

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: P589891

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589891
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-40-UNV-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2276.0 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

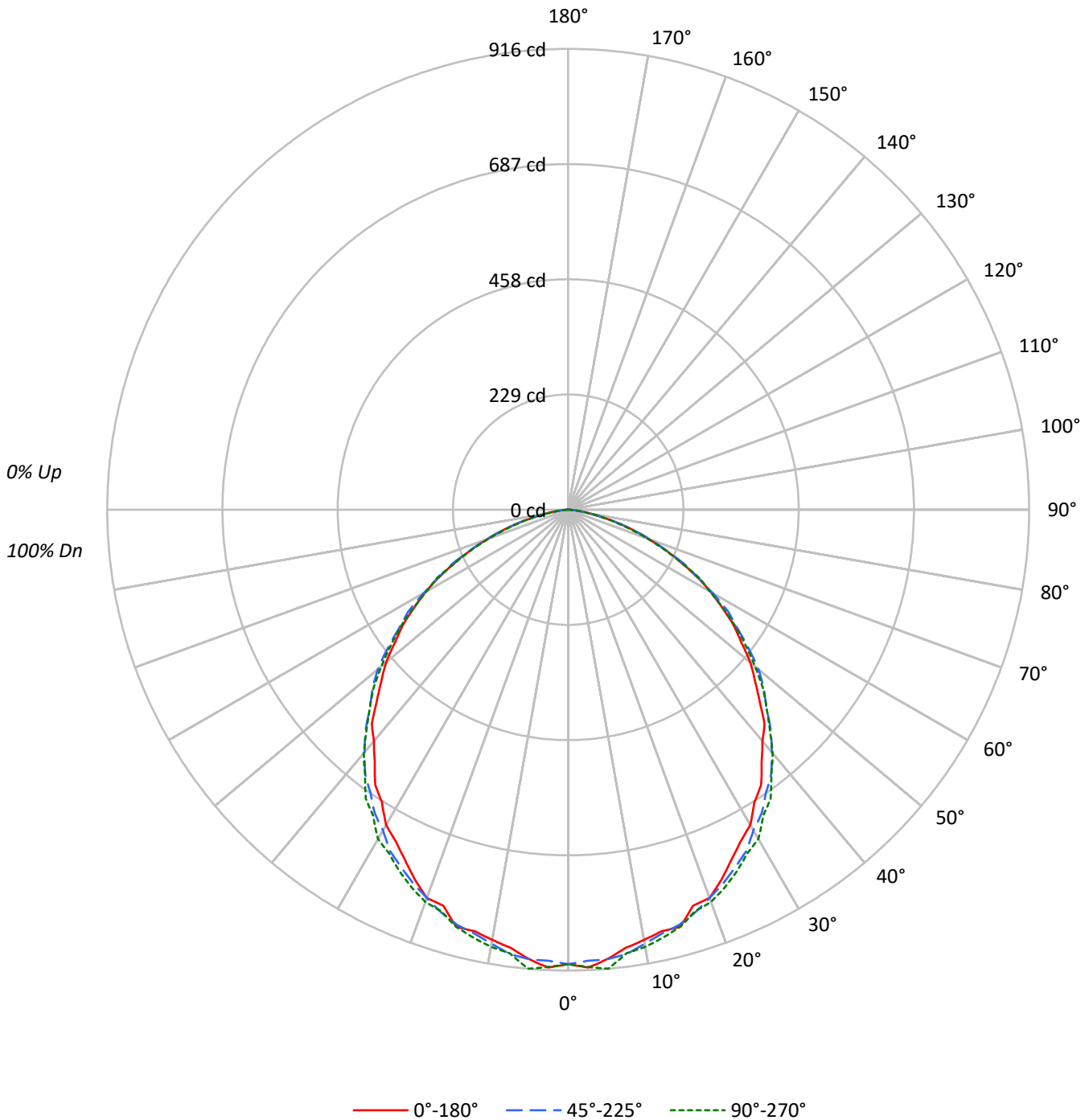
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86				86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73				73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62				62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53				53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46				46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41				41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36				36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32				32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29				29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26				26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2430	2430	2430
5°	2422	2423	2474
10°	2373	2394	2411
15°	2392	2379	2392
20°	2351	2351	2376
25°	2279	2329	2355
30°	2248	2287	2348
35°	2195	2252	2303
40°	2109	2211	2221
45°	2046	2118	2122
50°	1979	2068	2028
55°	1885	1922	1908
60°	1763	1780	1748
65°	1571	1612	1561
70°	1349	1353	1316
75°	1068	1066	1024
80°	716	696	668
85°	389	386	361

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2173 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.9	3.7
10°-20°	240.7	10.6
20°-30°	360.7	15.8
30°-40°	427.5	18.8
40°-50°	428.3	18.8
50°-60°	363.5	16.0
60°-70°	245.1	10.8
70°-80°	107.7	4.7
80°-90°	17.5	0.8
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°	686.4	30.2
0°-40°	1113.9	48.9
0°-60°	1905.7	83.7
0°-90°	2276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2276.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	897	894	897	894	916	85
15°	858	849	854	858	859	239
25°	768	772	784	795	793	355
35°	668	670	686	702	701	415
45°	538	548	557	571	558	416
55°	402	399	410	407	407	357
65°	247	244	253	244	245	245
75°	103	101	102	95	98	110
85°	13	12	12	12	12	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	903.1	903.1	903.1	903.1	903.1
2.5°	910.9	904.0	897.6	905.0	909.6
5°	896.6	894.5	897.0	894.3	915.9
7.5°	878.2	886.3	890.9	888.0	889.3
10°	868.4	865.6	876.0	883.2	882.2
12.5°	857.9	862.1	862.7	870.5	871.2
15°	858.5	848.6	853.9	858.3	858.6
17.5°	825.2	835.9	839.5	849.7	837.1
20°	821.1	813.3	821.1	831.5	829.8
22.5°	796.0	787.3	804.1	813.3	812.7
25°	767.6	771.8	784.4	794.6	793.0
27.5°	742.6	747.5	765.5	779.6	770.5
30°	723.4	720.9	736.1	748.7	755.7
32.5°	689.0	697.8	715.6	728.0	721.4
35°	668.1	670.1	685.6	701.5	701.0
37.5°	631.6	640.8	662.6	667.1	663.0
40°	600.5	609.7	629.4	634.2	632.2
42.5°	577.5	579.1	596.1	601.5	592.8
45°	537.5	547.5	556.6	571.0	557.5
47.5°	503.5	508.1	527.7	531.6	524.5
50°	472.6	474.2	493.9	489.1	484.5
52.5°	433.7	440.6	451.7	450.8	445.3
55°	401.8	399.1	409.6	406.8	406.7
57.5°	363.4	368.1	376.7	372.3	365.2
60°	327.5	327.6	330.8	325.8	324.8
62.5°	287.5	288.9	289.6	283.5	293.5
65°	246.8	243.6	253.1	243.5	245.1
67.5°	209.4	211.0	210.1	204.0	206.4
70°	171.4	173.5	172.0	165.1	167.2
72.5°	136.7	134.1	135.7	127.1	131.1
75°	102.7	100.6	102.5	95.3	98.5
77.5°	70.0	71.6	70.4	66.6	68.8
80°	46.2	44.9	44.9	42.7	43.1
82.5°	26.9	25.7	25.3	24.6	25.7
85°	12.6	12.2	12.5	12.1	11.7
87.5°	4.5	4.7	4.7	4.4	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)