

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: P561329

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561329
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-80-84-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8148.0 lumens
Efficiency: N/A
Efficacy: 94.3 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

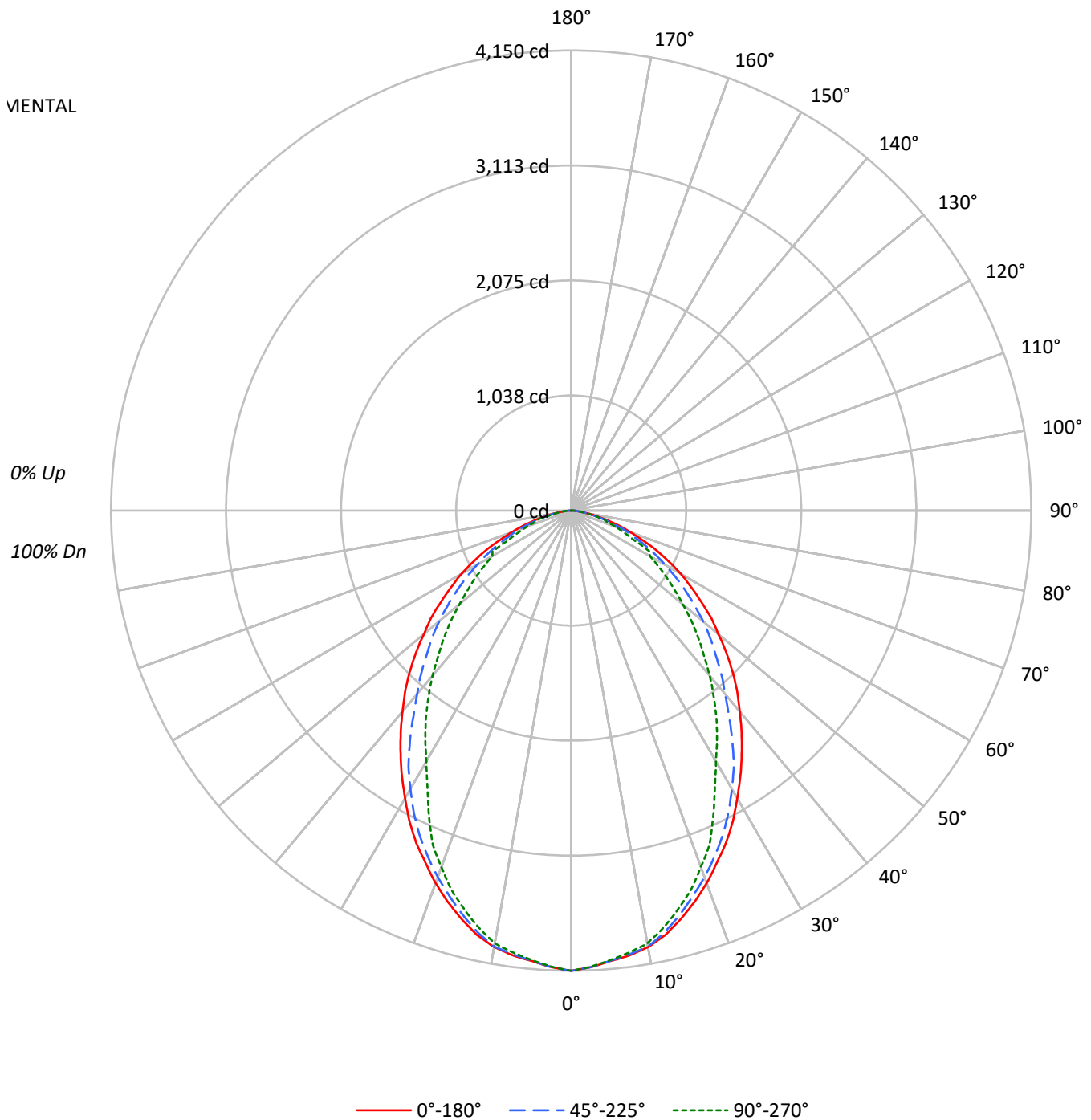
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	11169	11169	11169
5°	11017	11004	10991
10°	10921	10908	10830
15°	10627	10520	10373
20°	10237	10072	9797
25°	9816	9602	9004
30°	9303	9005	8111
35°	8811	8323	7503
40°	8310	7585	6826
45°	7833	7012	6172
50°	7252	6508	5504
55°	6708	5898	4930
60°	6146	5268	4416
65°	5408	4613	3911
70°	4455	4039	3322
75°	3542	3093	3243
80°	2379	2230	2083
85°	1482	1778	2075

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7833 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	386.4	4.7
10°-20°	1060.3	13.0
20°-30°	1467.9	18.0
30°-40°	1565.2	19.2
40°-50°	1428.0	17.5
50°-60°	1118.7	13.7
60°-70°	729.1	8.9
70°-80°	323.0	4.0
80°-90°	69.4	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°	2914.6	35.8
0°-40°	4479.8	55.0
0°-60°	7026.5	86.2
0°-90°	8148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8148.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4150	4150	4150	4150	4150	
5°	4078	4074	4074	4069	4069	387
15°	3815	3815	3776	3738	3723	1072
25°	3306	3287	3234	3119	3032	1518
35°	2682	2663	2534	2342	2284	1677
45°	2058	2015	1842	1689	1622	1586
55°	1430	1387	1257	1108	1051	1282
65°	849	801	724	739	614	837
75°	341	317	298	283	312	365
85°	48	53	58	62	67	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4150.5	4150.5	4150.5	4150.5	4150.5
2.5°	4121.7	4121.7	4121.7	4116.9	4116.9
5°	4078.5	4073.7	4073.7	4068.9	4068.9
7.5°	4044.9	4040.1	4035.3	4030.5	4020.9
10°	3996.9	3996.9	3992.1	3968.1	3963.4
12.5°	3920.2	3915.4	3896.2	3862.6	3853.0
15°	3814.6	3814.6	3776.2	3737.8	3723.4
17.5°	3699.4	3694.6	3646.7	3608.3	3589.1
20°	3574.7	3565.1	3517.1	3454.7	3421.1
22.5°	3435.5	3435.5	3378.0	3296.4	3262.8
25°	3306.0	3286.8	3234.0	3118.9	3032.5
27.5°	3157.2	3128.5	3070.9	2907.7	2807.0
30°	2994.1	2979.7	2898.1	2687.0	2610.2
32.5°	2840.6	2816.6	2730.2	2509.5	2447.1
35°	2682.2	2663.0	2533.5	2341.5	2284.0
37.5°	2523.9	2499.9	2336.7	2183.2	2111.2
40°	2365.5	2336.7	2159.2	2020.1	1943.3
42.5°	2216.8	2178.4	2005.7	1856.9	1770.6
45°	2058.4	2015.3	1842.5	1689.0	1621.8
47.5°	1900.1	1861.7	1703.4	1545.0	1468.3
50°	1732.2	1698.6	1554.6	1396.3	1314.7
52.5°	1593.0	1540.2	1401.1	1242.7	1175.6
55°	1429.9	1386.7	1257.1	1108.4	1050.8
57.5°	1281.1	1237.9	1118.0	978.8	930.9
60°	1142.0	1079.6	978.8	858.9	820.5
62.5°	988.4	940.5	854.1	753.3	801.3
65°	849.3	801.3	724.5	738.9	614.2
67.5°	695.7	671.8	604.6	537.4	518.2
70°	566.2	537.4	513.4	441.4	422.2
72.5°	451.0	422.2	388.7	350.3	335.9
75°	340.7	316.7	297.5	283.1	311.9
77.5°	235.1	225.5	211.1	196.7	191.9
80°	153.5	148.7	143.9	139.1	134.4
82.5°	91.2	91.2	91.2	91.2	91.2
85°	48.0	52.8	57.6	62.4	67.2
87.5°	28.8	28.8	33.6	38.4	43.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)