

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: P563265

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563265
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-35-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8305.0 lumens
Efficiency: N/A
Efficacy: 118.3 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

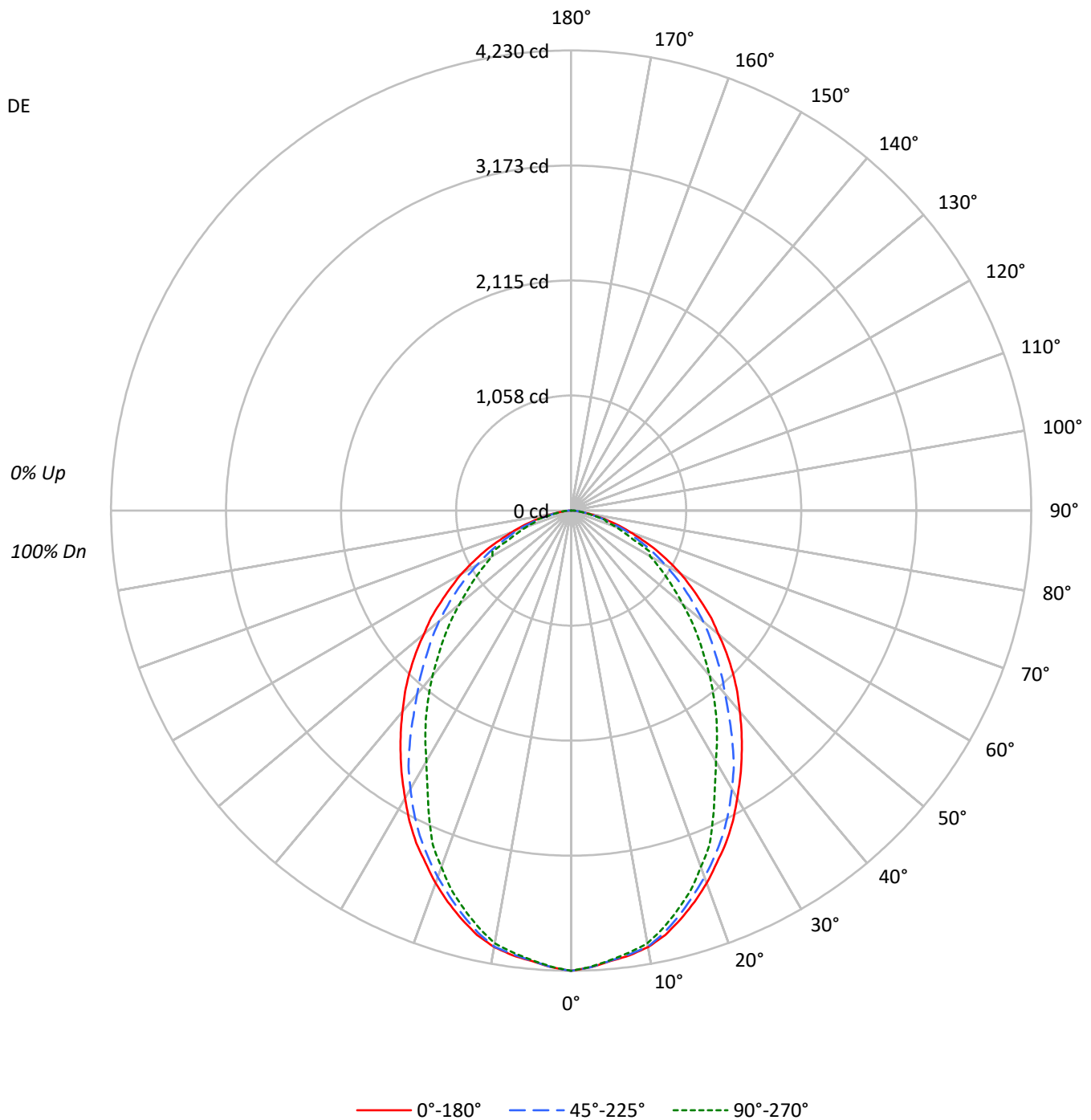
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5692	5692	5692
5°	5615	5608	5601
10°	5566	5559	5519
15°	5416	5361	5287
20°	5217	5133	4993
25°	5003	4894	4589
30°	4741	4589	4133
35°	4491	4242	3824
40°	4235	3866	3479
45°	3992	3573	3146
50°	3696	3317	2805
55°	3419	3006	2513
60°	3132	2685	2250
65°	2756	2351	1993
70°	2270	2059	1693
75°	1805	1576	1653
80°	1213	1137	1061
85°	755	906	1057

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3992 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	393.8	4.7
10°-20°	1080.7	13.0
20°-30°	1496.2	18.0
30°-40°	1595.4	19.2
40°-50°	1455.5	17.5
50°-60°	1140.2	13.7
60°-70°	743.2	8.9
70°-80°	329.2	4.0
80°-90°	70.7	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°	2970.8	35.8
0°-40°	4566.2	55.0
0°-60°	7161.9	86.2
0°-90°	8305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8305.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4230	4230	4230	4230	4230	
5°	4157	4152	4152	4147	4147	395
15°	3888	3888	3849	3810	3795	1093
25°	3370	3350	3296	3179	3091	1547
35°	2734	2714	2582	2387	2328	1709
45°	2098	2054	1878	1722	1653	1616
55°	1457	1413	1281	1130	1071	1307
65°	866	817	738	753	626	853
75°	347	323	303	289	318	372
85°	49	54	59	64	68	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4230.5	4230.5	4230.5	4230.5	4230.5
2.5°	4201.1	4201.1	4201.1	4196.2	4196.2
5°	4157.1	4152.2	4152.2	4147.3	4147.3
7.5°	4122.9	4118.0	4113.1	4108.2	4098.4
10°	4074.0	4074.0	4069.1	4044.6	4039.7
12.5°	3995.7	3990.8	3971.2	3937.0	3927.2
15°	3888.1	3888.1	3849.0	3809.9	3795.2
17.5°	3770.7	3765.8	3716.9	3677.8	3658.2
20°	3643.6	3633.8	3584.9	3521.3	3487.1
22.5°	3501.7	3501.7	3443.1	3359.9	3325.7
25°	3369.7	3350.1	3296.3	3179.0	3090.9
27.5°	3218.1	3188.7	3130.0	2963.8	2861.1
30°	3051.8	3037.1	2954.0	2738.8	2660.5
32.5°	2895.3	2870.8	2782.8	2557.8	2494.3
35°	2733.9	2714.3	2582.3	2386.7	2328.0
37.5°	2572.5	2548.1	2381.8	2225.3	2151.9
40°	2411.1	2381.8	2200.8	2059.0	1980.7
42.5°	2259.5	2220.4	2044.3	1892.7	1804.7
45°	2098.1	2054.1	1878.0	1721.5	1653.1
47.5°	1936.7	1897.6	1736.2	1574.8	1496.6
50°	1765.5	1731.3	1584.6	1423.2	1340.1
52.5°	1623.7	1569.9	1428.1	1266.7	1198.2
55°	1457.4	1413.4	1281.4	1129.8	1071.1
57.5°	1305.8	1261.8	1139.5	997.7	948.8
60°	1164.0	1100.4	997.7	875.4	836.3
62.5°	1007.5	958.6	870.5	767.8	816.7
65°	865.7	816.7	738.5	753.2	626.0
67.5°	709.2	684.7	616.2	547.8	528.2
70°	577.1	547.8	523.3	449.9	430.4
72.5°	459.7	430.4	396.1	357.0	342.3
75°	347.2	322.8	303.2	288.6	317.9
77.5°	239.6	229.9	215.2	200.5	195.6
80°	156.5	151.6	146.7	141.8	136.9
82.5°	92.9	92.9	92.9	92.9	92.9
85°	48.9	53.8	58.7	63.6	68.5
87.5°	29.3	29.3	34.2	39.1	44.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)