

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: P563375

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563375
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-93-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

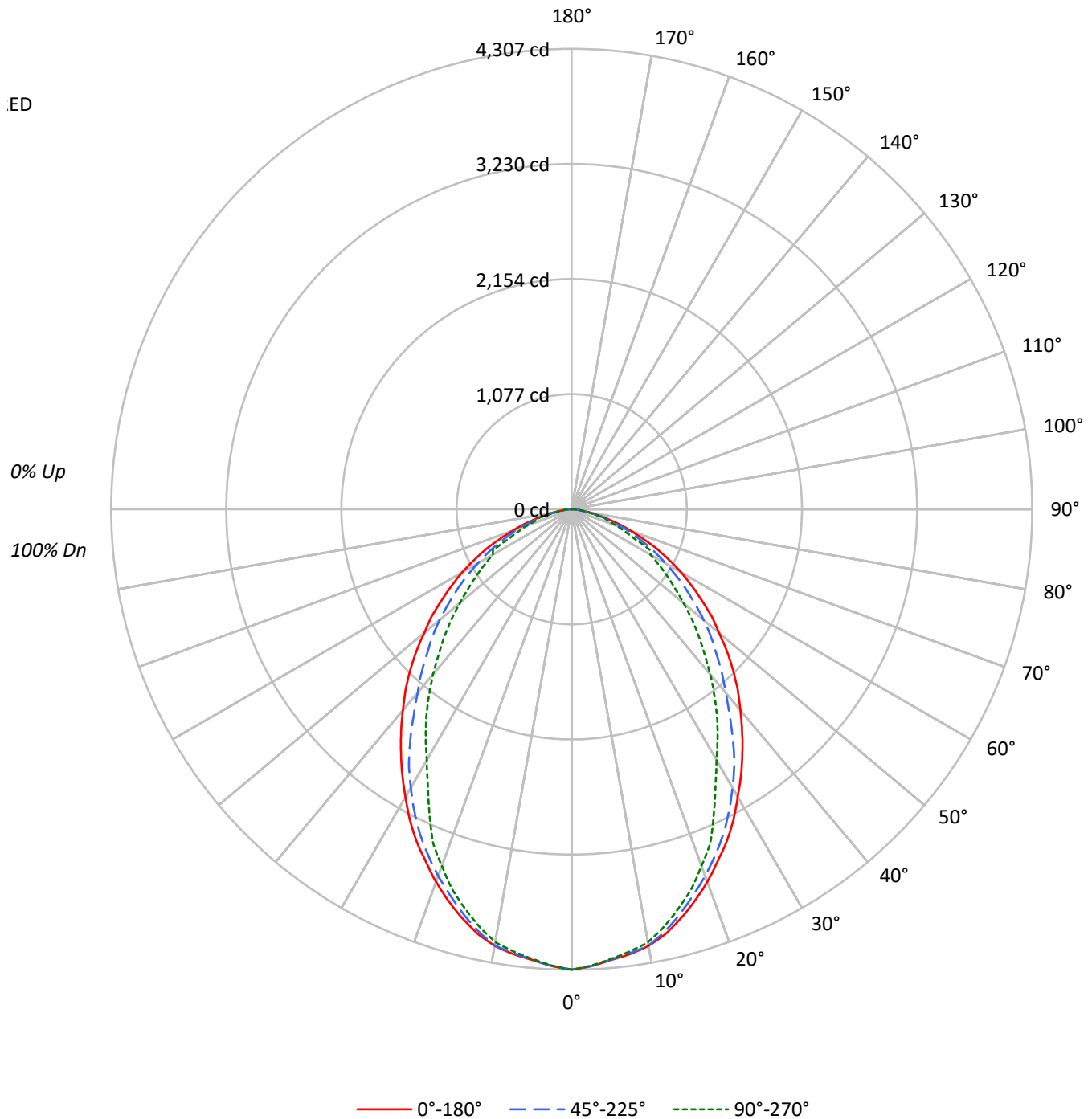
Lumens per Lamp: N/A
Luminaire Lumens: 8455.0 lumens
Efficiency: N/A
Efficacy: 120.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P563375
CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-93-97-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563375

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-93-97-EDD

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					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5795	5795	5795
5°	5716	5709	5703
10°	5667	5660	5619
15°	5514	5458	5382
20°	5311	5226	5083
25°	5093	4982	4672
30°	4827	4672	4208
35°	4572	4318	3893
40°	4311	3935	3542
45°	4064	3638	3202
50°	3762	3377	2856
55°	3481	3060	2558
60°	3189	2733	2291
65°	2806	2394	2029
70°	2311	2096	1724
75°	1838	1605	1682
80°	1234	1158	1080
85°	769	922	1076

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4064 cd/sqm



TEST NUMBER: P563375

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-93-97-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	400.9	4.7
10°-20°	1100.3	13.0
20°-30°	1523.2	18.0
30°-40°	1624.2	19.2
40°-50°	1481.8	17.5
50°-60°	1160.8	13.7
60°-70°	756.6	8.9
70°-80°	335.2	4.0
80°-90°	72.0	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°	3024.4	35.8
0°-40°	4648.7	55.0
0°-60°	7291.3	86.2
0°-90°	8455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8455.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4307	4307	4307	4307	4307	
5°	4232	4227	4227	4222	4222	402
15°	3958	3958	3918	3879	3864	1113
25°	3431	3411	3356	3236	3147	1575
35°	2783	2763	2629	2430	2370	1740
45°	2136	2091	1912	1753	1683	1645
55°	1484	1439	1304	1150	1090	1331
65°	881	832	752	767	637	869
75°	354	329	309	294	324	379
85°	50	55	60	65	70	69
90°	0	0	0	0	0	

TEST NUMBER: P563375

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-93-97-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4306.9	4306.9	4306.9	4306.9	4306.9
2.5°	4277.0	4277.0	4277.0	4272.0	4272.0
5°	4232.2	4227.2	4227.2	4222.2	4222.2
7.5°	4197.3	4192.3	4187.4	4182.4	4172.4
10°	4147.5	4147.5	4142.6	4117.7	4112.7
12.5°	4067.9	4062.9	4043.0	4008.1	3998.2
15°	3958.3	3958.3	3918.5	3878.7	3863.7
17.5°	3838.8	3833.9	3784.1	3744.2	3724.3
20°	3709.4	3699.4	3649.6	3584.9	3550.1
22.5°	3565.0	3565.0	3505.2	3420.6	3385.7
25°	3430.6	3410.6	3355.9	3236.4	3146.7
27.5°	3276.2	3246.3	3186.6	3017.3	2912.7
30°	3106.9	3092.0	3007.3	2788.3	2708.6
32.5°	2947.6	2922.7	2833.1	2604.0	2539.3
35°	2783.3	2763.4	2628.9	2429.8	2370.0
37.5°	2619.0	2594.1	2424.8	2265.5	2190.8
40°	2454.7	2424.8	2240.6	2096.2	2016.5
42.5°	2300.3	2260.5	2081.2	1926.9	1837.3
45°	2136.0	2091.2	1911.9	1752.6	1682.9
47.5°	1971.7	1931.9	1767.6	1603.2	1523.6
50°	1797.4	1762.6	1613.2	1448.9	1364.3
52.5°	1653.0	1598.3	1453.9	1289.6	1219.9
55°	1483.8	1438.9	1304.5	1150.2	1090.4
57.5°	1329.4	1284.6	1160.1	1015.7	965.9
60°	1185.0	1120.3	1015.7	891.2	851.4
62.5°	1025.7	975.9	886.3	781.7	831.5
65°	881.3	831.5	751.8	766.8	637.3
67.5°	722.0	697.1	627.4	557.7	537.7
70°	587.5	557.7	532.8	458.1	438.2
72.5°	468.0	438.2	403.3	363.5	348.5
75°	353.5	328.6	308.7	293.8	323.6
77.5°	244.0	234.0	219.1	204.1	199.2
80°	159.3	154.4	149.4	144.4	139.4
82.5°	94.6	94.6	94.6	94.6	94.6
85°	49.8	54.8	59.7	64.7	69.7
87.5°	29.9	29.9	34.9	39.8	44.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)