7.5°	4234.6	4229.5	4224.5	4219.5	4209.4
10°	4184.3	4184.3	4179.3	4154.2	4149.2
12.5°	4104.0	4098.9	4078.8	4043.7	4033.6
15°	3993.4	3993.4	3953.3	3913.1	3898.0
17.5°	3872.9	3867.9	3817.6	3777.4	3757.4
20°	3742.3	3732.2	3682.0	3616.7	3581.5
22.5°	3596.6	3596.6	3536.3	3450.9	3415.8
25°	3461.0	3440.9	3385.6	3265.1	3174.7
27.5°	3305.3	3275.1	3214.8	3044.1	2938.6
30°	3134.5	3119.4	3034.0	2813.0	2732.6
32.5°	2973.7	2948.6	2858.2	2627.1	2561.8
35°	2808.0	2787.9	2652.2	2451.3	2391.0
37.5°	2642.2	2617.1	2446.3	2285.6	2210.2
40°	2476.4	2446.3	2260.4	2114.8	2034.4
42.5°	2320.7	2280.5	2099.7	1944.0	1853.6
45°	2155.0	2109.7	1928.9	1768.2	1697.8
47.5°	1989.2	1949.0	1783.2	1617.5	1537.1
50°	1813.4	1778.2	1627.5	1461.8	1376.4
52.5°	1667.7	1612.4	1466.8	1301.0	1230.7
55°	1496.9	1451.7	1316.1	1160.4	1100.1
57.5°	1341.2	1296.0	1170.4	1024.7	974.5
60°	1195.5	1130.2	1024.7	899.2	859.0
62.5°	1034.8	984.5	894.1	788.6	838.9
65°	889.1	838.9	758.5	773.6	643.0
67.5°	728.4	703.2	632.9	562.6	542.5
70°	592.7	562.6	537.5	462.1	442.0
72.5°	472.2	442.0	406.9	366.7	351.6
75°	356.6	331.5	311.4	296.4	326.5
77.5°	246.1	236.1	221.0	206.0	200.9
80°	160.7	155.7	150.7	145.7	140.6
82.5°	95.4	95.4	95.4	95.4	95.4
85°	50.2	55.3	60.3	65.3	70.3
87.5°	30.1	30.1	35.2	40.2	45.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)