

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: P562581

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562581
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-LD4-2HI-40-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8714.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

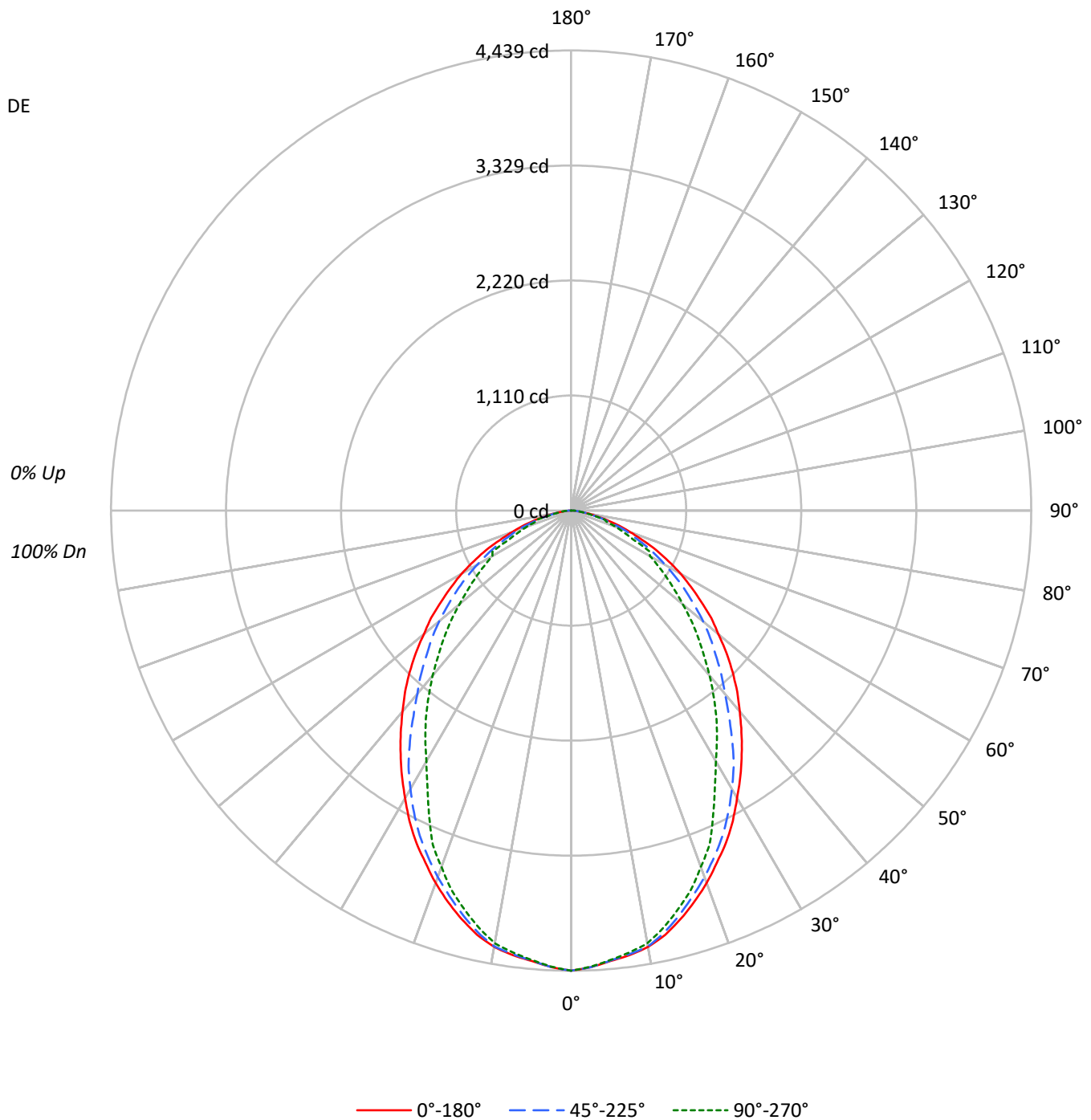
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	5972	5972	5972
5°	5891	5884	5877
10°	5840	5833	5791
15°	5683	5625	5547
20°	5474	5386	5239
25°	5249	5135	4815
30°	4975	4815	4337
35°	4712	4450	4012
40°	4444	4056	3650
45°	4189	3749	3300
50°	3878	3480	2943
55°	3587	3154	2636
60°	3286	2817	2361
65°	2892	2467	2091
70°	2382	2160	1777
75°	1894	1654	1734
80°	1272	1192	1113
85°	792	951	1108

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4189 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	413.2	4.7
10°-20°	1134.0	13.0
20°-30°	1569.9	18.0
30°-40°	1674.0	19.2
40°-50°	1527.2	17.5
50°-60°	1196.4	13.7
60°-70°	779.8	8.9
70°-80°	345.5	4.0
80°-90°	74.2	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°	3117.1	35.8
0°-40°	4791.1	55.0
0°-60°	7514.6	86.2
0°-90°	8714.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8714.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4439	4439	4439	4439	4439	
5°	4362	4357	4357	4352	4352	414
15°	4080	4080	4038	3998	3982	1147
25°	3536	3515	3459	3336	3243	1623
35°	2868	2848	2710	2504	2443	1793
45°	2201	2155	1970	1806	1734	1696
55°	1529	1483	1344	1185	1124	1372
65°	908	857	775	790	657	895
75°	364	339	318	303	334	390
85°	51	56	62	67	72	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4438.8	4438.8	4438.8	4438.8	4438.8
2.5°	4408.0	4408.0	4408.0	4402.9	4402.9
5°	4361.8	4356.7	4356.7	4351.6	4351.6
7.5°	4325.9	4320.8	4315.6	4310.5	4300.2
10°	4274.6	4274.6	4269.5	4243.8	4238.7
12.5°	4192.5	4187.3	4166.8	4130.9	4120.6
15°	4079.6	4079.6	4038.5	3997.5	3982.1
17.5°	3956.4	3951.3	3900.0	3858.9	3838.4
20°	3823.0	3812.7	3761.4	3694.7	3658.8
22.5°	3674.2	3674.2	3612.6	3525.4	3489.5
25°	3535.6	3515.1	3458.7	3335.5	3243.1
27.5°	3376.6	3345.8	3284.2	3109.7	3002.0
30°	3202.1	3186.7	3099.5	2873.7	2791.6
32.5°	3037.9	3012.2	2919.9	2683.8	2617.1
35°	2868.5	2848.0	2709.5	2504.2	2442.6
37.5°	2699.2	2673.5	2499.1	2334.9	2257.9
40°	2529.9	2499.1	2309.2	2160.4	2078.3
42.5°	2370.8	2329.7	2145.0	1985.9	1893.5
45°	2201.4	2155.3	1970.5	1806.3	1734.5
47.5°	2032.1	1991.0	1821.7	1652.4	1570.3
50°	1852.5	1816.6	1662.6	1493.3	1406.0
52.5°	1703.7	1647.2	1498.4	1329.1	1257.2
55°	1529.2	1483.0	1344.5	1185.4	1123.8
57.5°	1370.1	1323.9	1195.7	1046.8	995.5
60°	1221.3	1154.6	1046.8	918.5	877.5
62.5°	1057.1	1005.8	913.4	805.7	857.0
65°	908.3	857.0	774.9	790.3	656.8
67.5°	744.1	718.4	646.6	574.7	554.2
70°	605.5	574.7	549.1	472.1	451.6
72.5°	482.4	451.6	415.7	374.6	359.2
75°	364.3	338.7	318.2	302.8	333.6
77.5°	251.4	241.2	225.8	210.4	205.3
80°	164.2	159.1	153.9	148.8	143.7
82.5°	97.5	97.5	97.5	97.5	97.5
85°	51.3	56.4	61.6	66.7	71.8
87.5°	30.8	30.8	35.9	41.1	46.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)