

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: P560753

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560753
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-LD4-1HI-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: 4074.0 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

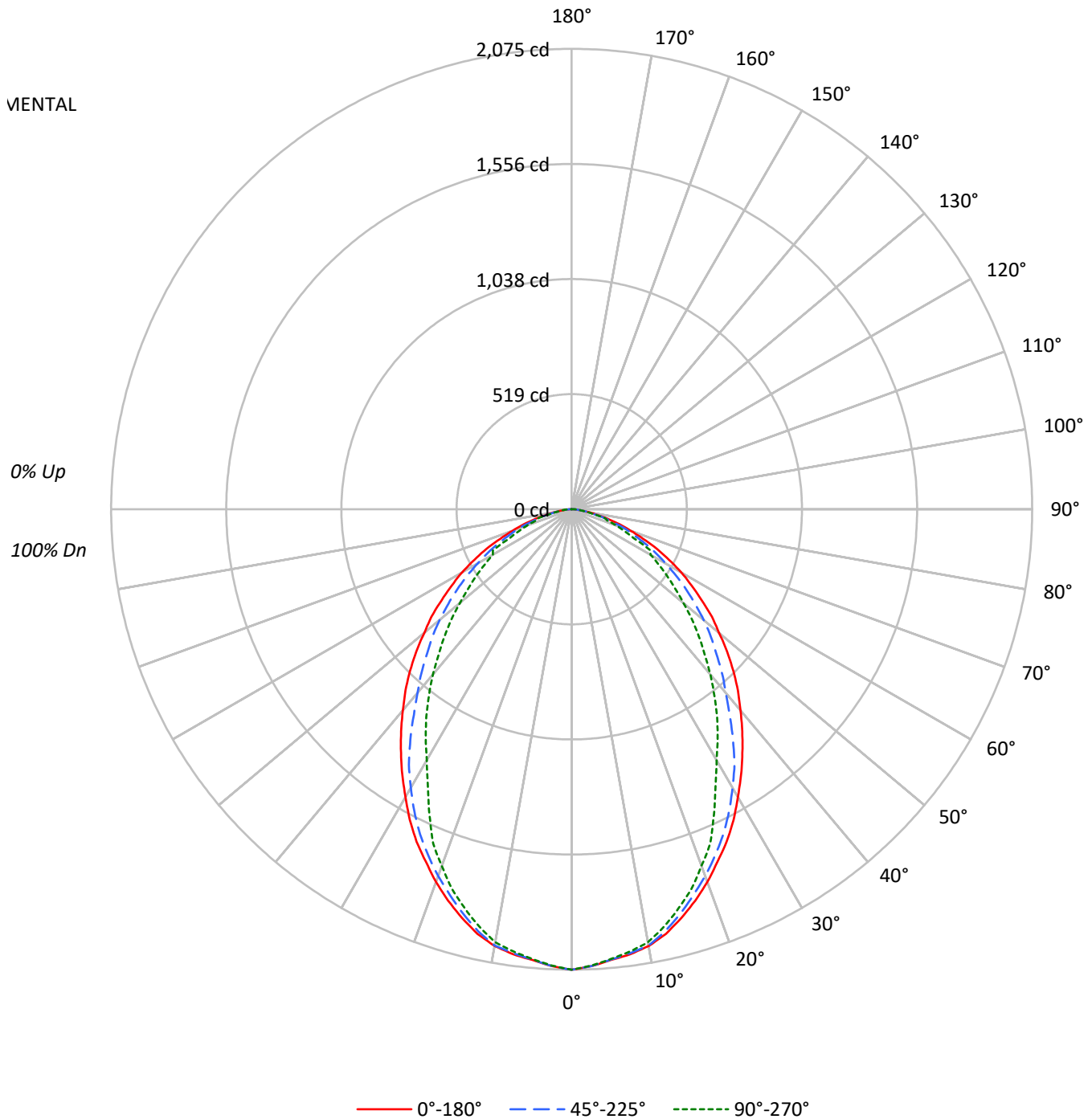
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5584	5584	5584
5°	5509	5502	5496
10°	5461	5454	5415
15°	5314	5260	5187
20°	5118	5036	4899
25°	4908	4801	4502
30°	4652	4503	4055
35°	4406	4161	3752
40°	4155	3792	3413
45°	3917	3506	3086
50°	3626	3254	2752
55°	3354	2949	2465
60°	3073	2634	2208
65°	2704	2307	1955
70°	2227	2020	1661
75°	1771	1546	1621
80°	1190	1116	1041
85°	741	889	1037

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3917 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.2	4.7
10°-20°	530.2	13.0
20°-30°	734.0	18.0
30°-40°	782.6	19.2
40°-50°	714.0	17.5
50°-60°	559.3	13.7
60°-70°	364.6	8.9
70°-80°	161.5	4.0
80°-90°	34.7	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°	1457.3	35.8
0°-40°	2239.9	55.0
0°-60°	3513.2	86.2
0°-90°	4074.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4074.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2075	2075	2075	2075	2075	
5°	2039	2037	2037	2034	2034	194
15°	1907	1907	1888	1869	1862	536
25°	1653	1643	1617	1559	1516	759
35°	1341	1332	1267	1171	1142	838
45°	1029	1008	921	844	811	793
55°	715	693	629	554	525	641
65°	425	401	362	370	307	418
75°	170	158	149	142	156	183
85°	24	26	29	31	34	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2075.2	2075.2	2075.2	2075.2	2075.2
2.5°	2060.8	2060.8	2060.8	2058.4	2058.4
5°	2039.3	2036.9	2036.9	2034.5	2034.5
7.5°	2022.5	2020.1	2017.7	2015.3	2010.5
10°	1998.5	1998.5	1996.1	1984.1	1981.7
12.5°	1960.1	1957.7	1948.1	1931.3	1926.5
15°	1907.3	1907.3	1888.1	1868.9	1861.7
17.5°	1849.7	1847.3	1823.3	1804.1	1794.5
20°	1787.3	1782.5	1758.6	1727.4	1710.6
22.5°	1717.8	1717.8	1689.0	1648.2	1631.4
25°	1653.0	1643.4	1617.0	1559.4	1516.2
27.5°	1578.6	1564.2	1535.4	1453.9	1403.5
30°	1497.1	1489.9	1449.1	1343.5	1305.1
32.5°	1420.3	1408.3	1365.1	1254.7	1223.6
35°	1341.1	1331.5	1266.7	1170.8	1142.0
37.5°	1261.9	1249.9	1168.4	1091.6	1055.6
40°	1182.8	1168.4	1079.6	1010.0	971.6
42.5°	1108.4	1089.2	1002.8	928.5	885.3
45°	1029.2	1007.6	921.3	844.5	810.9
47.5°	950.1	930.9	851.7	772.5	734.1
50°	866.1	849.3	777.3	698.1	657.4
52.5°	796.5	770.1	700.5	621.4	587.8
55°	714.9	693.3	628.6	554.2	525.4
57.5°	640.6	619.0	559.0	489.4	465.4
60°	571.0	539.8	489.4	429.4	410.2
62.5°	494.2	470.2	427.0	376.7	400.7
65°	424.6	400.7	362.3	369.5	307.1
67.5°	347.9	335.9	302.3	268.7	259.1
70°	283.1	268.7	256.7	220.7	211.1
72.5°	225.5	211.1	194.3	175.1	167.9
75°	170.3	158.3	148.7	141.5	155.9
77.5°	117.6	112.8	105.6	98.4	96.0
80°	76.8	74.4	72.0	69.6	67.2
82.5°	45.6	45.6	45.6	45.6	45.6
85°	24.0	26.4	28.8	31.2	33.6
87.5°	14.4	14.4	16.8	19.2	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)