

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: P561857

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561857
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-LD4-2STD-50-UNV-81-84-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6482.0 lumens
Efficiency: N/A
Efficacy: 97.3 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

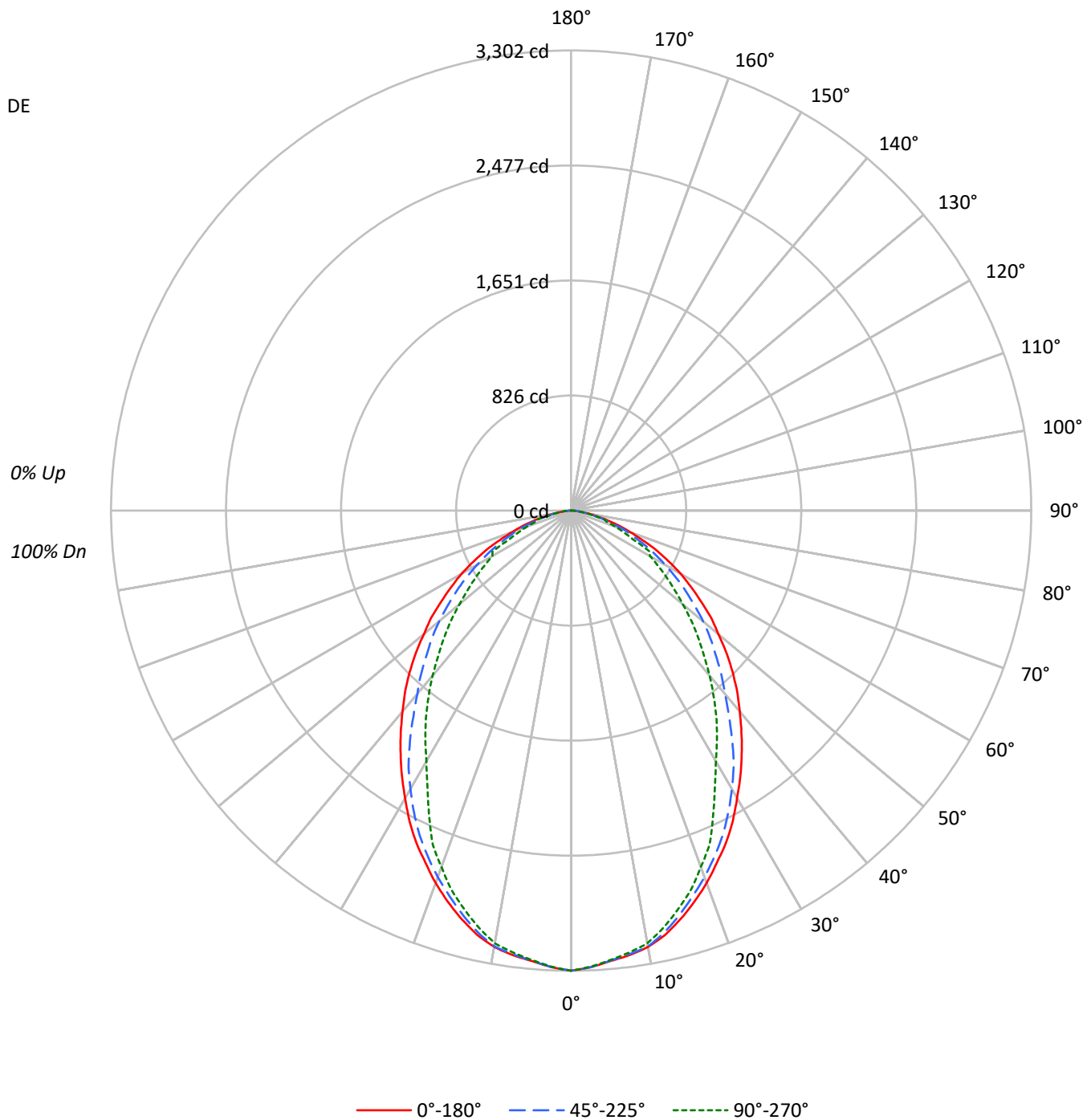
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8885	8885	8885
5°	8765	8754	8744
10°	8689	8678	8616
15°	8454	8369	8252
20°	8144	8013	7794
25°	7809	7639	7163
30°	7401	7164	6452
35°	7010	6621	5969
40°	6611	6034	5431
45°	6232	5578	4910
50°	5769	5178	4379
55°	5337	4692	3922
60°	4890	4191	3513
65°	4302	3670	3111
70°	3544	3213	2643
75°	2818	2461	2580
80°	1892	1774	1657
85°	1179	1414	1649

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6232 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	307.4	4.7
10°-20°	843.5	13.0
20°-30°	1167.8	18.0
30°-40°	1245.2	19.2
40°-50°	1136.0	17.5
50°-60°	890.0	13.7
60°-70°	580.0	8.9
70°-80°	257.0	4.0
80°-90°	55.2	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°	2318.7	35.8
0°-40°	3563.9	55.0
0°-60°	5589.8	86.2
0°-90°	6482.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6482.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3302	3302	3302	3302	3302	
5°	3245	3241	3241	3237	3237	308
15°	3035	3035	3004	2974	2962	853
25°	2630	2615	2573	2481	2412	1207
35°	2134	2118	2016	1863	1817	1334
45°	1638	1603	1466	1344	1290	1261
55°	1138	1103	1000	882	836	1020
65°	676	638	576	588	489	666
75°	271	252	237	225	248	290
85°	38	42	46	50	53	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3301.8	3301.8	3301.8	3301.8	3301.8
2.5°	3278.9	3278.9	3278.9	3275.1	3275.1
5°	3244.6	3240.8	3240.8	3237.0	3237.0
7.5°	3217.9	3214.0	3210.2	3206.4	3198.8
10°	3179.7	3179.7	3175.9	3156.8	3153.0
12.5°	3118.6	3114.8	3099.5	3072.8	3065.2
15°	3034.6	3034.6	3004.1	2973.6	2962.1
17.5°	2943.0	2939.2	2901.0	2870.5	2855.2
20°	2843.8	2836.2	2798.0	2748.4	2721.6
22.5°	2733.1	2733.1	2687.3	2622.4	2595.7
25°	2630.0	2614.8	2572.8	2481.2	2412.4
27.5°	2511.7	2488.8	2443.0	2313.2	2233.0
30°	2381.9	2370.5	2305.6	2137.6	2076.5
32.5°	2259.8	2240.7	2172.0	1996.4	1946.8
35°	2133.8	2118.5	2015.5	1862.8	1817.0
37.5°	2007.8	1988.7	1859.0	1736.8	1679.6
40°	1881.9	1859.0	1717.7	1607.0	1546.0
42.5°	1763.5	1733.0	1595.6	1477.2	1408.5
45°	1637.6	1603.2	1465.8	1343.6	1290.2
47.5°	1511.6	1481.1	1355.1	1229.1	1168.1
50°	1378.0	1351.3	1236.8	1110.8	1045.9
52.5°	1267.3	1225.3	1114.6	988.6	935.2
55°	1137.5	1103.2	1000.1	881.8	836.0
57.5°	1019.2	984.8	889.4	778.7	740.5
60°	908.5	858.9	778.7	683.3	652.7
62.5°	786.3	748.2	679.5	599.3	637.5
65°	675.6	637.5	576.4	587.8	488.6
67.5°	553.5	534.4	481.0	427.5	412.3
70°	450.4	427.5	408.4	351.2	335.9
72.5°	358.8	335.9	309.2	278.7	267.2
75°	271.0	251.9	236.7	225.2	248.1
77.5°	187.0	179.4	168.0	156.5	152.7
80°	122.1	118.3	114.5	110.7	106.9
82.5°	72.5	72.5	72.5	72.5	72.5
85°	38.2	42.0	45.8	49.6	53.4
87.5°	22.9	22.9	26.7	30.5	34.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)