

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: P563269

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563269
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-81-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8048.0 lumens
Efficiency: N/A
Efficacy: 114.6 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

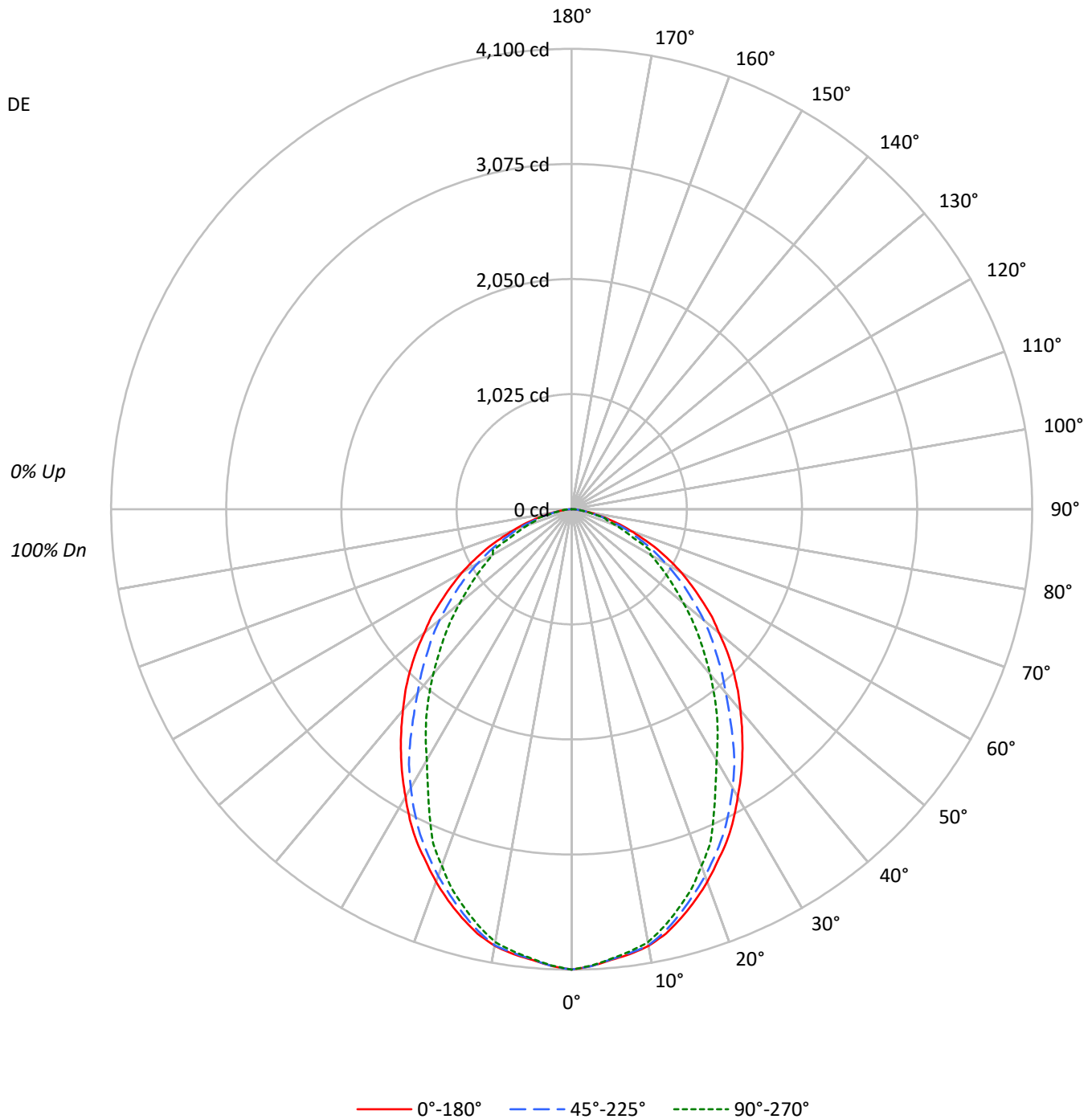
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									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°	5516	5516	5516
5°	5441	5435	5428
10°	5394	5387	5348
15°	5248	5196	5123
20°	5056	4974	4838
25°	4848	4742	4447
30°	4595	4447	4006
35°	4352	4110	3705
40°	4104	3746	3371
45°	3869	3463	3048
50°	3581	3214	2718
55°	3313	2913	2435
60°	3035	2602	2181
65°	2671	2278	1931
70°	2200	1995	1641
75°	1749	1527	1602
80°	1175	1102	1028
85°	732	878	1025

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3869 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	381.6	4.7
10°-20°	1047.3	13.0
20°-30°	1449.9	18.0
30°-40°	1546.0	19.2
40°-50°	1410.4	17.5
50°-60°	1105.0	13.7
60°-70°	720.2	8.9
70°-80°	319.1	4.0
80°-90°	68.5	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°	2878.8	35.8
0°-40°	4424.9	55.0
0°-60°	6940.3	86.2
0°-90°	8048.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8048.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4100	4100	4100	4100	4100	
5°	4028	4024	4024	4019	4019	382
15°	3768	3768	3730	3692	3678	1059
25°	3265	3246	3194	3081	2995	1499
35°	2649	2630	2502	2313	2256	1656
45°	2033	1990	1820	1668	1602	1566
55°	1412	1370	1242	1095	1038	1267
65°	839	792	716	730	607	827
75°	336	313	294	280	308	361
85°	47	52	57	62	66	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4099.5	4099.5	4099.5	4099.5	4099.5
2.5°	4071.1	4071.1	4071.1	4066.4	4066.4
5°	4028.5	4023.7	4023.7	4019.0	4019.0
7.5°	3995.3	3990.5	3985.8	3981.1	3971.6
10°	3947.9	3947.9	3943.1	3919.4	3914.7
12.5°	3872.1	3867.3	3848.4	3815.2	3805.7
15°	3767.8	3767.8	3729.9	3692.0	3677.7
17.5°	3654.0	3649.3	3601.9	3564.0	3545.0
20°	3530.8	3521.3	3473.9	3412.3	3379.2
22.5°	3393.4	3393.4	3336.5	3255.9	3222.8
25°	3265.4	3246.5	3194.3	3080.6	2995.3
27.5°	3118.5	3090.1	3033.2	2872.1	2772.5
30°	2957.4	2943.1	2862.6	2654.0	2578.2
32.5°	2805.7	2782.0	2696.7	2478.7	2417.1
35°	2649.3	2630.3	2502.4	2312.8	2255.9
37.5°	2492.9	2469.2	2308.1	2156.4	2085.3
40°	2336.5	2308.1	2132.7	1995.3	1919.4
42.5°	2189.6	2151.7	1981.1	1834.1	1748.8
45°	2033.2	1990.5	1819.9	1668.3	1601.9
47.5°	1876.8	1838.9	1682.5	1526.1	1450.2
50°	1710.9	1677.7	1535.6	1379.2	1298.6
52.5°	1573.5	1521.3	1383.9	1227.5	1161.1
55°	1412.3	1369.7	1241.7	1094.8	1037.9
57.5°	1265.4	1222.8	1104.3	966.8	919.4
60°	1128.0	1066.4	966.8	848.3	810.4
62.5°	976.3	928.9	843.6	744.1	791.5
65°	838.9	791.5	715.6	729.9	606.6
67.5°	687.2	663.5	597.2	530.8	511.9
70°	559.2	530.8	507.1	436.0	417.1
72.5°	445.5	417.1	383.9	346.0	331.8
75°	336.5	312.8	293.8	279.6	308.1
77.5°	232.2	222.7	208.5	194.3	189.6
80°	151.7	146.9	142.2	137.4	132.7
82.5°	90.0	90.0	90.0	90.0	90.0
85°	47.4	52.1	56.9	61.6	66.4
87.5°	28.4	28.4	33.2	37.9	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)