

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: P561382

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561382
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-12-4-LD4-2HI-35-UNV-93-87-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6405.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

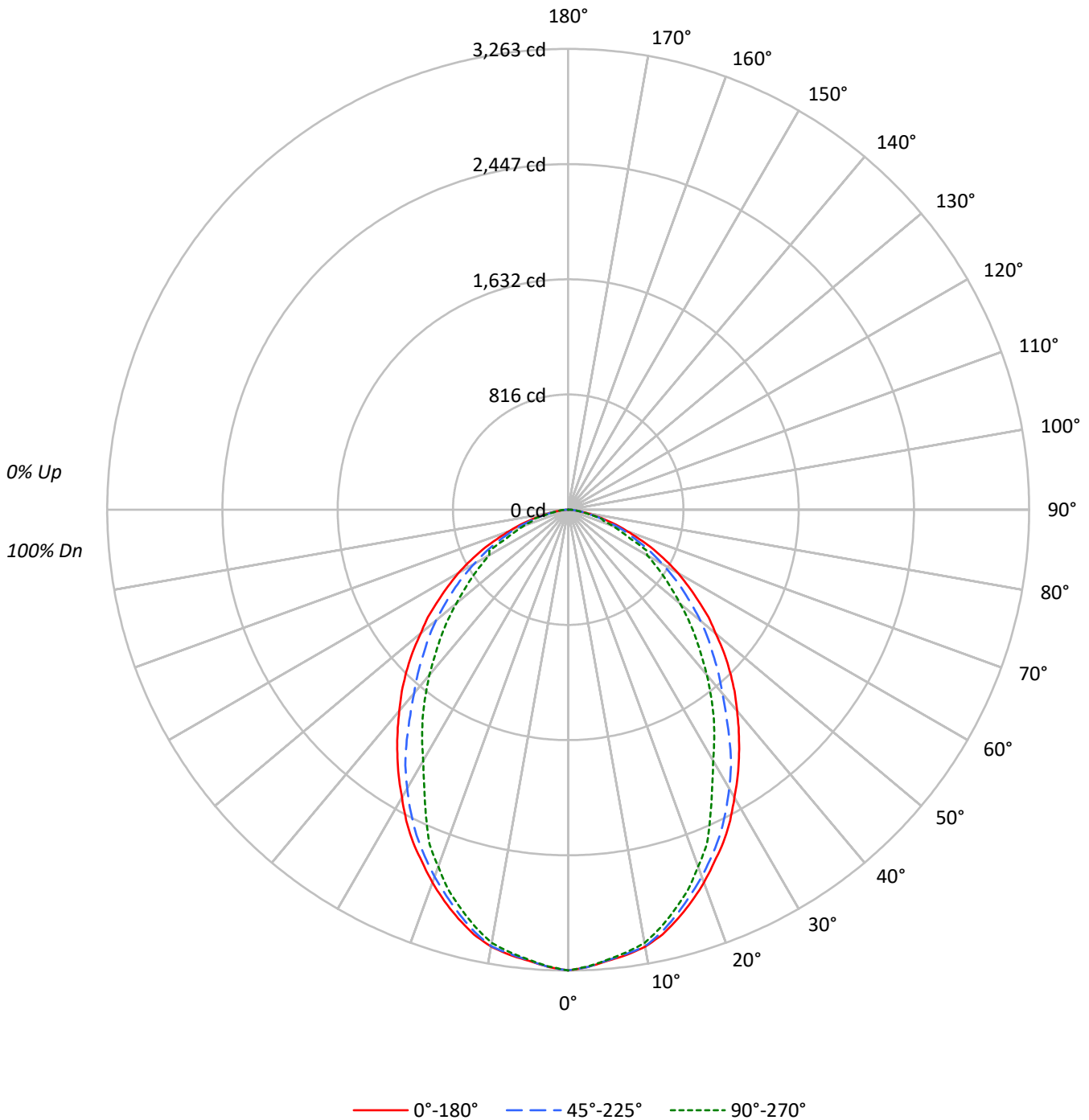
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8780	8780	8780
5°	8660	8650	8640
10°	8585	8575	8513
15°	8354	8270	8154
20°	8047	7917	7701
25°	7716	7548	7078
30°	7313	7079	6376
35°	6926	6542	5898
40°	6532	5962	5366
45°	6158	5512	4852
50°	5700	5116	4327
55°	5273	4636	3875
60°	4831	4141	3471
65°	4251	3626	3074
70°	3502	3175	2611
75°	2784	2432	2549
80°	1870	1754	1636
85°	1164	1399	1630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6158 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.7	4.7
10°-20°	833.5	13.0
20°-30°	1153.9	18.0
30°-40°	1230.4	19.2
40°-50°	1122.5	17.5
50°-60°	879.4	13.7
60°-70°	573.1	8.9
70°-80°	253.9	4.0
80°-90°	54.5	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°	2291.1	35.8
0°-40°	3521.5	55.0
0°-60°	5523.4	86.2
0°-90°	6405.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6405.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3263	3263	3263	3263	3263	
5°	3206	3202	3202	3198	3198	304
15°	2999	2999	2968	2938	2927	843
25°	2599	2584	2542	2452	2384	1193
35°	2108	2093	1992	1841	1795	1318
45°	1618	1584	1448	1328	1275	1246
55°	1124	1090	988	871	826	1008
65°	668	630	570	581	483	658
75°	268	249	234	222	245	287
85°	38	42	45	49	53	52
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3262.6	3262.6	3262.6	3262.6	3262.6
2.5°	3240.0	3240.0	3240.0	3236.2	3236.2
5°	3206.0	3202.3	3202.3	3198.5	3198.5
7.5°	3179.6	3175.9	3172.1	3168.3	3160.8
10°	3141.9	3141.9	3138.2	3119.3	3115.5
12.5°	3081.6	3077.8	3062.7	3036.3	3028.8
15°	2998.6	2998.6	2968.4	2938.2	2926.9
17.5°	2908.1	2904.3	2866.6	2836.4	2821.3
20°	2810.0	2802.5	2764.7	2715.7	2689.3
22.5°	2700.6	2700.6	2655.4	2591.2	2564.8
25°	2598.8	2583.7	2542.2	2451.7	2383.8
27.5°	2481.9	2459.2	2414.0	2285.7	2206.5
30°	2353.6	2342.3	2278.2	2112.2	2051.9
32.5°	2232.9	2214.1	2146.2	1972.7	1923.6
35°	2108.4	2093.4	1991.5	1840.6	1795.4
37.5°	1984.0	1965.1	1836.9	1716.2	1659.6
40°	1859.5	1836.9	1697.3	1587.9	1527.6
42.5°	1742.6	1712.4	1576.6	1459.7	1391.8
45°	1618.1	1584.2	1448.4	1327.7	1274.9
47.5°	1493.6	1463.5	1339.0	1214.5	1154.2
50°	1361.6	1335.2	1222.1	1097.6	1033.5
52.5°	1252.2	1210.8	1101.4	976.9	924.1
55°	1124.0	1090.1	988.2	871.3	826.0
57.5°	1007.1	973.1	878.8	769.5	731.7
60°	897.7	848.7	769.5	675.2	645.0
62.5°	777.0	739.3	671.4	592.2	629.9
65°	667.6	629.9	569.5	580.9	482.8
67.5°	546.9	528.1	475.2	422.4	407.4
70°	445.1	422.4	403.6	347.0	331.9
72.5°	354.6	331.9	305.5	275.3	264.0
75°	267.8	248.9	233.9	222.5	245.2
77.5°	184.8	177.3	166.0	154.6	150.9
80°	120.7	116.9	113.2	109.4	105.6
82.5°	71.7	71.7	71.7	71.7	71.7
85°	37.7	41.5	45.3	49.0	52.8
87.5°	22.6	22.6	26.4	30.2	33.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)