

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: P562886

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562886
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-LD4-2STD-35-UNV-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5817.0 lumens
Efficiency: N/A
Efficacy: 87.3 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

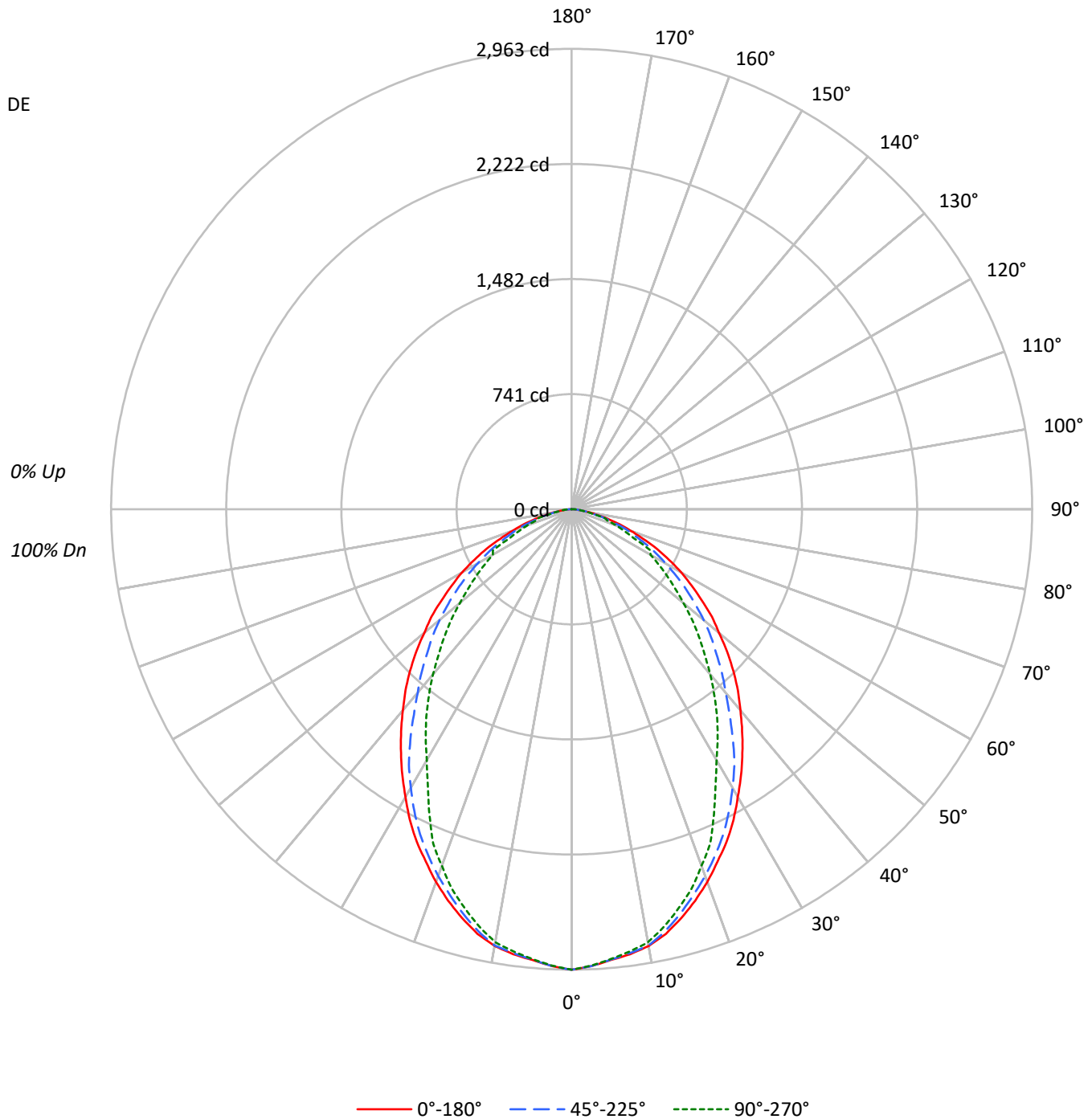
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3987	3987	3987
5°	3933	3928	3923
10°	3899	3894	3866
15°	3793	3755	3703
20°	3654	3595	3497
25°	3504	3428	3214
30°	3321	3214	2895
35°	3145	2971	2678
40°	2966	2708	2437
45°	2796	2503	2203
50°	2588	2323	1965
55°	2395	2105	1760
60°	2194	1880	1576
65°	1930	1647	1396
70°	1590	1442	1186
75°	1264	1104	1158
80°	849	797	743
85°	530	634	741

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2796 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	275.8	4.7
10°-20°	757.0	13.0
20°-30°	1048.0	18.0
30°-40°	1117.5	19.2
40°-50°	1019.4	17.5
50°-60°	798.7	13.7
60°-70°	520.5	8.9
70°-80°	230.6	4.0
80°-90°	49.5	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°	2080.8	35.8
0°-40°	3198.2	55.0
0°-60°	5016.3	86.2
0°-90°	5817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5817.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2963	2963	2963	2963	2963	
5°	2912	2908	2908	2905	2905	276
15°	2723	2723	2696	2668	2658	766
25°	2360	2346	2309	2227	2165	1084
35°	1915	1901	1809	1672	1631	1197
45°	1470	1439	1315	1206	1158	1132
55°	1021	990	898	791	750	916
65°	606	572	517	528	438	598
75°	243	226	212	202	223	261
85°	34	38	41	44	48	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2963.1	2963.1	2963.1	2963.1	2963.1
2.5°	2942.5	2942.5	2942.5	2939.1	2939.1
5°	2911.7	2908.3	2908.3	2904.9	2904.9
7.5°	2887.7	2884.3	2880.9	2877.5	2870.6
10°	2853.5	2853.5	2850.1	2832.9	2829.5
12.5°	2798.7	2795.3	2781.5	2757.6	2750.7
15°	2723.3	2723.3	2695.9	2668.5	2658.2
17.5°	2641.1	2637.7	2603.4	2576.0	2562.3
20°	2552.0	2545.2	2510.9	2466.4	2442.4
22.5°	2452.7	2452.7	2411.6	2353.4	2329.4
25°	2360.2	2346.5	2308.8	2226.6	2164.9
27.5°	2254.0	2233.5	2192.4	2075.9	2003.9
30°	2137.5	2127.3	2069.0	1918.3	1863.5
32.5°	2027.9	2010.8	1949.1	1791.6	1747.0
35°	1914.9	1901.2	1808.7	1671.7	1630.6
37.5°	1801.8	1784.7	1668.2	1558.6	1507.2
40°	1688.8	1668.2	1541.5	1442.2	1387.3
42.5°	1582.6	1555.2	1431.9	1325.7	1264.0
45°	1469.6	1438.7	1315.4	1205.8	1157.8
47.5°	1356.5	1329.1	1216.1	1103.0	1048.2
50°	1236.6	1212.6	1109.9	996.8	938.6
52.5°	1137.3	1099.6	1000.3	887.2	839.3
55°	1020.8	990.0	897.5	791.3	750.2
57.5°	914.6	883.8	798.2	698.8	664.6
60°	815.3	770.7	698.8	613.2	585.8
62.5°	705.7	671.4	609.7	537.8	572.1
65°	606.3	572.1	517.3	527.5	438.5
67.5°	496.7	479.6	431.6	383.7	370.0
70°	404.2	383.7	366.5	315.2	301.4
72.5°	322.0	301.4	277.5	250.1	239.8
75°	243.2	226.1	212.4	202.1	222.7
77.5°	167.9	161.0	150.7	140.4	137.0
80°	109.6	106.2	102.8	99.3	95.9
82.5°	65.1	65.1	65.1	65.1	65.1
85°	34.3	37.7	41.1	44.5	48.0
87.5°	20.6	20.6	24.0	27.4	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)