

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: P562654

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-82-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562654
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-50-UNV-82-97-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7767.0 lumens
Efficiency: N/A
Efficacy: 89.9 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

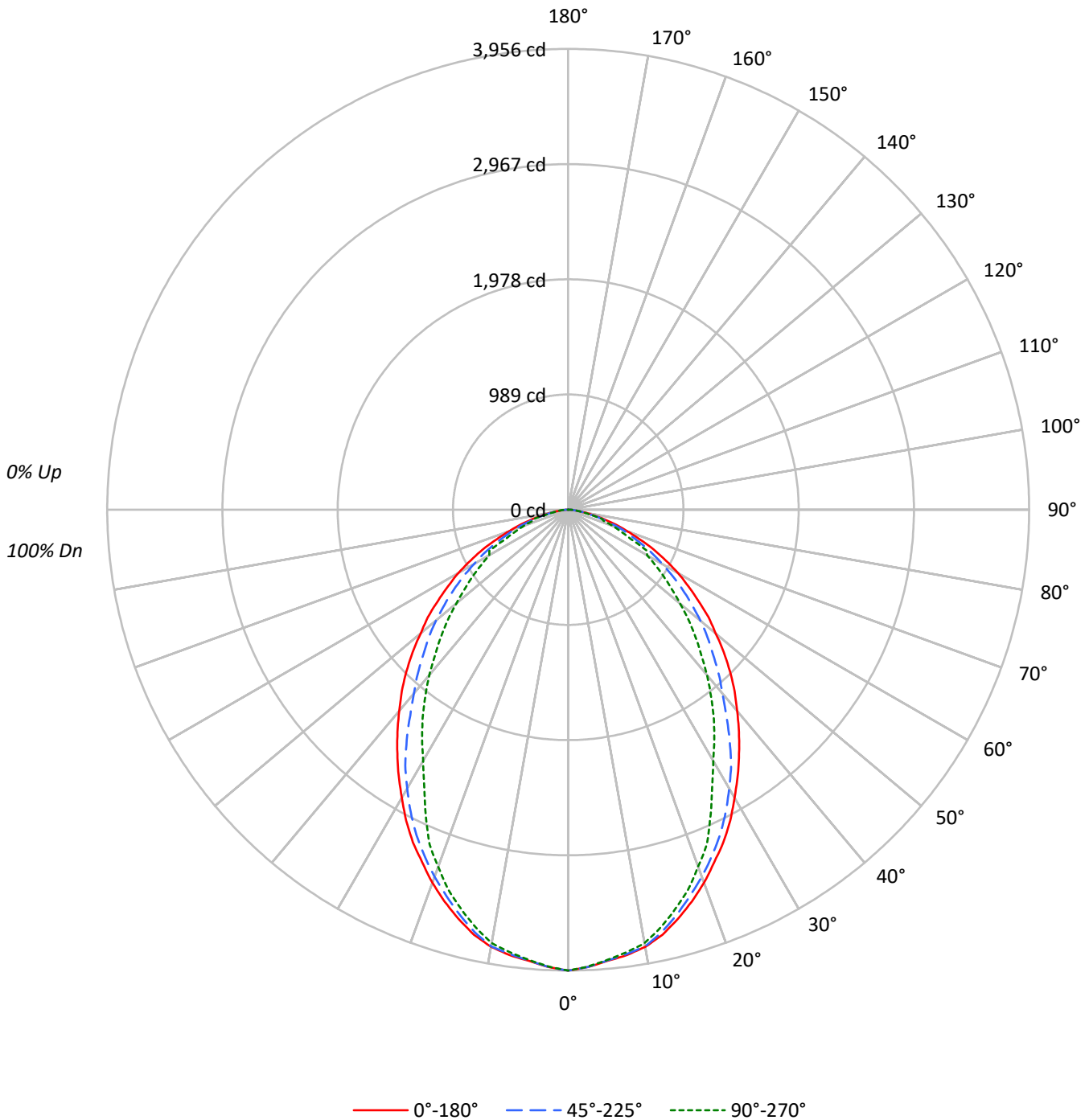
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	5323	5323	5323
5°	5251	5245	5239
10°	5205	5199	5162
15°	5065	5014	4944
20°	4879	4801	4670
25°	4679	4577	4291
30°	4434	4292	3866
35°	4200	3967	3576
40°	3961	3615	3254
45°	3734	3342	2942
50°	3456	3102	2623
55°	3197	2811	2350
60°	2929	2511	2105
65°	2578	2199	1864
70°	2123	1925	1583
75°	1688	1474	1546
80°	1134	1063	993
85°	706	848	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3734 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.3	4.7
10°-20°	1010.7	13.0
20°-30°	1399.3	18.0
30°-40°	1492.1	19.2
40°-50°	1361.2	17.5
50°-60°	1066.4	13.7
60°-70°	695.0	8.9
70°-80°	307.9	4.0
80°-90°	66.1	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°	2778.3	35.8
0°-40°	4270.4	55.0
0°-60°	6698.0	86.2
0°-90°	7767.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7767.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3956	3956	3956	3956	3956	
5°	3888	3883	3883	3879	3879	369
15°	3636	3636	3600	3563	3549	1022
25°	3151	3133	3083	2973	2891	1447
35°	2557	2538	2415	2232	2177	1598
45°	1962	1921	1756	1610	1546	1511
55°	1363	1322	1198	1057	1002	1223
65°	810	764	691	704	586	798
75°	325	302	284	270	297	348
85°	46	50	55	60	64	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3956.4	3956.4	3956.4	3956.4	3956.4
2.5°	3929.0	3929.0	3929.0	3924.4	3924.4
5°	3887.8	3883.2	3883.2	3878.7	3878.7
7.5°	3855.8	3851.2	3846.6	3842.1	3832.9
10°	3810.0	3810.0	3805.5	3782.6	3778.0
12.5°	3736.9	3732.3	3714.0	3682.0	3672.8
15°	3636.2	3636.2	3599.6	3563.1	3549.3
17.5°	3526.5	3521.9	3476.1	3439.6	3421.3
20°	3407.5	3398.4	3352.7	3293.2	3261.2
22.5°	3274.9	3274.9	3220.0	3142.3	3110.2
25°	3151.4	3133.1	3082.8	2973.0	2890.7
27.5°	3009.6	2982.2	2927.3	2771.8	2675.7
30°	2854.1	2840.4	2762.6	2561.4	2488.2
32.5°	2707.7	2684.9	2602.5	2392.1	2332.7
35°	2556.8	2538.5	2415.0	2232.1	2177.2
37.5°	2405.9	2383.0	2227.5	2081.1	2012.5
40°	2254.9	2227.5	2058.2	1925.6	1852.4
42.5°	2113.1	2076.5	1911.9	1770.1	1687.8
45°	1962.2	1921.0	1756.4	1610.0	1546.0
47.5°	1811.3	1774.7	1623.7	1472.8	1399.6
50°	1651.2	1619.2	1481.9	1331.0	1253.2
52.5°	1518.5	1468.2	1335.6	1184.6	1120.6
55°	1363.0	1321.9	1198.4	1056.6	1001.7
57.5°	1221.2	1180.1	1065.7	933.1	887.3
60°	1088.6	1029.1	933.1	818.7	782.1
62.5°	942.2	896.5	814.2	718.1	763.8
65°	809.6	763.8	690.7	704.4	585.5
67.5°	663.2	640.3	576.3	512.3	494.0
70°	539.7	512.3	489.4	420.8	402.5
72.5°	429.9	402.5	370.5	333.9	320.2
75°	324.7	301.9	283.6	269.9	297.3
77.5°	224.1	215.0	201.3	187.5	183.0
80°	146.4	141.8	137.2	132.6	128.1
82.5°	86.9	86.9	86.9	86.9	86.9
85°	45.7	50.3	54.9	59.5	64.0
87.5°	27.4	27.4	32.0	36.6	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)