

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: P561367

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561367
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-82-87-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7105.0 lumens
Efficiency: N/A
Efficacy: 82.2 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

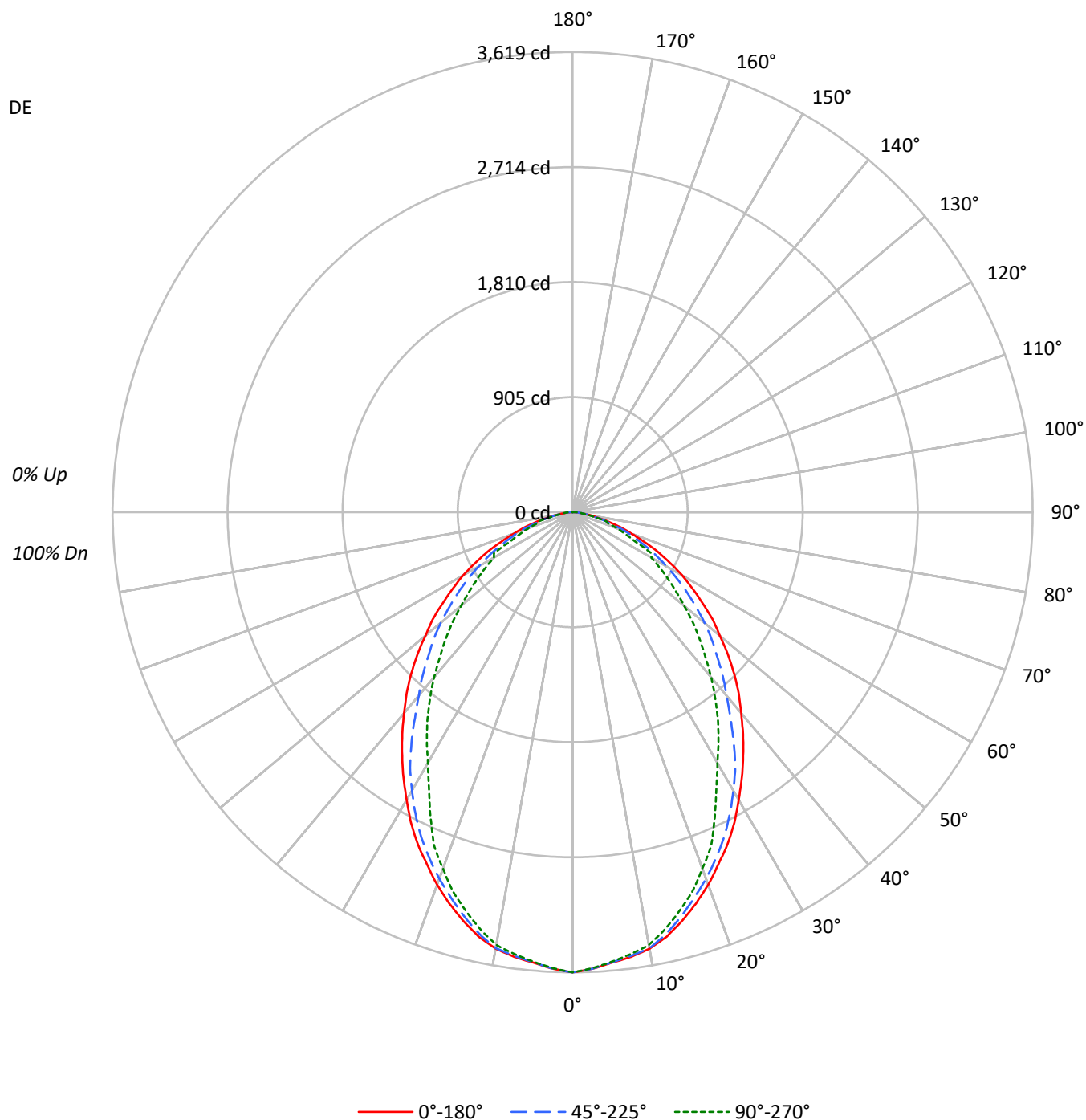
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	110	106	102	99		108	104	100	97		100	97	94		96	94	91		92	90	89
2	101	94	88	83		99	92	87	82		89	84	80		86	82	78		83	79	77
3	93	84	77	71		91	82	76	70		79	74	69		77	72	68		74	70	67
4	86	75	67	61		84	74	66	61		72	65	60		69	64	59		67	62	58
5	80	68	60	54		78	67	59	53		65	58	53		63	57	52		61	56	52
6	74	62	53	48		72	61	53	47		59	52	47		57	51	47		56	50	46
7	69	56	48	43		67	56	48	42		54	47	42		53	46	42		51	46	42
8	65	52	44	38		63	51	44	38		50	43	38		49	42	38		48	42	38
9	61	48	40	35		59	47	40	35		46	39	35		45	39	34		44	38	34
10	57	44	37	32		56	44	37	32		43	36	32		42	36	32		41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9739	9739	9739
5°	9607	9595	9584
10°	9524	9512	9443
15°	9267	9173	9045
20°	8926	8783	8543
25°	8560	8373	7851
30°	8112	7853	7072
35°	7683	7257	6543
40°	7246	6614	5952
45°	6831	6114	5382
50°	6323	5675	4799
55°	5849	5143	4299
60°	5359	4594	3851
65°	4716	4023	3410
70°	3884	3522	2897
75°	3089	2697	2828
80°	2075	1945	1816
85°	1291	1550	1809

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6831 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.9	4.7
10°-20°	924.6	13.0
20°-30°	1280.0	18.0
30°-40°	1364.9	19.2
40°-50°	1245.2	17.5
50°-60°	975.5	13.7
60°-70°	635.8	8.9
70°-80°	281.7	4.0
80°-90°	60.5	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°	2541.5	35.8
0°-40°	3906.4	55.0
0°-60°	6127.1	86.2
0°-90°	7105.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3619	3619	3619	3619	3619	
5°	3556	3552	3552	3548	3548	338
15°	3326	3326	3293	3259	3247	935
25°	2883	2866	2820	2720	2644	1323
35°	2339	2322	2209	2042	1992	1462
45°	1795	1757	1607	1473	1414	1383
55°	1247	1209	1096	966	916	1118
65°	741	699	632	644	536	730
75°	297	276	259	247	272	318
85°	42	46	50	54	59	58
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3619.2	3619.2	3619.2	3619.2	3619.2
2.5°	3594.1	3594.1	3594.1	3589.9	3589.9
5°	3556.4	3552.2	3552.2	3548.1	3548.1
7.5°	3527.1	3523.0	3518.8	3514.6	3506.2
10°	3485.3	3485.3	3481.1	3460.2	3456.0
12.5°	3418.4	3414.2	3397.4	3368.1	3359.8
15°	3326.3	3326.3	3292.8	3259.4	3246.8
17.5°	3225.9	3221.7	3179.9	3146.4	3129.7
20°	3117.1	3108.7	3066.9	3012.5	2983.2
22.5°	2995.8	2995.8	2945.6	2874.4	2845.1
25°	2882.8	2866.1	2820.0	2719.6	2644.3
27.5°	2753.1	2728.0	2677.8	2535.5	2447.7
30°	2610.8	2598.3	2527.2	2343.1	2276.1
32.5°	2476.9	2456.0	2380.7	2188.3	2133.9
35°	2338.9	2322.1	2209.2	2041.8	1991.6
37.5°	2200.8	2179.9	2037.6	1903.7	1841.0
40°	2062.7	2037.6	1882.8	1761.5	1694.5
42.5°	1933.0	1899.6	1748.9	1619.2	1543.9
45°	1795.0	1757.3	1606.7	1472.8	1414.2
47.5°	1656.9	1623.4	1485.3	1347.3	1280.3
50°	1510.4	1481.1	1355.6	1217.6	1146.4
52.5°	1389.1	1343.1	1221.7	1083.7	1025.1
55°	1246.8	1209.2	1096.2	966.5	916.3
57.5°	1117.1	1079.5	974.9	853.5	811.7
60°	995.8	941.4	853.5	748.9	715.5
62.5°	861.9	820.1	744.8	656.9	698.7
65°	740.6	698.7	631.8	644.3	535.6
67.5°	606.7	585.8	527.2	468.6	451.9
70°	493.7	468.6	447.7	384.9	368.2
72.5°	393.3	368.2	338.9	305.4	292.9
75°	297.1	276.1	259.4	246.9	272.0
77.5°	205.0	196.6	184.1	171.5	167.4
80°	133.9	129.7	125.5	121.3	117.2
82.5°	79.5	79.5	79.5	79.5	79.5
85°	41.8	46.0	50.2	54.4	58.6
87.5°	25.1	25.1	29.3	33.5	37.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)