

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: P563318

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563318
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-LD4-3LO-40-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6956.0 lumens
Efficiency: N/A
Efficacy: 99.1 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

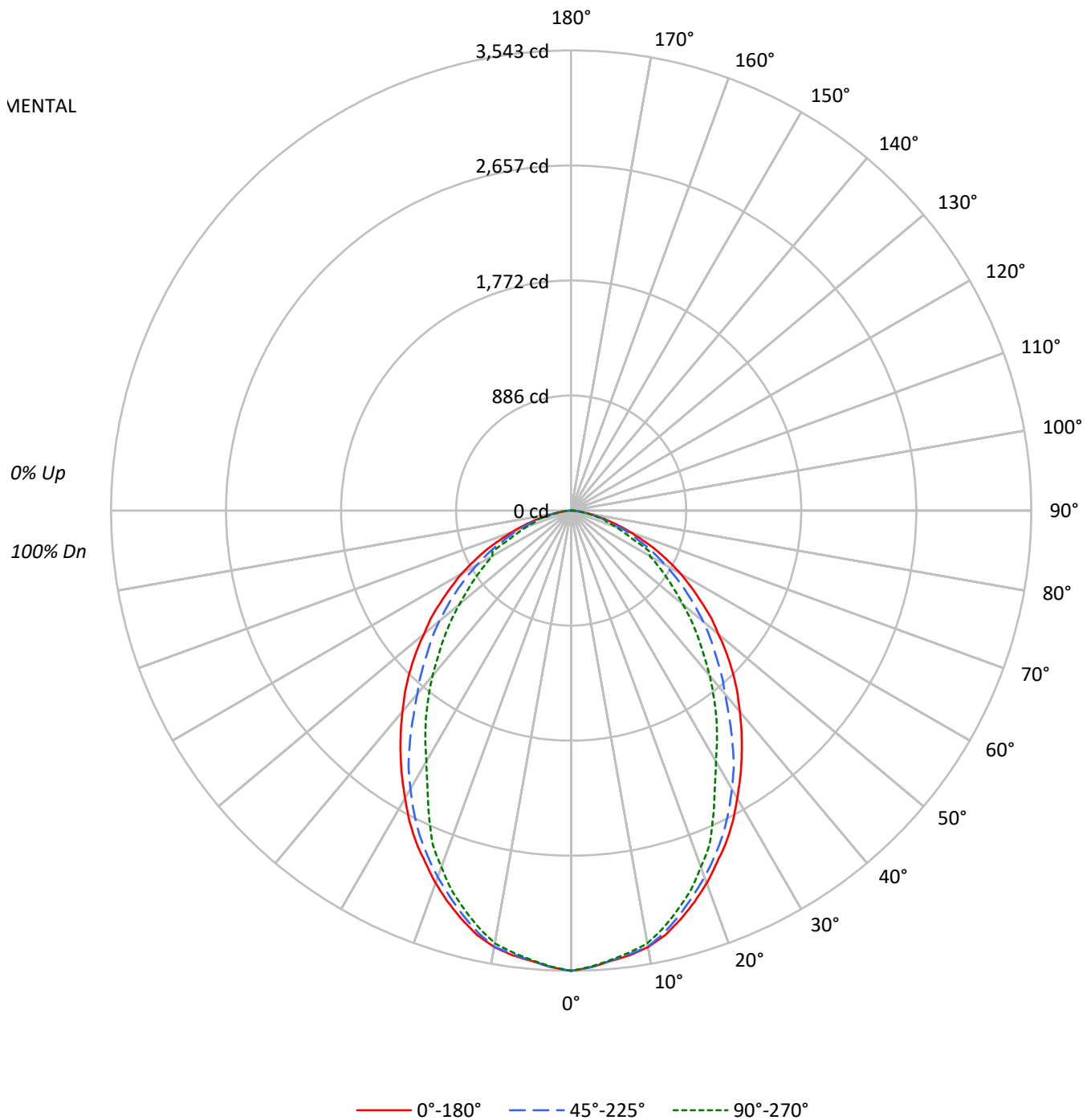
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563318

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-80-87-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563318

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-80-87-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°	4767	4767	4767
5°	4703	4697	4692
10°	4662	4656	4623
15°	4536	4491	4428
20°	4370	4299	4182
25°	4190	4099	3843
30°	3971	3844	3462
35°	3761	3552	3203
40°	3547	3238	2914
45°	3344	2993	2634
50°	3095	2778	2349
55°	2864	2518	2104
60°	2623	2249	1885
65°	2308	1969	1669
70°	1902	1724	1418
75°	1512	1320	1384
80°	1016	952	889
85°	633	760	885

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3344 cd/sqm



TEST NUMBER: P563318

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-80-87-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.8	4.7
10°-20°	905.2	13.0
20°-30°	1253.2	18.0
30°-40°	1336.3	19.2
40°-50°	1219.1	17.5
50°-60°	955.0	13.7
60°-70°	622.4	8.9
70°-80°	275.8	4.0
80°-90°	59.2	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°	2488.2	35.8
0°-40°	3824.5	55.0
0°-60°	5998.6	86.2
0°-90°	6956.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6956.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3543	3543	3543	3543	3543	
5°	3482	3478	3478	3474	3474	331
15°	3257	3257	3224	3191	3179	916
25°	2822	2806	2761	2663	2589	1296
35°	2290	2273	2163	1999	1950	1432
45°	1757	1720	1573	1442	1384	1354
55°	1221	1184	1073	946	897	1095
65°	725	684	618	631	524	715
75°	291	270	254	242	266	312
85°	41	45	49	53	57	57
90°	0	0	0	0	0	



TEST NUMBER: P563318

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-80-87-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3543.3	3543.3	3543.3	3543.3	3543.3
2.5°	3518.7	3518.7	3518.7	3514.6	3514.6
5°	3481.8	3477.8	3477.8	3473.7	3473.7
7.5°	3453.2	3449.1	3445.0	3440.9	3432.7
10°	3412.2	3412.2	3408.1	3387.6	3383.5
12.5°	3346.7	3342.6	3326.2	3297.5	3289.3
15°	3256.6	3256.6	3223.8	3191.0	3178.7
17.5°	3158.2	3154.1	3113.2	3080.4	3064.0
20°	3051.7	3043.5	3002.6	2949.3	2920.7
22.5°	2932.9	2932.9	2883.8	2814.2	2785.5
25°	2822.3	2806.0	2760.9	2662.6	2588.9
27.5°	2695.4	2670.8	2621.6	2482.4	2396.3
30°	2556.1	2543.8	2474.2	2293.9	2228.4
32.5°	2425.0	2404.5	2330.8	2142.4	2089.1
35°	2289.8	2273.4	2162.8	1999.0	1949.8
37.5°	2154.7	2134.2	1994.9	1863.8	1802.4
40°	2019.5	1994.9	1843.3	1724.5	1659.0
42.5°	1892.5	1859.7	1712.3	1585.3	1511.5
45°	1757.3	1720.4	1573.0	1441.9	1384.5
47.5°	1622.1	1589.4	1454.2	1319.0	1253.5
50°	1478.8	1450.1	1327.2	1192.0	1122.4
52.5°	1360.0	1314.9	1196.1	1060.9	1003.6
55°	1220.7	1183.8	1073.2	946.2	897.1
57.5°	1093.7	1056.8	954.4	835.6	794.7
60°	974.9	921.7	835.6	733.2	700.5
62.5°	843.8	802.9	729.1	643.1	684.1
65°	725.0	684.1	618.5	630.8	524.3
67.5°	594.0	573.5	516.1	458.8	442.4
70°	483.4	458.8	438.3	376.9	360.5
72.5°	385.1	360.5	331.8	299.0	286.7
75°	290.8	270.4	254.0	241.7	266.3
77.5°	200.7	192.5	180.2	167.9	163.9
80°	131.1	127.0	122.9	118.8	114.7
82.5°	77.8	77.8	77.8	77.8	77.8
85°	41.0	45.1	49.2	53.3	57.3
87.5°	24.6	24.6	28.7	32.8	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)