

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: P560405

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560405
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-12-2-LD4-2LO-35-UNV-82-86-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

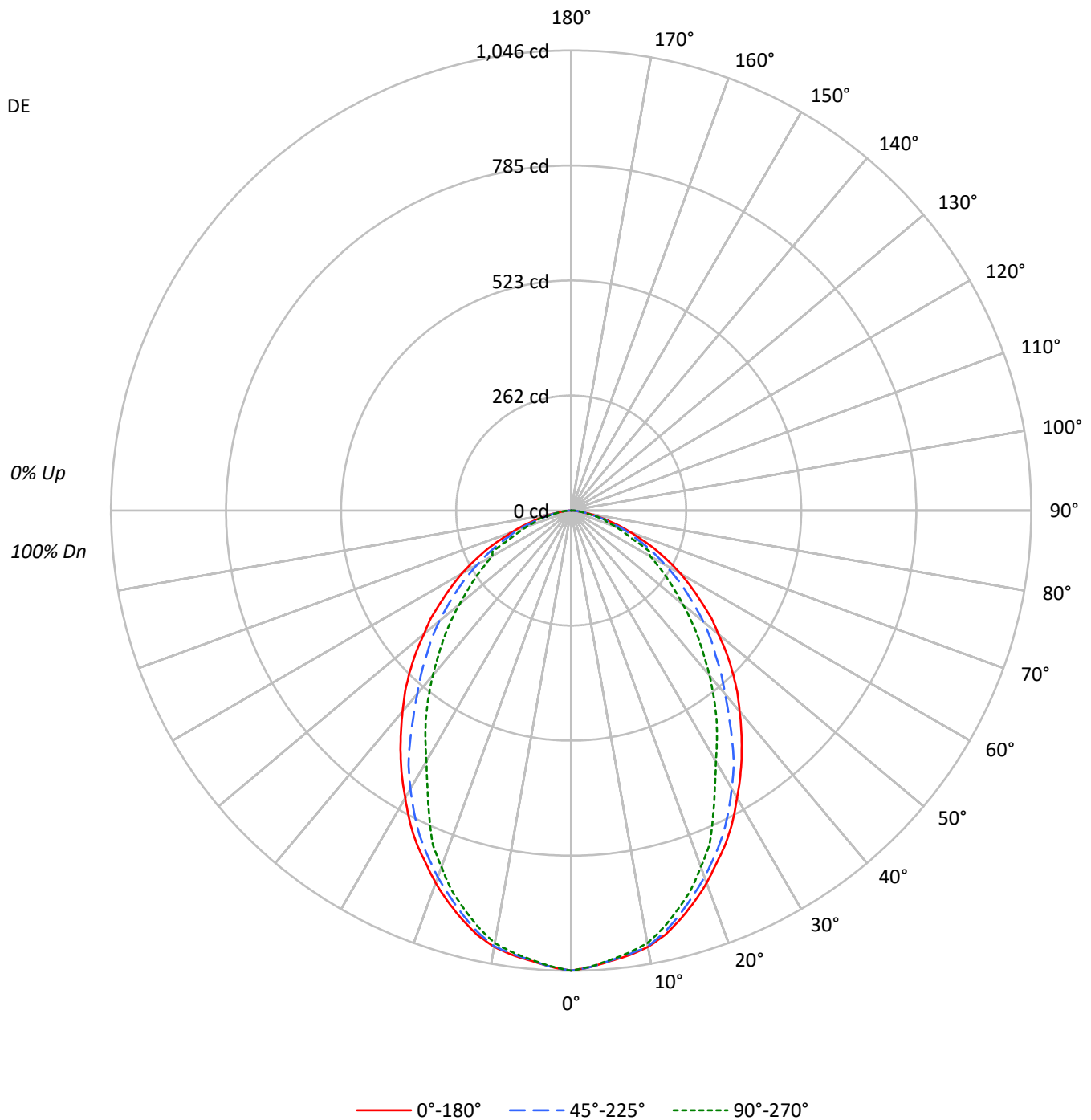
Lumens per Lamp: N/A
Luminaire Lumens: 2053.0 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	5628	5628	5628
5°	5552	5545	5539
10°	5504	5497	5457
15°	5355	5302	5227
20°	5159	5076	4937
25°	4947	4839	4537
30°	4688	4538	4087
35°	4440	4194	3781
40°	4187	3822	3440
45°	3948	3533	3110
50°	3654	3280	2774
55°	3381	2973	2485
60°	3097	2654	2225
65°	2725	2325	1970
70°	2245	2036	1674
75°	1784	1560	1634
80°	1199	1125	1051
85°	747	895	1044

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3948 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.3	4.7
10°-20°	267.2	13.0
20°-30°	369.9	18.0
30°-40°	394.4	19.2
40°-50°	359.8	17.5
50°-60°	281.9	13.7
60°-70°	183.7	8.9
70°-80°	81.4	4.0
80°-90°	17.5	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°	734.4	35.8
0°-40°	1128.8	55.0
0°-60°	1770.4	86.2
0°-90°	2053.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2053.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1046	1046	1046	1046	1046	
5°	1028	1026	1026	1025	1025	98
15°	961	961	952	942	938	270
25°	833	828	815	786	764	382
35°	676	671	638	590	576	422
45°	519	508	464	426	409	400
55°	360	349	317	279	265	323
65°	214	202	183	186	155	211
75°	86	80	75	71	79	92
85°	12	13	14	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1045.8	1045.8	1045.8	1045.8	1045.8
2.5°	1038.5	1038.5	1038.5	1037.3	1037.3
5°	1027.6	1026.4	1026.4	1025.2	1025.2
7.5°	1019.2	1018.0	1016.8	1015.5	1013.1
10°	1007.1	1007.1	1005.9	999.8	998.6
12.5°	987.7	986.5	981.7	973.2	970.8
15°	961.1	961.1	951.5	941.8	938.2
17.5°	932.1	930.9	918.8	909.2	904.3
20°	900.7	898.3	886.2	870.5	862.0
22.5°	865.6	865.6	851.1	830.6	822.1
25°	833.0	828.2	814.9	785.8	764.1
27.5°	795.5	788.3	773.7	732.6	707.3
30°	754.4	750.8	730.2	677.0	657.7
32.5°	715.7	709.7	687.9	632.3	616.6
35°	675.8	671.0	638.3	590.0	575.5
37.5°	635.9	629.9	588.8	550.1	532.0
40°	596.0	588.8	544.0	509.0	489.6
42.5°	558.6	548.9	505.4	467.9	446.1
45°	518.7	507.8	464.2	425.6	408.6
47.5°	478.8	469.1	429.2	389.3	369.9
50°	436.4	428.0	391.7	351.8	331.3
52.5°	401.4	388.1	353.0	313.1	296.2
55°	360.3	349.4	316.8	279.3	264.8
57.5°	322.8	311.9	281.7	246.6	234.5
60°	287.7	272.0	246.6	216.4	206.7
62.5°	249.1	237.0	215.2	189.8	201.9
65°	214.0	201.9	182.6	186.2	154.7
67.5°	175.3	169.3	152.3	135.4	130.6
70°	142.7	135.4	129.4	111.2	106.4
72.5°	113.6	106.4	97.9	88.3	84.6
75°	85.8	79.8	75.0	71.3	78.6
77.5°	59.2	56.8	53.2	49.6	48.4
80°	38.7	37.5	36.3	35.1	33.9
82.5°	23.0	23.0	23.0	23.0	23.0
85°	12.1	13.3	14.5	15.7	16.9
87.5°	7.3	7.3	8.5	9.7	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)