

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: P561983

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561983
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-LD4-1HI-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

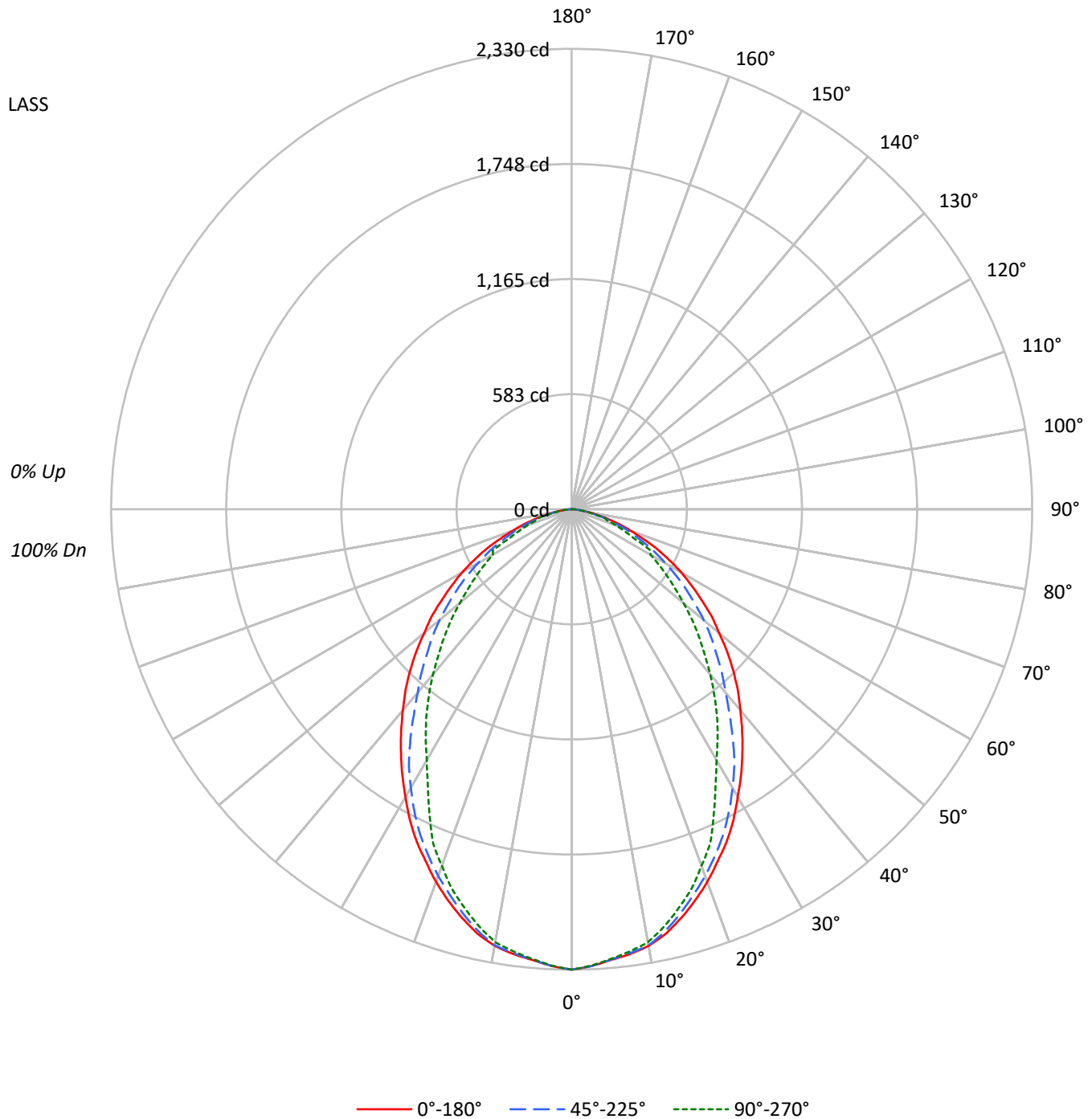
Lumens per Lamp: N/A
Luminaire Lumens: 4574.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	3135	3135	3135
5°	3092	3089	3085
10°	3065	3062	3040
15°	2983	2953	2912
20°	2873	2827	2750
25°	2755	2695	2527
30°	2611	2528	2277
35°	2473	2336	2106
40°	2332	2129	1916
45°	2199	1968	1732
50°	2035	1827	1545
55°	1883	1655	1384
60°	1725	1479	1239
65°	1518	1295	1098
70°	1250	1134	932
75°	994	868	910
80°	668	626	584
85°	415	499	582

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2199 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.9	4.7
10°-20°	595.2	13.0
20°-30°	824.1	18.0
30°-40°	878.7	19.2
40°-50°	801.6	17.5
50°-60°	628.0	13.7
60°-70°	409.3	8.9
70°-80°	181.3	4.0
80°-90°	38.9	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°	1636.2	35.8
0°-40°	2514.8	55.0
0°-60°	3944.4	86.2
0°-90°	4574.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4574.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2330	2330	2330	2330	2330	
5°	2290	2287	2287	2284	2284	217
15°	2141	2141	2120	2098	2090	602
25°	1856	1845	1816	1751	1702	852
35°	1506	1495	1422	1314	1282	941
45°	1156	1131	1034	948	910	890
55°	803	778	706	622	590	720
65°	477	450	407	415	345	470
75°	191	178	167	159	175	205
85°	27	30	32	35	38	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2329.9	2329.9	2329.9	2329.9	2329.9
2.5°	2313.8	2313.8	2313.8	2311.1	2311.1
5°	2289.5	2286.8	2286.8	2284.1	2284.1
7.5°	2270.7	2268.0	2265.3	2262.6	2257.2
10°	2243.7	2243.7	2241.0	2227.6	2224.9
12.5°	2200.6	2197.9	2187.2	2168.3	2162.9
15°	2141.4	2141.4	2119.8	2098.3	2090.2
17.5°	2076.7	2074.0	2047.1	2025.6	2014.8
20°	2006.7	2001.3	1974.4	1939.4	1920.5
22.5°	1928.6	1928.6	1896.3	1850.5	1831.6
25°	1855.9	1845.1	1815.5	1750.8	1702.3
27.5°	1772.4	1756.2	1723.9	1632.3	1575.7
30°	1680.8	1672.7	1626.9	1508.4	1465.3
32.5°	1594.6	1581.1	1532.6	1408.7	1373.7
35°	1505.7	1494.9	1422.2	1314.5	1282.1
37.5°	1416.8	1403.3	1311.8	1225.6	1185.2
40°	1327.9	1311.8	1212.1	1134.0	1090.9
42.5°	1244.4	1222.9	1125.9	1042.4	993.9
45°	1155.5	1131.3	1034.3	948.1	910.4
47.5°	1066.7	1045.1	956.2	867.3	824.2
50°	972.4	953.5	872.7	783.8	738.0
52.5°	894.3	864.6	786.5	697.6	659.9
55°	802.7	778.4	705.7	622.2	589.9
57.5°	719.2	694.9	627.6	549.5	522.6
60°	641.1	606.1	549.5	482.1	460.6
62.5°	554.9	527.9	479.5	422.9	449.8
65°	476.8	449.8	406.7	414.8	344.8
67.5°	390.6	377.1	339.4	301.7	290.9
70°	317.8	301.7	288.2	247.8	237.0
72.5°	253.2	237.0	218.2	196.6	188.5
75°	191.2	177.8	167.0	158.9	175.1
77.5°	132.0	126.6	118.5	110.4	107.7
80°	86.2	83.5	80.8	78.1	75.4
82.5°	51.2	51.2	51.2	51.2	51.2
85°	26.9	29.6	32.3	35.0	37.7
87.5°	16.2	16.2	18.9	21.5	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)