

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: P559687

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559687
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-LD4-1HI-40-UNV-81-87-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1683.0 lumens
Efficiency: N/A
Efficacy: 77.9 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

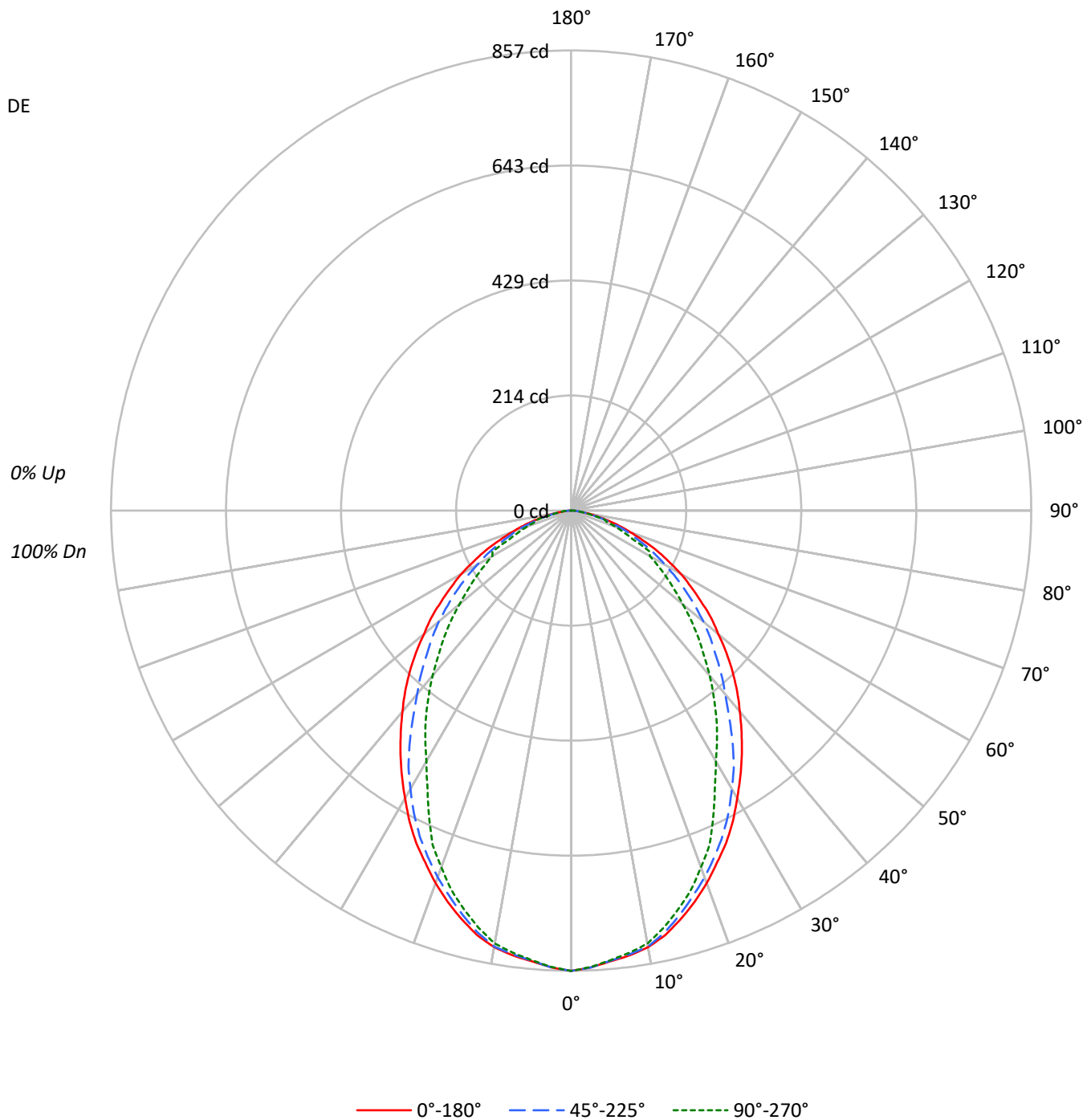
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	4614	4614	4614
5°	4551	4546	4540
10°	4512	4506	4474
15°	4390	4346	4285
20°	4229	4161	4048
25°	4055	3967	3720
30°	3843	3720	3351
35°	3640	3438	3100
40°	3433	3133	2820
45°	3236	2897	2550
50°	2996	2689	2274
55°	2771	2437	2036
60°	2539	2176	1824
65°	2234	1906	1616
70°	1840	1668	1372
75°	1464	1277	1339
80°	982	921	862
85°	611	735	858

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3236 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.8	4.7
10°-20°	219.0	13.0
20°-30°	303.2	18.0
30°-40°	323.3	19.2
40°-50°	295.0	17.5
50°-60°	231.1	13.7
60°-70°	150.6	8.9
70°-80°	66.7	4.0
80°-90°	14.3	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°	602.0	35.8
0°-40°	925.3	55.0
0°-60°	1451.4	86.2
0°-90°	1683.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1683.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	842	841	841	840	840	80
15°	788	788	780	772	769	222
25°	683	679	668	644	626	313
35°	554	550	523	484	472	346
45°	425	416	381	349	335	328
55°	295	286	260	229	217	265
65°	175	166	150	153	127	173
75°	70	65	61	58	64	75
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	857.3	857.3	857.3	857.3	857.3
2.5°	851.4	851.4	851.4	850.4	850.4
5°	842.4	841.4	841.4	840.4	840.4
7.5°	835.5	834.5	833.5	832.5	830.5
10°	825.6	825.6	824.6	819.6	818.6
12.5°	809.7	808.7	804.8	797.8	795.8
15°	787.9	787.9	780.0	772.1	769.1
17.5°	764.1	763.1	753.2	745.3	741.3
20°	738.4	736.4	726.5	713.6	706.7
22.5°	709.6	709.6	697.7	680.9	673.9
25°	682.9	678.9	668.0	644.2	626.4
27.5°	652.1	646.2	634.3	600.6	579.8
30°	618.4	615.5	598.6	555.0	539.2
32.5°	586.7	581.8	563.9	518.3	505.5
35°	554.0	550.1	523.3	483.7	471.8
37.5°	521.3	516.4	482.7	450.9	436.1
40°	488.6	482.7	446.0	417.3	401.4
42.5°	457.9	450.0	414.3	383.6	365.7
45°	425.2	416.3	380.6	348.9	335.0
47.5°	392.5	384.5	351.8	319.1	303.3
50°	357.8	350.8	321.1	288.4	271.6
52.5°	329.0	318.1	289.4	256.7	242.8
55°	295.3	286.4	259.7	228.9	217.0
57.5°	264.6	255.7	230.9	202.2	192.3
60°	235.9	223.0	202.2	177.4	169.5
62.5°	204.2	194.3	176.4	155.6	165.5
65°	175.4	165.5	149.7	152.6	126.9
67.5°	143.7	138.8	124.9	111.0	107.0
70°	116.9	111.0	106.0	91.2	87.2
72.5°	93.2	87.2	80.3	72.3	69.4
75°	70.4	65.4	61.4	58.5	64.4
77.5°	48.6	46.6	43.6	40.6	39.6
80°	31.7	30.7	29.7	28.7	27.8
82.5°	18.8	18.8	18.8	18.8	18.8
85°	9.9	10.9	11.9	12.9	13.9
87.5°	5.9	5.9	6.9	7.9	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)