

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: P563154

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563154
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-LD4-3HI-40-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11108.0 lumens
Efficiency: N/A
Efficacy: 85.7 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

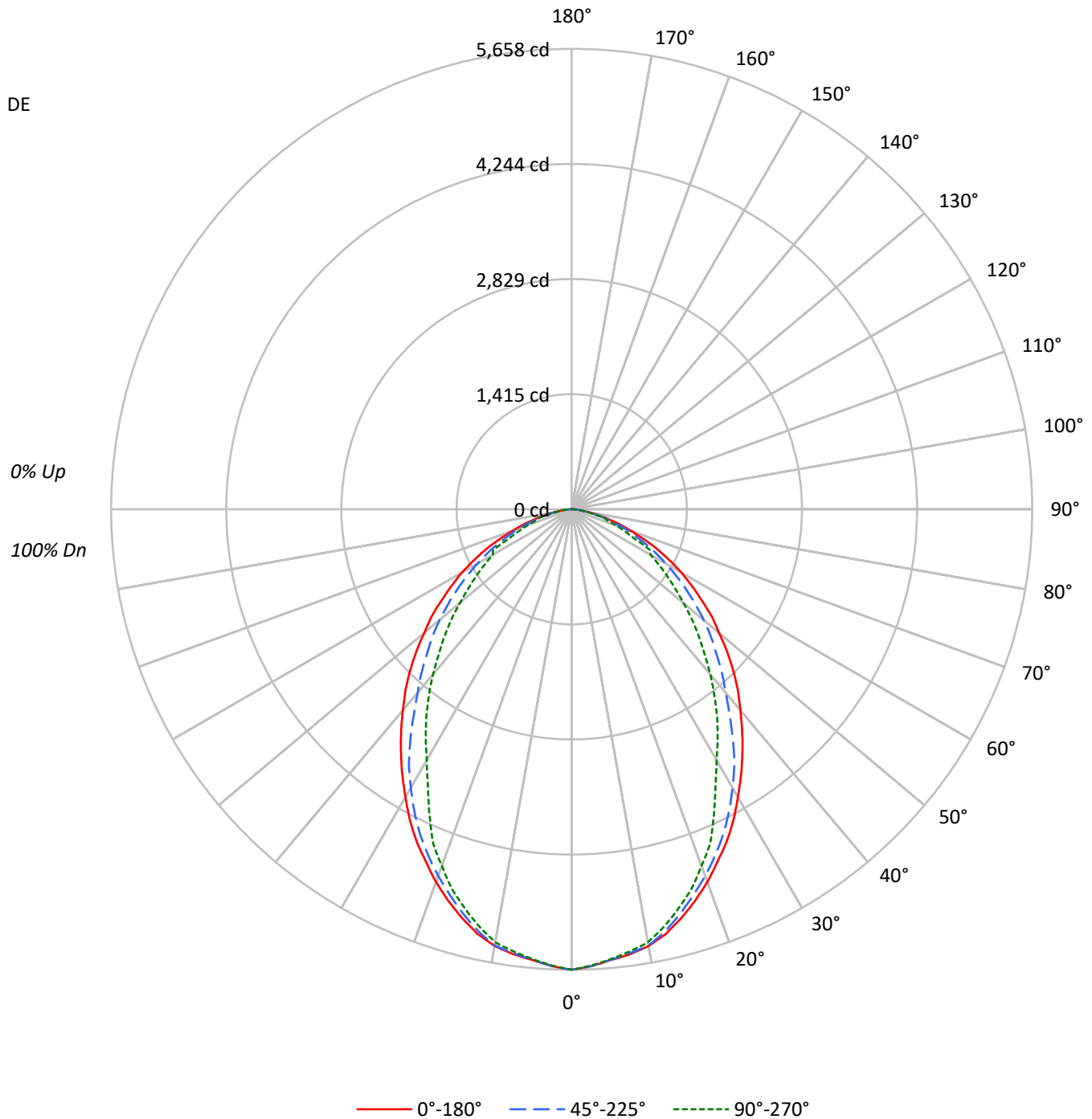
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563154

CATALOG NUMBER: FSR-24-4-LD4-3HI-40-UNV-82-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563154

CATALOG NUMBER: FSR-24-4-LD4-3HI-40-UNV-82-85-EDD-90

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°	7613	7613	7613
5°	7510	7501	7492
10°	7445	7436	7382
15°	7244	7171	7071
20°	6978	6865	6678
25°	6691	6545	6137
30°	6342	6138	5529
35°	6006	5673	5114
40°	5664	5170	4653
45°	5340	4780	4207
50°	4943	4436	3752
55°	4573	4020	3361
60°	4189	3591	3010
65°	3686	3145	2666
70°	3037	2753	2264
75°	2414	2109	2210
80°	1622	1520	1420
85°	1010	1212	1414

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5340 cd/sqm



TEST NUMBER: P563154

CATALOG NUMBER: FSR-24-4-LD4-3HI-40-UNV-82-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	526.7	4.7
10°-20°	1445.5	13.0
20°-30°	2001.2	18.0
30°-40°	2133.9	19.2
40°-50°	1946.7	17.5
50°-60°	1525.1	13.7
60°-70°	994.0	8.9
70°-80°	440.4	4.0
80°-90°	94.5	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°	3973.4	35.8
0°-40°	6107.3	55.0
0°-60°	9579.1	86.2
0°-90°	11108.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11108.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5658	5658	5658	5658	5658	
5°	5560	5554	5554	5547	5547	528
15°	5200	5200	5148	5096	5076	1462
25°	4507	4481	4409	4252	4134	2069
35°	3657	3630	3454	3192	3114	2286
45°	2806	2747	2512	2303	2211	2162
55°	1949	1890	1714	1511	1433	1748
65°	1158	1092	988	1007	837	1141
75°	464	432	406	386	425	498
85°	65	72	78	85	92	91
90°	0	0	0	0	0	



TEST NUMBER: P563154

CATALOG NUMBER: FSR-24-4-LD4-3HI-40-UNV-82-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5658.3	5658.3	5658.3	5658.3	5658.3
2.5°	5619.0	5619.0	5619.0	5612.5	5612.5
5°	5560.1	5553.6	5553.6	5547.1	5547.1
7.5°	5514.4	5507.8	5501.3	5494.7	5481.7
10°	5448.9	5448.9	5442.4	5409.7	5403.2
12.5°	5344.3	5337.7	5311.6	5265.8	5252.7
15°	5200.4	5200.4	5148.0	5095.7	5076.1
17.5°	5043.4	5036.8	4971.4	4919.1	4892.9
20°	4873.3	4860.2	4794.8	4709.8	4664.0
22.5°	4683.6	4683.6	4605.1	4493.9	4448.1
25°	4507.0	4480.8	4408.9	4251.9	4134.1
27.5°	4304.2	4265.0	4186.5	3964.1	3826.7
30°	4081.8	4062.2	3951.0	3663.2	3558.5
32.5°	3872.5	3839.8	3722.0	3421.1	3336.1
35°	3656.6	3630.4	3453.8	3192.2	3113.7
37.5°	3440.7	3408.0	3185.6	2976.3	2878.2
40°	3224.9	3185.6	2943.6	2753.9	2649.2
42.5°	3022.1	2969.8	2734.3	2531.5	2413.8
45°	2806.2	2747.4	2511.9	2302.6	2211.0
47.5°	2590.4	2538.0	2322.2	2106.3	2001.7
50°	2361.4	2315.6	2119.4	1903.5	1792.3
52.5°	2171.7	2099.8	1910.1	1694.2	1602.6
55°	1949.3	1890.4	1713.8	1511.1	1432.6
57.5°	1746.5	1687.7	1524.1	1334.4	1269.0
60°	1556.8	1471.8	1334.4	1170.9	1118.6
62.5°	1347.5	1282.1	1164.4	1027.0	1092.4
65°	1157.8	1092.4	987.7	1007.4	837.3
67.5°	948.5	915.8	824.2	732.6	706.5
70°	771.9	732.6	699.9	601.8	575.6
72.5°	614.9	575.6	529.8	477.5	457.9
75°	464.4	431.7	405.6	385.9	425.2
77.5°	320.5	307.4	287.8	268.2	261.7
80°	209.3	202.8	196.2	189.7	183.2
82.5°	124.3	124.3	124.3	124.3	124.3
85°	65.4	72.0	78.5	85.0	91.6
87.5°	39.2	39.2	45.8	52.3	58.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)