

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: P563976

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563976
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-LD4-4LO-50-UNV-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8355.0 lumens
Efficiency: N/A
Efficacy: 89.3 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

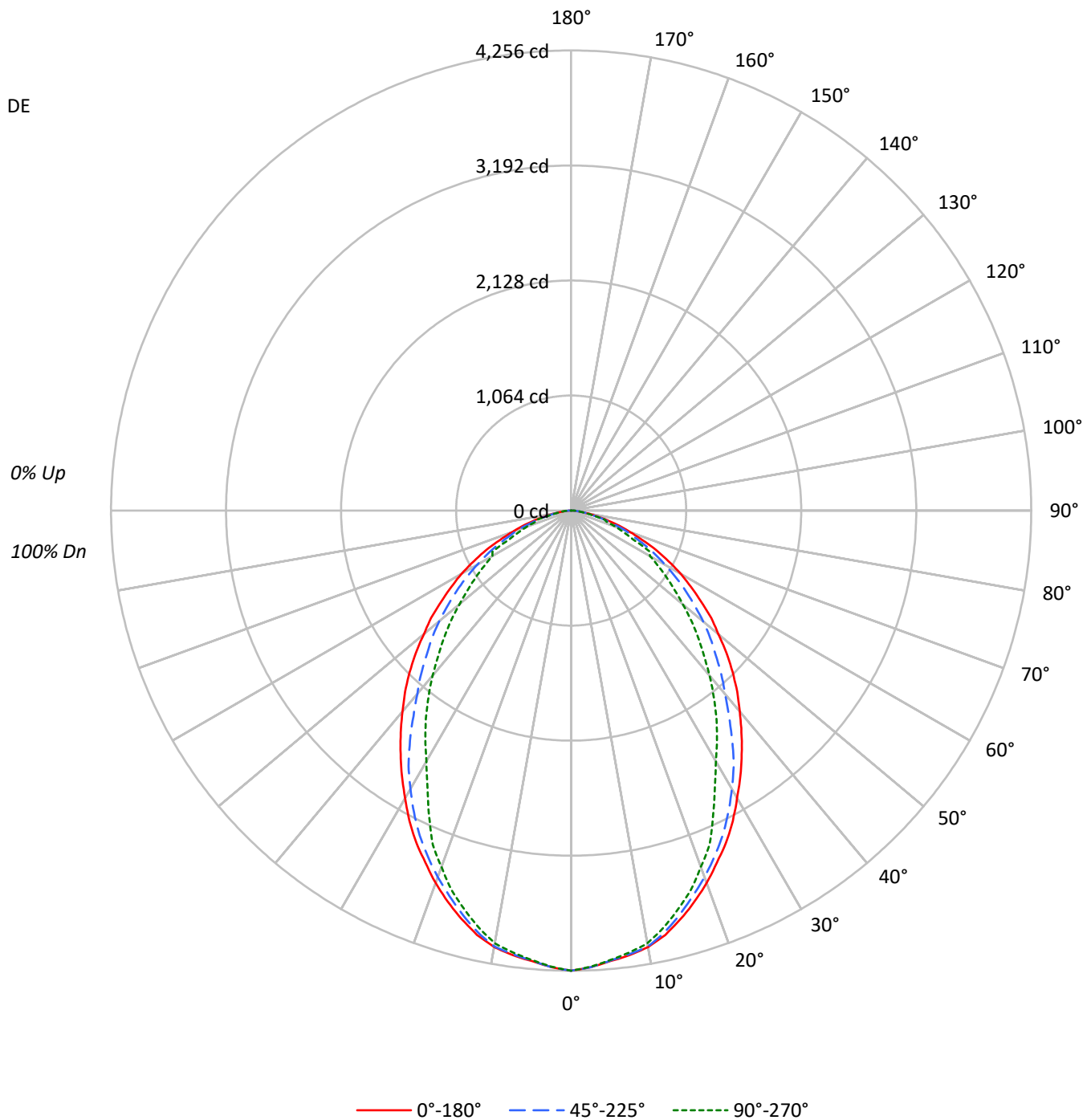
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5726	5726	5726
5°	5648	5642	5635
10°	5600	5593	5552
15°	5449	5394	5318
20°	5248	5164	5023
25°	5033	4923	4616
30°	4770	4617	4158
35°	4518	4267	3847
40°	4260	3889	3500
45°	4016	3595	3164
50°	3718	3337	2822
55°	3439	3024	2528
60°	3151	2701	2264
65°	2773	2365	2005
70°	2284	2071	1703
75°	1816	1586	1663
80°	1220	1144	1068
85°	760	911	1064

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4016 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	396.2	4.7
10°-20°	1087.3	13.0
20°-30°	1505.2	18.0
30°-40°	1605.0	19.2
40°-50°	1464.2	17.5
50°-60°	1147.1	13.7
60°-70°	747.6	8.9
70°-80°	331.2	4.0
80°-90°	71.1	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°	2988.7	35.8
0°-40°	4593.7	55.0
0°-60°	7205.0	86.2
0°-90°	8355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8355.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4256	4256	4256	4256	4256	
5°	4182	4177	4177	4172	4172	397
15°	3912	3912	3872	3833	3818	1100
25°	3390	3370	3316	3198	3110	1556
35°	2750	2731	2598	2401	2342	1719
45°	2111	2066	1889	1732	1663	1626
55°	1466	1422	1289	1137	1078	1315
65°	871	822	743	758	630	858
75°	349	325	305	290	320	374
85°	49	54	59	64	69	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4255.9	4255.9	4255.9	4255.9	4255.9
2.5°	4226.4	4226.4	4226.4	4221.5	4221.5
5°	4182.1	4177.2	4177.2	4172.3	4172.3
7.5°	4147.7	4142.8	4137.8	4132.9	4123.1
10°	4098.5	4098.5	4093.6	4069.0	4064.0
12.5°	4019.8	4014.8	3995.2	3960.7	3950.9
15°	3911.5	3911.5	3872.2	3832.8	3818.0
17.5°	3793.4	3788.5	3739.3	3699.9	3680.3
20°	3665.5	3655.7	3606.5	3542.5	3508.1
22.5°	3522.8	3522.8	3463.8	3380.1	3345.7
25°	3390.0	3370.3	3316.2	3198.1	3109.5
27.5°	3237.5	3207.9	3148.9	2981.6	2878.3
30°	3070.2	3055.4	2971.8	2755.3	2676.6
32.5°	2912.7	2888.1	2799.6	2573.2	2509.3
35°	2750.4	2730.7	2597.8	2401.0	2342.0
37.5°	2588.0	2563.4	2396.1	2238.7	2164.9
40°	2425.6	2396.1	2214.1	2071.4	1992.7
42.5°	2273.1	2233.7	2056.6	1904.1	1815.5
45°	2110.7	2066.5	1889.3	1731.9	1663.0
47.5°	1948.4	1909.0	1746.7	1584.3	1505.6
50°	1776.2	1741.7	1594.1	1431.8	1348.1
52.5°	1633.5	1579.4	1436.7	1274.3	1205.4
55°	1466.2	1421.9	1289.1	1136.6	1077.5
57.5°	1313.7	1269.4	1146.4	1003.7	954.5
60°	1171.0	1107.0	1003.7	880.7	841.3
62.5°	1013.5	964.3	875.8	772.5	821.7
65°	870.9	821.7	742.9	757.7	629.8
67.5°	713.4	688.8	619.9	551.1	531.4
70°	580.6	551.1	526.5	452.7	433.0
72.5°	462.5	433.0	398.5	359.2	344.4
75°	349.3	324.7	305.0	290.3	319.8
77.5°	241.1	231.2	216.5	201.7	196.8
80°	157.4	152.5	147.6	142.7	137.8
82.5°	93.5	93.5	93.5	93.5	93.5
85°	49.2	54.1	59.0	64.0	68.9
87.5°	29.5	29.5	34.4	39.4	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)