

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: P561501

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561501
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-12-4-LD4-2HI-50-UNV-82-96-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7715.0 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

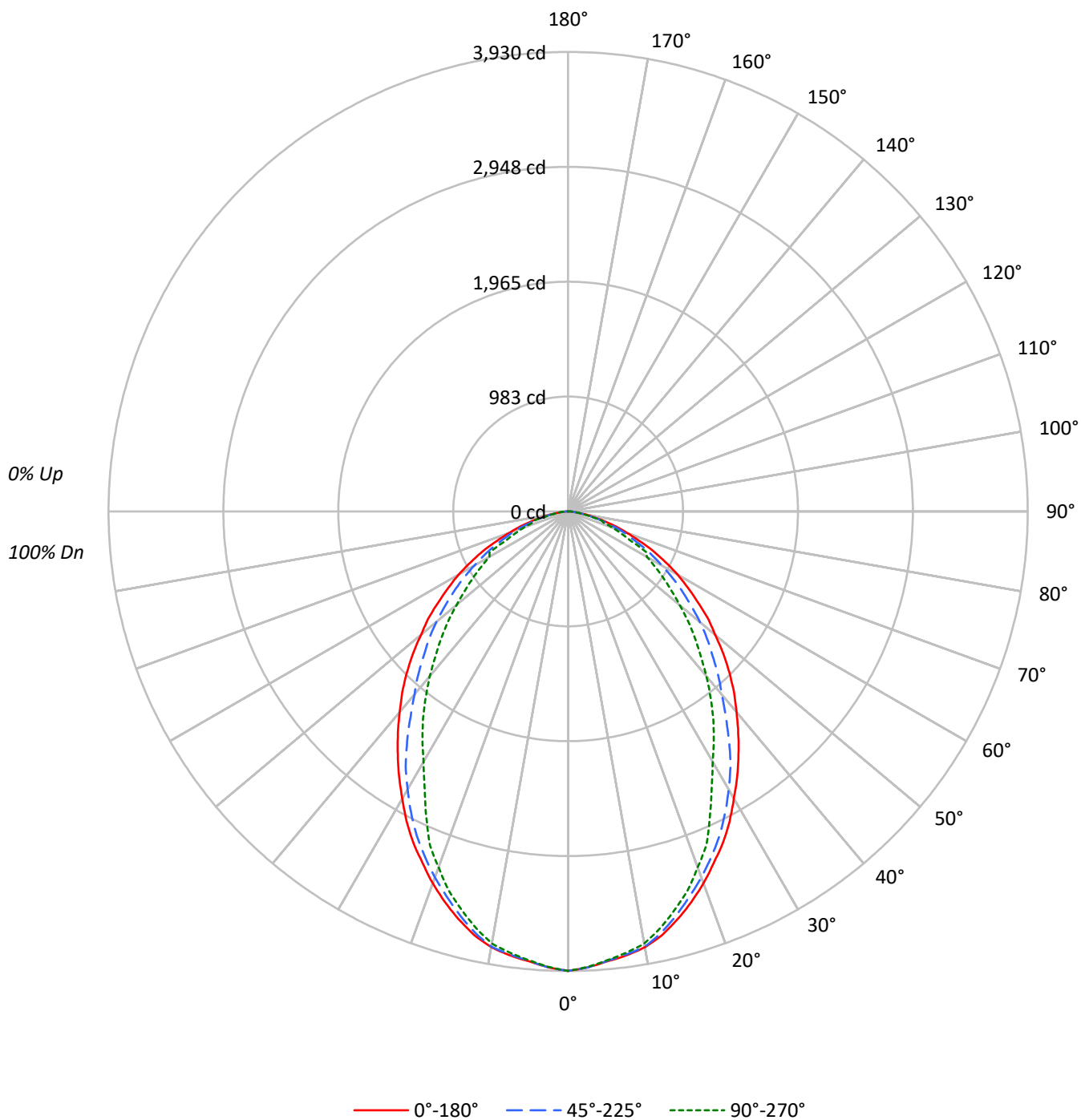
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	110	106	102	99		108	104	100	97		100	97	94		96	94	91		92	90	89
2	101	94	88	83		99	92	87	82		89	84	80		86	82	78		83	79	77
3	93	84	77	71		91	82	76	70		79	74	69		77	72	68		74	70	67
4	86	75	67	61		84	74	66	61		72	65	60		69	64	59		67	62	58
5	80	68	60	54		78	67	59	53		65	58	53		63	57	52		61	56	52
6	74	62	53	48		72	61	53	47		59	52	47		57	51	47		56	50	46
7	69	56	48	43		67	56	48	42		54	47	42		53	46	42		51	46	42
8	65	52	44	38		63	51	44	38		50	43	38		49	42	38		48	42	38
9	61	48	40	35		59	47	40	35		46	39	35		45	39	34		44	38	34
10	57	44	37	32		56	44	37	32		43	36	32		42	36	32		41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10575	10575	10575
5°	10432	10419	10407
10°	10341	10329	10254
15°	10062	9961	9822
20°	9693	9537	9276
25°	9294	9092	8525
30°	8809	8527	7680
35°	8343	7880	7104
40°	7868	7182	6464
45°	7418	6639	5844
50°	6866	6162	5212
55°	6352	5584	4668
60°	5820	4988	4181
65°	5121	4368	3703
70°	4218	3825	3146
75°	3354	2929	3070
80°	2253	2112	1971
85°	1402	1683	1964

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 7418 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.8	4.7
10°-20°	1004.0	13.0
20°-30°	1389.9	18.0
30°-40°	1482.1	19.2
40°-50°	1352.1	17.5
50°-60°	1059.2	13.7
60°-70°	690.4	8.9
70°-80°	305.9	4.0
80°-90°	65.7	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°	2759.7	35.8
0°-40°	4241.8	55.0
0°-60°	6653.1	86.2
0°-90°	7715.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7715.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3930	3930	3930	3930	3930	
5°	3862	3857	3857	3853	3853	367
15°	3612	3612	3576	3539	3526	1015
25°	3130	3112	3062	2953	2871	1437
35°	2540	2522	2399	2217	2163	1588
45°	1949	1908	1745	1599	1536	1501
55°	1354	1313	1190	1050	995	1214
65°	804	759	686	700	582	793
75°	323	300	282	268	295	346
85°	45	50	54	59	64	63
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3929.9	3929.9	3929.9	3929.9	3929.9
2.5°	3902.7	3902.7	3902.7	3898.1	3898.1
5°	3861.8	3857.2	3857.2	3852.7	3852.7
7.5°	3830.0	3825.4	3820.9	3816.3	3807.2
10°	3784.5	3784.5	3780.0	3757.3	3752.7
12.5°	3711.8	3707.3	3689.1	3657.3	3648.2
15°	3611.9	3611.9	3575.5	3539.2	3525.6
17.5°	3502.9	3498.3	3452.9	3416.5	3398.4
20°	3384.7	3375.6	3330.2	3271.1	3239.3
22.5°	3253.0	3253.0	3198.5	3121.2	3089.4
25°	3130.3	3112.1	3062.2	2953.1	2871.3
27.5°	2989.5	2962.2	2907.7	2753.2	2657.8
30°	2835.0	2821.4	2744.1	2544.2	2471.5
32.5°	2689.6	2666.9	2585.1	2376.1	2317.1
35°	2539.7	2521.5	2398.8	2217.1	2162.6
37.5°	2389.8	2367.0	2212.6	2067.2	1999.0
40°	2239.8	2212.6	2044.5	1912.7	1840.0
42.5°	2099.0	2062.6	1899.1	1758.2	1676.5
45°	1949.1	1908.2	1744.6	1599.2	1535.6
47.5°	1799.1	1762.8	1612.9	1462.9	1390.2
50°	1640.1	1608.3	1472.0	1322.1	1244.9
52.5°	1508.4	1458.4	1326.6	1176.7	1113.1
55°	1353.9	1313.0	1190.3	1049.5	995.0
57.5°	1213.0	1172.2	1058.6	926.8	881.4
60°	1081.3	1022.2	926.8	813.2	776.9
62.5°	935.9	890.5	808.7	713.3	758.7
65°	804.2	758.7	686.0	699.7	581.5
67.5°	658.8	636.1	572.5	508.8	490.7
70°	536.1	508.8	486.1	418.0	399.8
72.5°	427.1	399.8	368.0	331.7	318.0
75°	322.6	299.9	281.7	268.1	295.3
77.5°	222.6	213.5	199.9	186.3	181.7
80°	145.4	140.8	136.3	131.8	127.2
82.5°	86.3	86.3	86.3	86.3	86.3
85°	45.4	50.0	54.5	59.1	63.6
87.5°	27.3	27.3	31.8	36.3	40.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)