

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: P563970

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563970
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-50-UNV-81-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9699.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

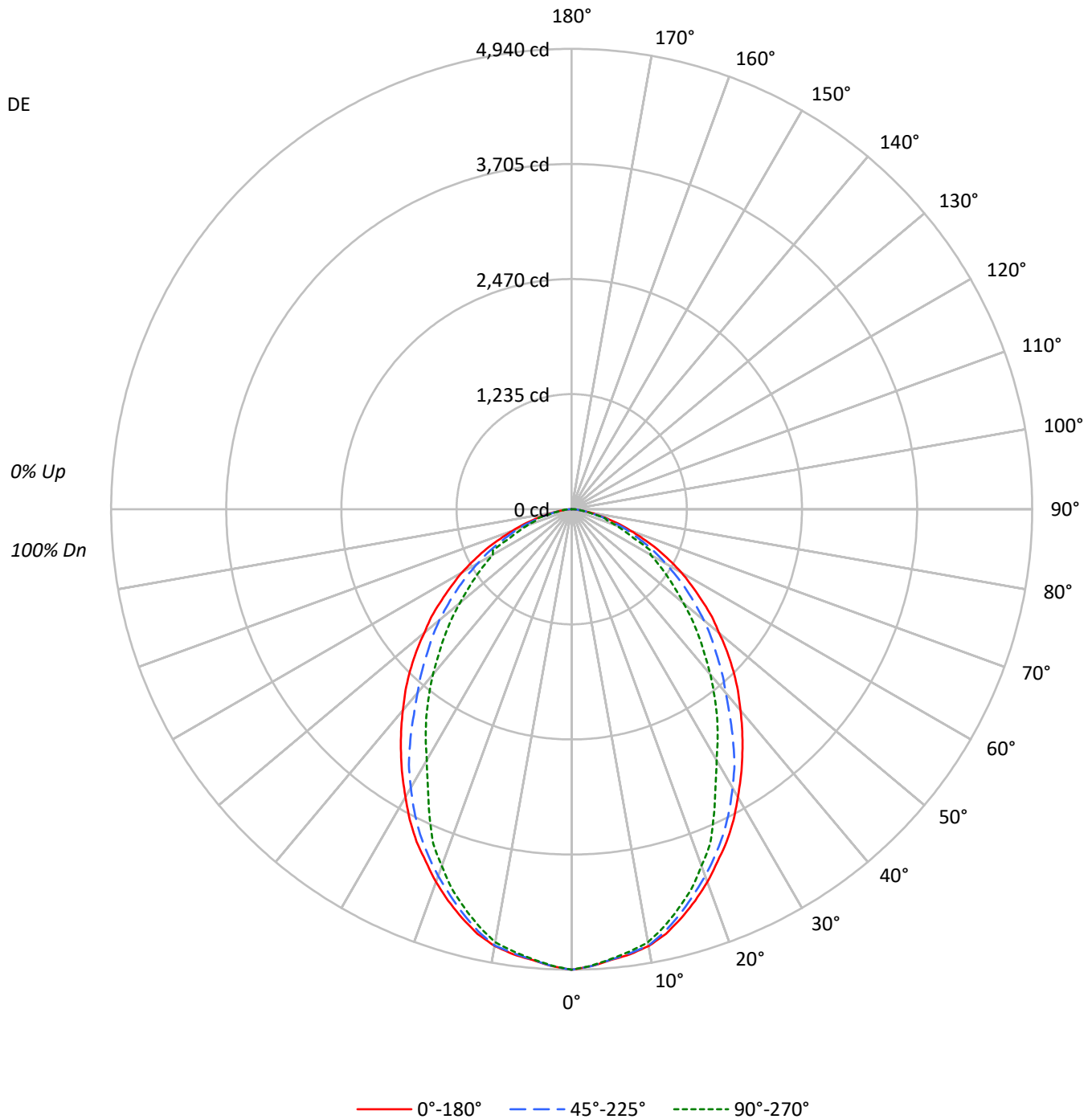
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6647	6647	6647
5°	6557	6549	6542
10°	6500	6493	6446
15°	6325	6261	6174
20°	6093	5995	5831
25°	5842	5715	5359
30°	5537	5360	4827
35°	5244	4953	4466
40°	4946	4514	4063
45°	4662	4173	3673
50°	4316	3874	3276
55°	3993	3510	2934
60°	3658	3136	2628
65°	3219	2746	2328
70°	2651	2404	1977
75°	2108	1841	1930
80°	1416	1327	1239
85°	881	1057	1235

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4662 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	459.9	4.7
10°-20°	1262.1	13.0
20°-30°	1747.4	18.0
30°-40°	1863.2	19.2
40°-50°	1699.8	17.5
50°-60°	1331.6	13.7
60°-70°	867.9	8.9
70°-80°	384.5	4.0
80°-90°	82.6	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°	3469.4	35.8
0°-40°	5332.6	55.0
0°-60°	8364.0	86.2
0°-90°	9699.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9699.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4940	4940	4940	4940	4940	
5°	4855	4849	4849	4843	4843	461
15°	4541	4541	4495	4449	4432	1277
25°	3935	3912	3850	3712	3610	1807
35°	3193	3170	3016	2787	2719	1996
45°	2450	2399	2193	2010	1930	1887
55°	1702	1651	1496	1319	1251	1527
65°	1011	954	862	880	731	996
75°	406	377	354	337	371	435
85°	57	63	68	74	80	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4940.5	4940.5	4940.5	4940.5	4940.5
2.5°	4906.3	4906.3	4906.3	4900.6	4900.6
5°	4854.9	4849.2	4849.2	4843.4	4843.4
7.5°	4814.9	4809.2	4803.5	4797.8	4786.3
10°	4757.8	4757.8	4752.1	4723.5	4717.8
12.5°	4666.4	4660.7	4637.8	4597.8	4586.4
15°	4540.7	4540.7	4495.0	4449.3	4432.2
17.5°	4403.6	4397.9	4340.8	4295.1	4272.3
20°	4255.1	4243.7	4186.6	4112.4	4072.4
22.5°	4089.5	4089.5	4021.0	3923.9	3883.9
25°	3935.3	3912.5	3849.6	3712.5	3609.7
27.5°	3758.2	3724.0	3655.4	3461.2	3341.3
30°	3564.0	3546.9	3449.8	3198.5	3107.1
32.5°	3381.3	3352.7	3249.9	2987.2	2912.9
35°	3192.8	3169.9	3015.7	2787.3	2718.7
37.5°	3004.3	2975.7	2781.6	2598.8	2513.1
40°	2815.8	2781.6	2570.2	2404.6	2313.2
42.5°	2638.8	2593.1	2387.5	2210.4	2107.6
45°	2450.3	2398.9	2193.3	2010.5	1930.5
47.5°	2261.8	2216.1	2027.6	1839.1	1747.8
50°	2061.9	2021.9	1850.6	1662.1	1565.0
52.5°	1896.3	1833.4	1667.8	1479.3	1399.3
55°	1702.1	1650.7	1496.4	1319.4	1250.8
57.5°	1525.0	1473.6	1330.8	1165.2	1108.1
60°	1359.4	1285.1	1165.2	1022.4	976.7
62.5°	1176.6	1119.5	1016.7	896.7	953.8
65°	1011.0	953.8	862.5	879.6	731.1
67.5°	828.2	799.6	719.7	639.7	616.9
70°	674.0	639.7	611.1	525.5	502.6
72.5°	536.9	502.6	462.6	416.9	399.8
75°	405.5	377.0	354.1	337.0	371.3
77.5°	279.9	268.4	251.3	234.2	228.5
80°	182.8	177.1	171.3	165.6	159.9
82.5°	108.5	108.5	108.5	108.5	108.5
85°	57.1	62.8	68.5	74.3	80.0
87.5°	34.3	34.3	40.0	45.7	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)