

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: P563473

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563473
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-LD4-3STD-35-UNV-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10888.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

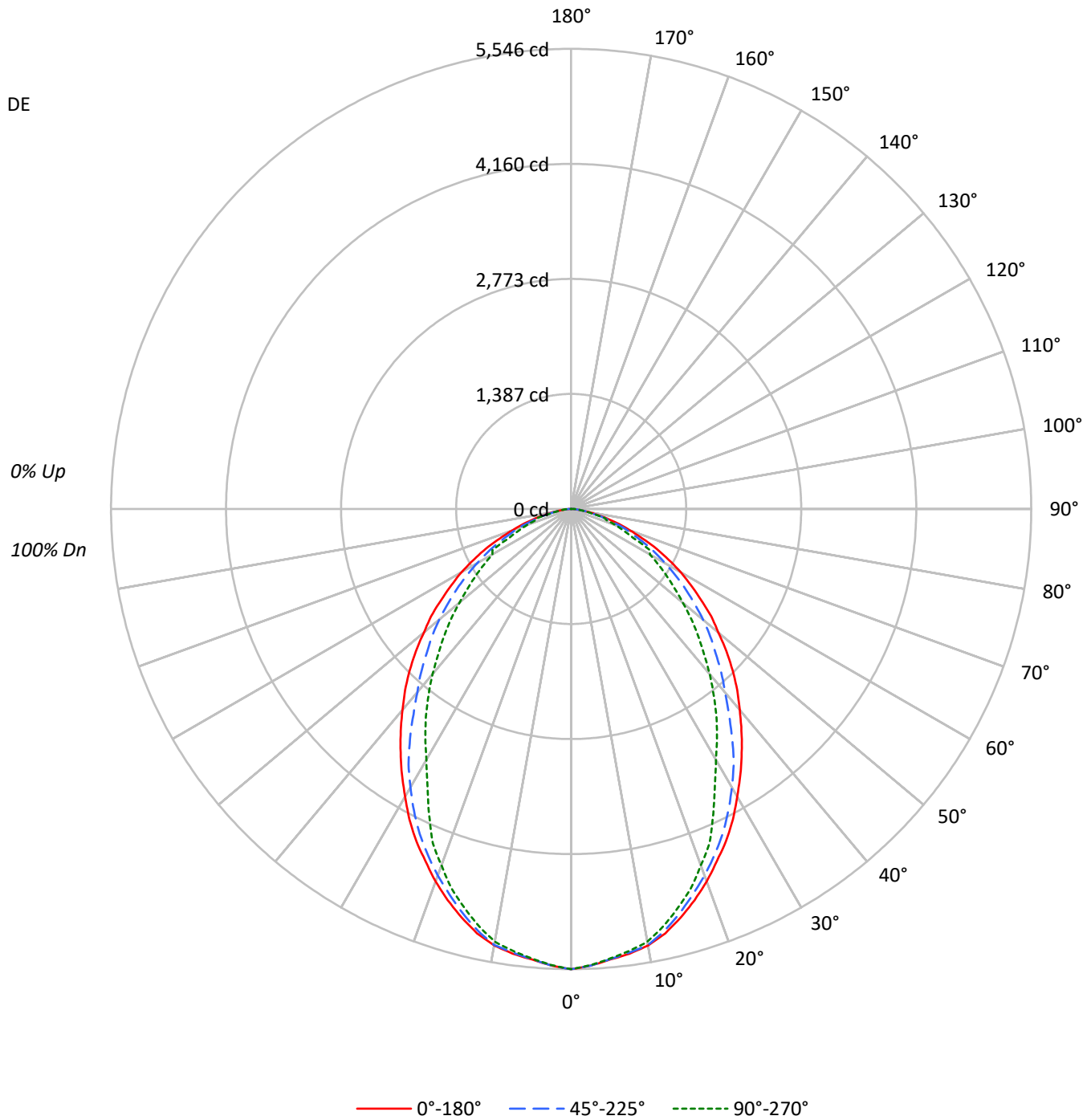
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7462	7462	7462
5°	7361	7352	7344
10°	7297	7288	7236
15°	7100	7029	6931
20°	6840	6729	6546
25°	6558	6416	6016
30°	6216	6017	5419
35°	5887	5561	5013
40°	5552	5068	4561
45°	5234	4685	4124
50°	4845	4348	3677
55°	4482	3941	3294
60°	4106	3520	2950
65°	3613	3082	2613
70°	2976	2699	2220
75°	2366	2066	2167
80°	1590	1491	1391
85°	990	1187	1386

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5234 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	516.3	4.7
10°-20°	1416.9	13.0
20°-30°	1961.6	18.0
30°-40°	2091.6	19.2
40°-50°	1908.2	17.5
50°-60°	1494.9	13.7
60°-70°	974.3	8.9
70°-80°	431.7	4.0
80°-90°	92.7	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°	3894.7	35.8
0°-40°	5986.3	55.0
0°-60°	9389.4	86.2
0°-90°	10888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5546	5546	5546	5546	5546	
5°	5450	5444	5444	5437	5437	517
15°	5097	5097	5046	4995	4976	1433
25°	4418	4392	4322	4168	4052	2028
35°	3584	3558	3385	3129	3052	2241
45°	2751	2693	2462	2257	2167	2119
55°	1911	1853	1680	1481	1404	1714
65°	1135	1071	968	987	821	1118
75°	455	423	398	378	417	488
85°	64	70	77	83	90	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5546.2	5546.2	5546.2	5546.2	5546.2
2.5°	5507.7	5507.7	5507.7	5501.3	5501.3
5°	5450.0	5443.6	5443.6	5437.2	5437.2
7.5°	5405.1	5398.7	5392.3	5385.9	5373.1
10°	5341.0	5341.0	5334.6	5302.6	5296.1
12.5°	5238.4	5232.0	5206.4	5161.5	5148.7
15°	5097.4	5097.4	5046.1	4994.8	4975.6
17.5°	4943.5	4937.1	4873.0	4821.7	4796.0
20°	4776.8	4764.0	4699.8	4616.5	4571.6
22.5°	4590.8	4590.8	4513.9	4404.9	4360.0
25°	4417.7	4392.1	4321.5	4167.7	4052.3
27.5°	4219.0	4180.5	4103.5	3885.5	3750.9
30°	4001.0	3981.7	3872.7	3590.6	3488.0
32.5°	3795.8	3763.7	3648.3	3353.4	3270.0
35°	3584.2	3558.5	3385.4	3129.0	3052.0
37.5°	3372.6	3340.5	3122.5	2917.4	2821.2
40°	3161.0	3122.5	2885.3	2699.4	2596.8
42.5°	2962.2	2911.0	2680.1	2481.4	2366.0
45°	2750.7	2693.0	2462.1	2257.0	2167.2
47.5°	2539.1	2487.8	2276.2	2064.6	1962.0
50°	2314.7	2269.8	2077.4	1865.8	1756.8
52.5°	2128.7	2058.2	1872.2	1660.7	1570.9
55°	1910.7	1853.0	1679.9	1481.1	1404.2
57.5°	1711.9	1654.2	1493.9	1308.0	1243.9
60°	1526.0	1442.7	1308.0	1147.7	1096.4
62.5°	1320.8	1256.7	1141.3	1006.7	1070.8
65°	1134.9	1070.8	968.2	987.4	820.7
67.5°	929.7	897.7	807.9	718.1	692.5
70°	756.6	718.1	686.1	589.9	564.2
72.5°	602.7	564.2	519.4	468.1	448.8
75°	455.2	423.2	397.5	378.3	416.8
77.5°	314.2	301.4	282.1	262.9	256.5
80°	205.2	198.8	192.4	185.9	179.5
82.5°	121.8	121.8	121.8	121.8	121.8
85°	64.1	70.5	76.9	83.4	89.8
87.5°	38.5	38.5	44.9	51.3	57.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)