

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: P563327

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563327
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-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

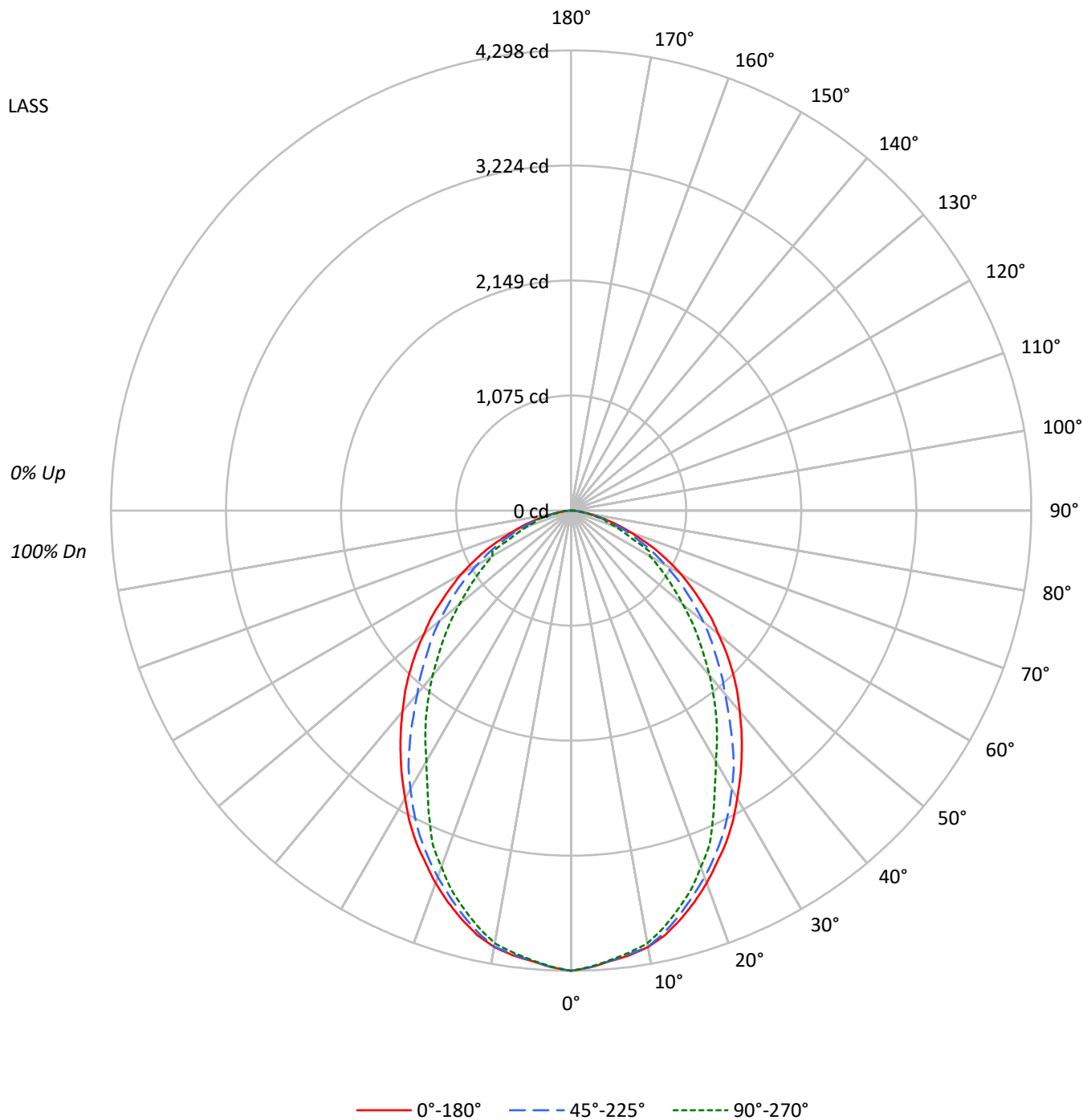
Lumens per Lamp: N/A
Luminaire Lumens: 8438.0 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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



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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	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°	5783	5783	5783
5°	5705	5698	5691
10°	5655	5648	5608
15°	5503	5447	5371
20°	5301	5215	5073
25°	5083	4972	4662
30°	4817	4663	4200
35°	4562	4309	3885
40°	4303	3928	3535
45°	4056	3631	3196
50°	3755	3370	2850
55°	3474	3054	2553
60°	3182	2728	2287
65°	2800	2389	2025
70°	2306	2092	1720
75°	1834	1602	1679
80°	1232	1155	1078
85°	767	920	1074

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4056 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	400.1	4.7
10°-20°	1098.1	13.0
20°-30°	1520.2	18.0
30°-40°	1621.0	19.2
40°-50°	1478.8	17.5
50°-60°	1158.5	13.7
60°-70°	755.1	8.9
70°-80°	334.5	4.0
80°-90°	71.8	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°	3018.3	35.8
0°-40°	4639.3	55.0
0°-60°	7276.6	86.2
0°-90°	8438.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8438.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4298	4298	4298	4298	4298	
5°	4224	4219	4219	4214	4214	401
15°	3950	3950	3911	3871	3856	1111
25°	3424	3404	3349	3230	3140	1572
35°	2778	2758	2624	2425	2365	1737
45°	2132	2087	1908	1749	1680	1642
55°	1481	1436	1302	1148	1088	1328
65°	880	830	750	765	636	867
75°	353	328	308	293	323	378
85°	50	55	60	65	70	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4298.2	4298.2	4298.2	4298.2	4298.2
2.5°	4268.4	4268.4	4268.4	4263.4	4263.4
5°	4223.7	4218.7	4218.7	4213.7	4213.7
7.5°	4188.9	4183.9	4178.9	4174.0	4164.0
10°	4139.2	4139.2	4134.2	4109.4	4104.4
12.5°	4059.7	4054.7	4034.8	4000.1	3990.1
15°	3950.4	3950.4	3910.6	3870.9	3856.0
17.5°	3831.1	3826.1	3776.5	3736.7	3716.8
20°	3701.9	3692.0	3642.3	3577.7	3542.9
22.5°	3557.8	3557.8	3498.2	3413.7	3378.9
25°	3423.7	3403.8	3349.1	3229.9	3140.4
27.5°	3269.6	3239.8	3180.2	3011.2	2906.9
30°	3100.7	3085.8	3001.3	2782.7	2703.1
32.5°	2941.7	2916.8	2827.4	2598.8	2534.2
35°	2777.7	2757.8	2623.6	2424.9	2365.3
37.5°	2613.7	2588.9	2419.9	2260.9	2186.4
40°	2449.7	2419.9	2236.1	2092.0	2012.5
42.5°	2295.7	2255.9	2077.1	1923.0	1833.6
45°	2131.7	2087.0	1908.1	1749.1	1679.5
47.5°	1967.7	1928.0	1764.0	1600.0	1520.5
50°	1793.8	1759.0	1610.0	1446.0	1361.5
52.5°	1649.7	1595.1	1451.0	1287.0	1217.4
55°	1480.8	1436.0	1301.9	1147.8	1088.2
57.5°	1326.7	1282.0	1157.8	1013.7	964.0
60°	1182.6	1118.0	1013.7	889.5	849.7
62.5°	1023.6	973.9	884.5	780.1	829.8
65°	879.5	829.8	750.3	765.2	636.0
67.5°	720.5	695.7	626.1	556.5	536.7
70°	586.3	556.5	531.7	457.2	437.3
72.5°	467.1	437.3	402.5	362.7	347.8
75°	352.8	328.0	308.1	293.2	323.0
77.5°	243.5	233.5	218.6	203.7	198.8
80°	159.0	154.0	149.1	144.1	139.1
82.5°	94.4	94.4	94.4	94.4	94.4
85°	49.7	54.7	59.6	64.6	69.6
87.5°	29.8	29.8	34.8	39.8	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)