

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: P563868

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563868
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-LD4-4LO-35-UNV-82-96-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 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: 8991.0 lumens
Efficiency: N/A
Efficacy: 96.1 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

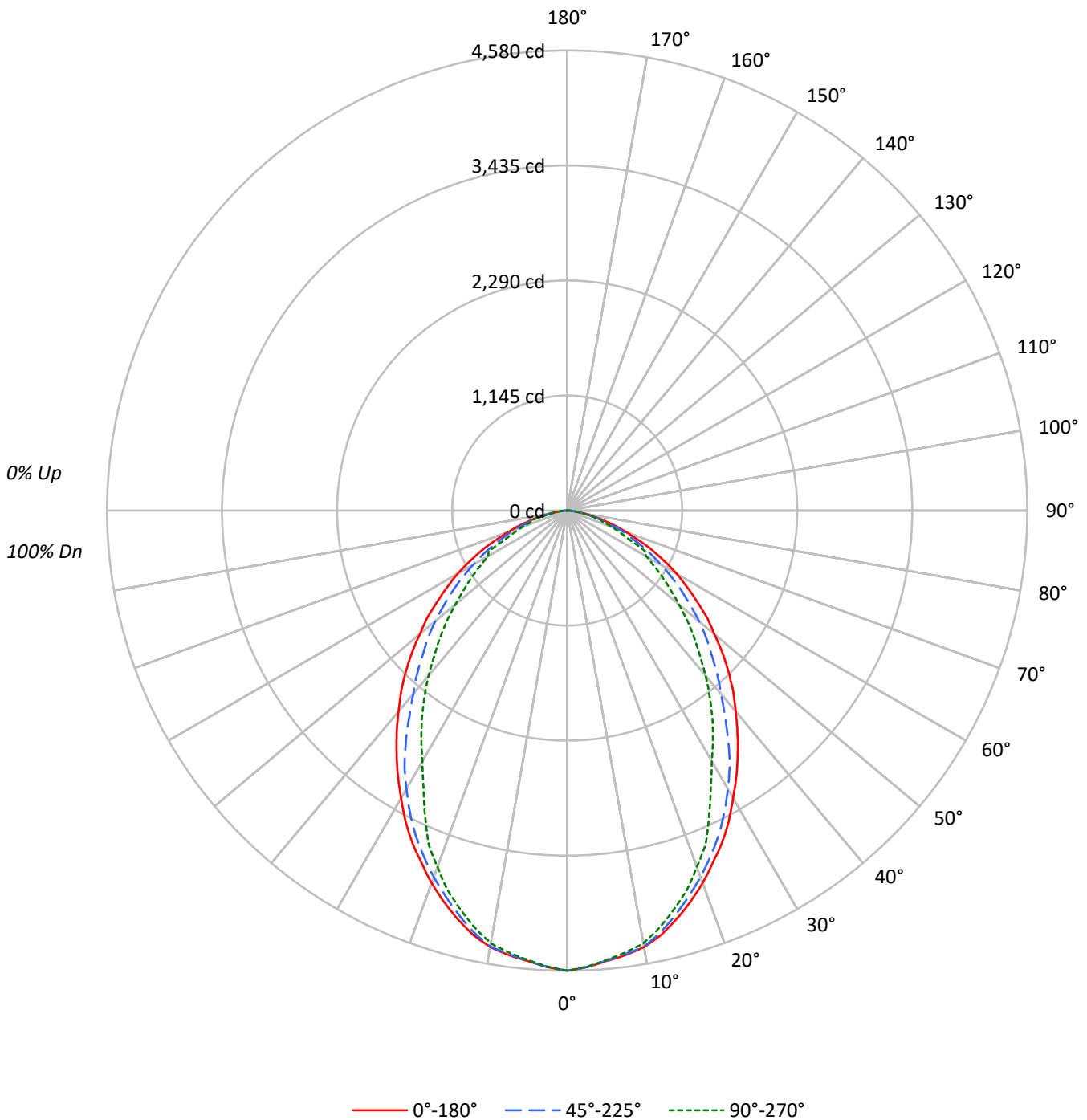
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	6162	6162	6162
5°	6079	6071	6064
10°	6026	6019	5975
15°	5863	5804	5723
20°	5648	5557	5405
25°	5416	5298	4968
30°	5133	4969	4475
35°	4861	4592	4140
40°	4585	4185	3766
45°	4322	3869	3405
50°	4001	3591	3037
55°	3701	3254	2720
60°	3391	2907	2436
65°	2984	2545	2158
70°	2458	2229	1833
75°	1954	1707	1789
80°	1313	1230	1149
85°	817	980	1144

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4322 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	426.3	4.7
10°-20°	1170.0	13.0
20°-30°	1619.8	18.0
30°-40°	1727.2	19.2
40°-50°	1575.7	17.5
50°-60°	1234.4	13.7
60°-70°	804.5	8.9
70°-80°	356.4	4.0
80°-90°	76.5	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°	3216.2	35.8
0°-40°	4943.3	55.0
0°-60°	7753.5	86.2
0°-90°	8991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8991.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4580	4580	4580	4580	4580	
5°	4500	4495	4495	4490	4490	427
15°	4209	4209	4167	4125	4109	1183
25°	3648	3627	3569	3442	3346	1675
35°	2960	2938	2796	2584	2520	1850
45°	2271	2224	2033	1864	1790	1750
55°	1578	1530	1387	1223	1160	1415
65°	937	884	800	815	678	924
75°	376	349	328	312	344	403
85°	53	58	64	69	74	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4579.9	4579.9	4579.9	4579.9	4579.9
2.5°	4548.1	4548.1	4548.1	4542.8	4542.8
5°	4500.5	4495.2	4495.2	4489.9	4489.9
7.5°	4463.4	4458.1	4452.8	4447.5	4436.9
10°	4410.5	4410.5	4405.2	4378.7	4373.4
12.5°	4325.8	4320.5	4299.3	4262.2	4251.6
15°	4209.3	4209.3	4166.9	4124.6	4108.7
17.5°	4082.2	4076.9	4024.0	3981.6	3960.4
20°	3944.5	3933.9	3881.0	3812.2	3775.1
22.5°	3791.0	3791.0	3727.5	3637.4	3600.4
25°	3648.0	3626.9	3568.6	3441.5	3346.2
27.5°	3483.9	3452.1	3388.6	3208.6	3097.4
30°	3303.9	3288.0	3198.0	2965.0	2880.3
32.5°	3134.4	3108.0	3012.7	2769.1	2700.3
35°	2959.7	2938.5	2795.6	2583.8	2520.3
37.5°	2785.0	2758.5	2578.5	2409.1	2329.7
40°	2610.3	2578.5	2382.6	2229.1	2144.3
42.5°	2446.1	2403.8	2213.2	2049.0	1953.7
45°	2271.4	2223.8	2033.2	1863.7	1789.6
47.5°	2096.7	2054.3	1879.6	1704.9	1620.2
50°	1911.4	1874.3	1715.5	1540.8	1450.7
52.5°	1757.8	1699.6	1546.0	1371.3	1297.2
55°	1577.8	1530.2	1387.2	1223.1	1159.5
57.5°	1413.7	1366.0	1233.7	1080.1	1027.2
60°	1260.1	1191.3	1080.1	947.7	905.4
62.5°	1090.7	1037.8	942.5	831.3	884.2
65°	937.2	884.2	799.5	815.4	677.7
67.5°	767.7	741.3	667.1	593.0	571.8
70°	624.8	593.0	566.5	487.1	465.9
72.5°	497.7	465.9	428.9	386.5	370.6
75°	375.9	349.4	328.3	312.4	344.2
77.5°	259.4	248.8	233.0	217.1	211.8
80°	169.4	164.1	158.8	153.5	148.3
82.5°	100.6	100.6	100.6	100.6	100.6
85°	52.9	58.2	63.5	68.8	74.1
87.5°	31.8	31.8	37.1	42.4	47.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)