

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: P560360

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560360
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-LD4-2HI-50-UNV-93-88-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2829.0 lumens
Efficiency: N/A
Efficacy: 65.5 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

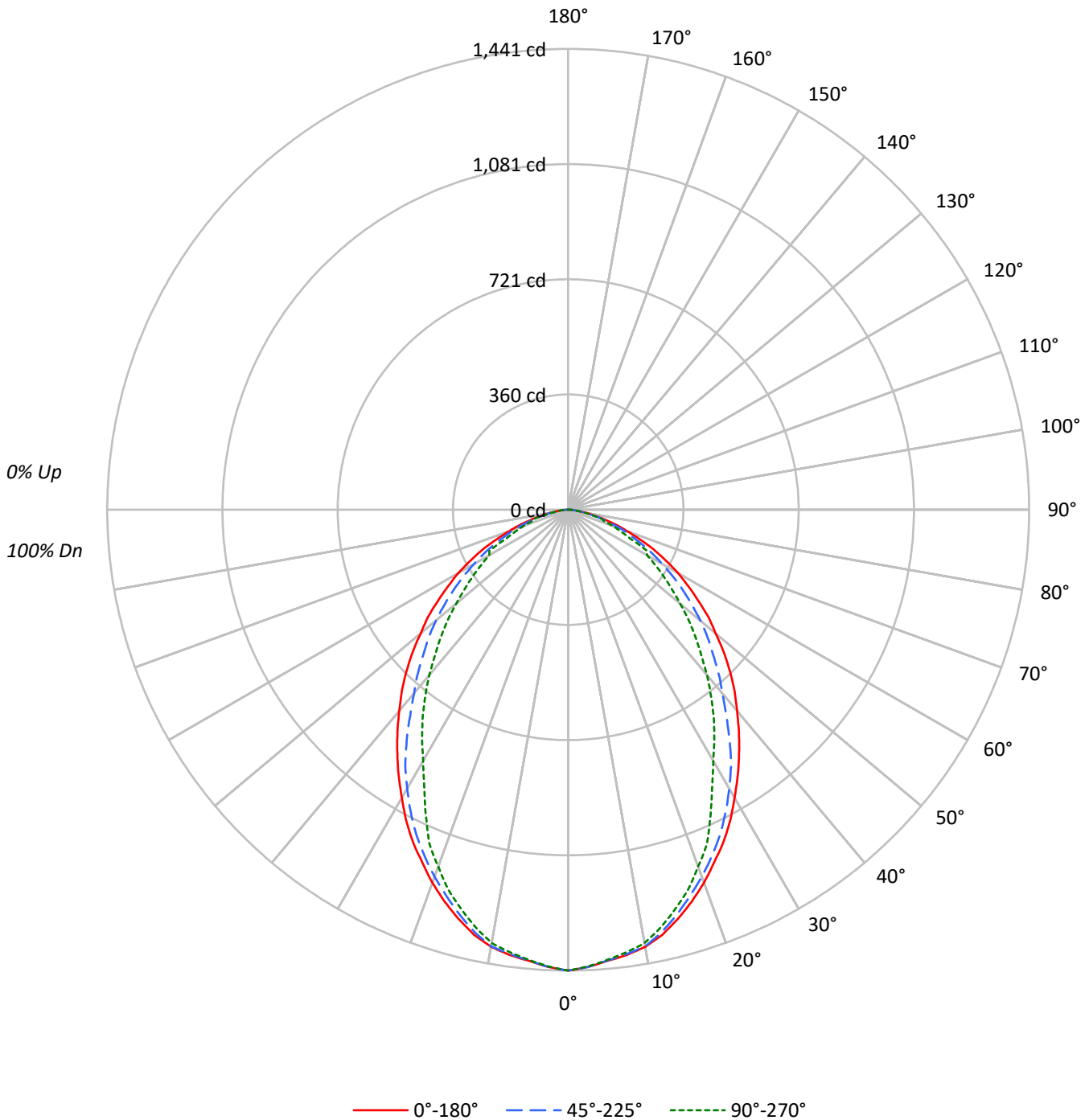
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7756	7756	7756
5°	7651	7641	7632
10°	7584	7575	7520
15°	7379	7305	7203
20°	7108	6994	6803
25°	6816	6668	6252
30°	6461	6253	5632
35°	6119	5779	5210
40°	5770	5267	4740
45°	5440	4869	4286
50°	5035	4520	3822
55°	4659	4096	3423
60°	4268	3659	3067
65°	3755	3204	2715
70°	3094	2806	2307
75°	2460	2148	2252
80°	1652	1550	1444
85°	1031	1235	1439

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5440 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.1	4.7
10°-20°	368.1	13.0
20°-30°	509.7	18.0
30°-40°	543.5	19.2
40°-50°	495.8	17.5
50°-60°	388.4	13.7
60°-70°	253.2	8.9
70°-80°	112.2	4.0
80°-90°	24.1	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°	1012.0	35.8
0°-40°	1555.4	55.0
0°-60°	2439.6	86.2
0°-90°	2829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2829.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1441	1441	1441	1441	1441	
5°	1416	1414	1414	1413	1413	134
15°	1324	1324	1311	1298	1293	372
25°	1148	1141	1123	1083	1053	527
35°	931	925	880	813	793	582
45°	715	700	640	586	563	551
55°	496	482	436	385	365	445
65°	295	278	252	257	213	291
75°	118	110	103	98	108	127
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1441.1	1441.1	1441.1	1441.1	1441.1
2.5°	1431.1	1431.1	1431.1	1429.4	1429.4
5°	1416.1	1414.4	1414.4	1412.7	1412.7
7.5°	1404.4	1402.7	1401.1	1399.4	1396.1
10°	1387.7	1387.7	1386.1	1377.7	1376.1
12.5°	1361.1	1359.4	1352.8	1341.1	1337.8
15°	1324.4	1324.4	1311.1	1297.8	1292.8
17.5°	1284.5	1282.8	1266.1	1252.8	1246.1
20°	1241.1	1237.8	1221.1	1199.5	1187.8
22.5°	1192.8	1192.8	1172.8	1144.5	1132.9
25°	1147.8	1141.2	1122.9	1082.9	1052.9
27.5°	1096.2	1086.2	1066.2	1009.6	974.6
30°	1039.6	1034.6	1006.2	932.9	906.3
32.5°	986.2	977.9	947.9	871.3	849.6
35°	931.3	924.6	879.6	813.0	793.0
37.5°	876.3	868.0	811.3	758.0	733.0
40°	821.3	811.3	749.7	701.4	674.7
42.5°	769.7	756.3	696.4	644.7	614.7
45°	714.7	699.7	639.7	586.4	563.1
47.5°	659.7	646.4	591.4	536.4	509.8
50°	601.4	589.7	539.8	484.8	456.5
52.5°	553.1	534.8	486.5	431.5	408.2
55°	496.5	481.5	436.5	384.8	364.8
57.5°	444.8	429.8	388.2	339.9	323.2
60°	396.5	374.8	339.9	298.2	284.9
62.5°	343.2	326.5	296.5	261.6	278.2
65°	294.9	278.2	251.6	256.6	213.2
67.5°	241.6	233.2	209.9	186.6	179.9
70°	196.6	186.6	178.3	153.3	146.6
72.5°	156.6	146.6	134.9	121.6	116.6
75°	118.3	110.0	103.3	98.3	108.3
77.5°	81.6	78.3	73.3	68.3	66.6
80°	53.3	51.6	50.0	48.3	46.6
82.5°	31.7	31.7	31.7	31.7	31.7
85°	16.7	18.3	20.0	21.7	23.3
87.5°	10.0	10.0	11.7	13.3	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)