

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: P560238

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560238
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-35-UNV-93-97-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2998.0 lumens
Efficiency: N/A
Efficacy: 69.4 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

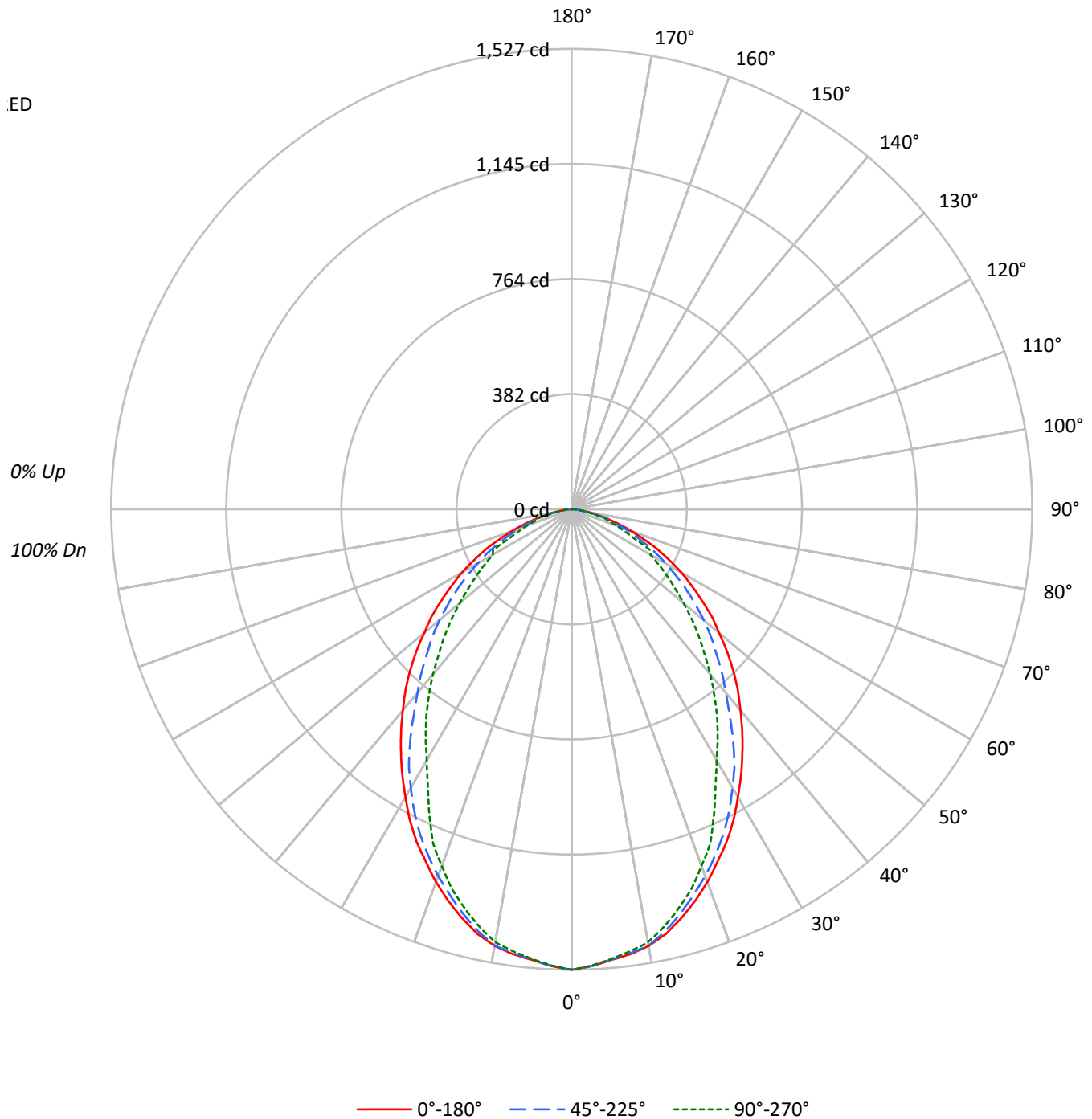
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8219	8219	8219
5°	8108	8098	8088
10°	8037	8028	7970
15°	7821	7741	7633
20°	7533	7412	7210
25°	7223	7066	6626
30°	6847	6627	5968
35°	6484	6125	5522
40°	6115	5582	5023
45°	5765	5160	4542
50°	5336	4789	4050
55°	4936	4341	3628
60°	4523	3877	3250
65°	3980	3395	2878
70°	3278	2972	2445
75°	2606	2277	2387
80°	1751	1643	1531
85°	1093	1309	1525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5765 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.2	4.7
10°-20°	390.1	13.0
20°-30°	540.1	18.0
30°-40°	575.9	19.2
40°-50°	525.4	17.5
50°-60°	411.6	13.7
60°-70°	268.3	8.9
70°-80°	118.9	4.0
80°-90°	25.5	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°	1072.4	35.8
0°-40°	1648.3	55.0
0°-60°	2585.4	86.2
0°-90°	2998.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2998.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1527	1527	1527	1527	1527	
5°	1501	1499	1499	1497	1497	142
15°	1404	1404	1389	1375	1370	395
25°	1216	1209	1190	1148	1116	558
35°	987	980	932	862	840	617
45°	757	742	678	621	597	583
55°	526	510	463	408	387	472
65°	312	295	267	272	226	308
75°	125	116	110	104	115	134
85°	18	19	21	23	25	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.1	1527.1	1527.1	1527.1	1527.1
2.5°	1516.5	1516.5	1516.5	1514.8	1514.8
5°	1500.7	1498.9	1498.9	1497.1	1497.1
7.5°	1488.3	1486.5	1484.8	1483.0	1479.5
10°	1470.6	1470.6	1468.9	1460.1	1458.3
12.5°	1442.4	1440.6	1433.6	1421.2	1417.7
15°	1403.6	1403.6	1389.4	1375.3	1370.0
17.5°	1361.2	1359.4	1341.8	1327.6	1320.6
20°	1315.3	1311.8	1294.1	1271.1	1258.8
22.5°	1264.1	1264.1	1242.9	1212.9	1200.5
25°	1216.4	1209.4	1189.9	1147.6	1115.8
27.5°	1161.7	1151.1	1129.9	1069.9	1032.8
30°	1101.7	1096.4	1066.4	988.7	960.4
32.5°	1045.2	1036.3	1004.6	923.3	900.4
35°	986.9	979.8	932.2	861.6	840.4
37.5°	928.6	919.8	859.8	803.3	776.8
40°	870.4	859.8	794.5	743.3	715.0
42.5°	815.7	801.5	738.0	683.2	651.5
45°	757.4	741.5	677.9	621.4	596.7
47.5°	699.1	685.0	626.7	568.5	540.2
50°	637.3	625.0	572.0	513.8	483.7
52.5°	586.1	566.7	515.5	457.3	432.5
55°	526.1	510.2	462.6	407.8	386.6
57.5°	471.4	455.5	411.4	360.2	342.5
60°	420.2	397.2	360.2	316.0	301.9
62.5°	363.7	346.0	314.3	277.2	294.8
65°	312.5	294.8	266.6	271.9	226.0
67.5°	256.0	247.2	222.5	197.7	190.7
70°	208.3	197.7	188.9	162.4	155.4
72.5°	166.0	155.4	143.0	128.9	123.6
75°	125.3	116.5	109.5	104.2	114.8
77.5°	86.5	83.0	77.7	72.4	70.6
80°	56.5	54.7	53.0	51.2	49.4
82.5°	33.5	33.5	33.5	33.5	33.5
85°	17.7	19.4	21.2	23.0	24.7
87.5°	10.6	10.6	12.4	14.1	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)