

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: P560685

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560685
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-LD4-2STD-40-UNV-93-96-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3060.0 lumens
Efficiency: N/A
Efficacy: 91.9 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

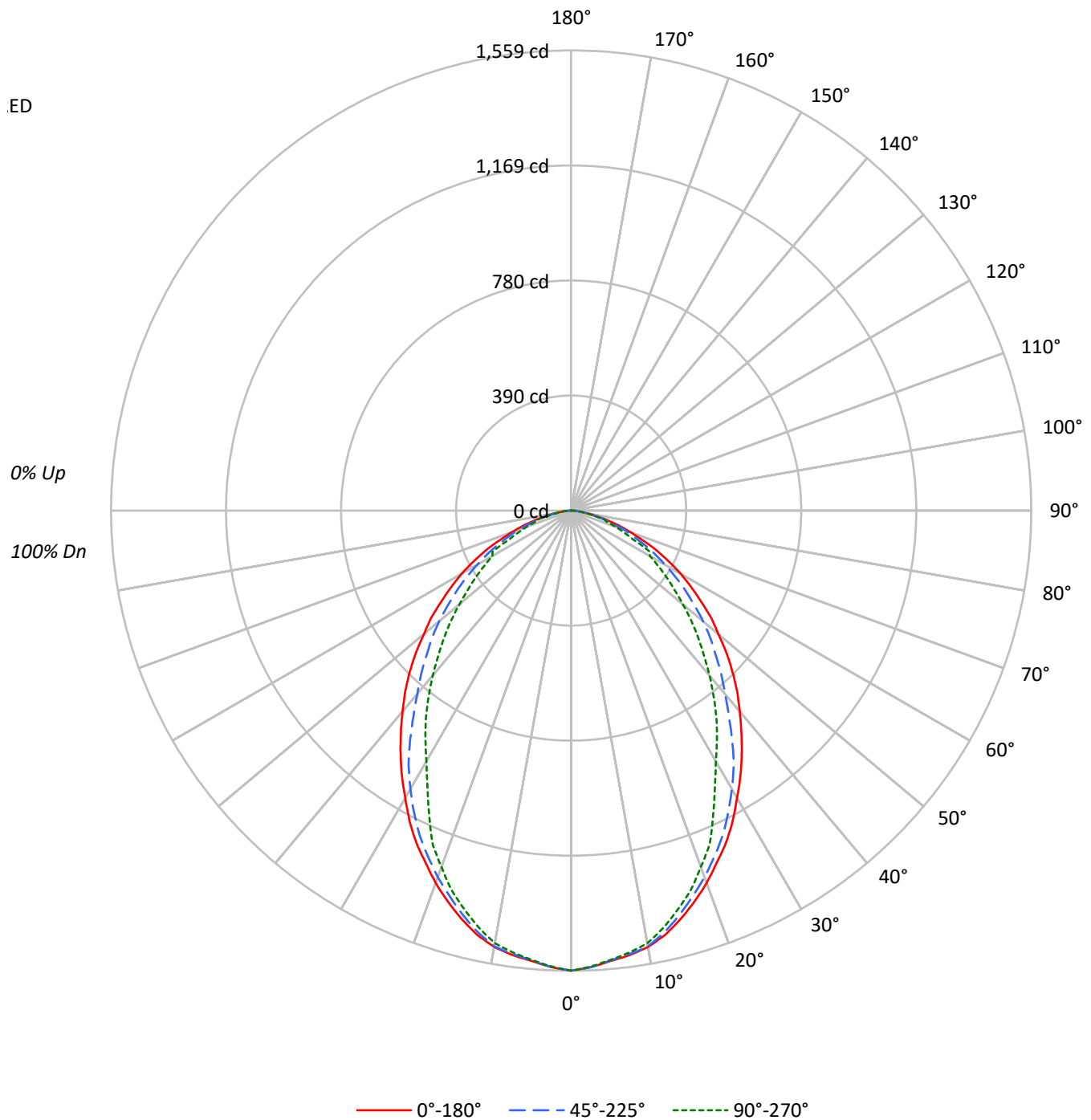
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8389	8389	8389
5°	8275	8265	8256
10°	8203	8194	8134
15°	7982	7902	7791
20°	7689	7565	7359
25°	7373	7212	6763
30°	6988	6764	6092
35°	6618	6252	5635
40°	6242	5697	5127
45°	5884	5267	4636
50°	5447	4888	4134
55°	5039	4430	3703
60°	4617	3957	3316
65°	4062	3465	2938
70°	3345	3034	2496
75°	2660	2323	2435
80°	1788	1677	1565
85°	1112	1334	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5884 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.1	4.7
10°-20°	398.2	13.0
20°-30°	551.3	18.0
30°-40°	587.8	19.2
40°-50°	536.3	17.5
50°-60°	420.1	13.7
60°-70°	273.8	8.9
70°-80°	121.3	4.0
80°-90°	26.0	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°	1094.6	35.8
0°-40°	1682.4	55.0
0°-60°	2638.8	86.2
0°-90°	3060.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3060.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1559	1559	1559	1559	1559	
5°	1532	1530	1530	1528	1528	145
15°	1433	1433	1418	1404	1398	403
25°	1242	1234	1214	1171	1139	570
35°	1007	1000	952	879	858	630
45°	773	757	692	634	609	595
55°	537	521	472	416	395	482
65°	319	301	272	278	231	314
75°	128	119	112	106	117	137
85°	18	20	22	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1558.7	1558.7	1558.7	1558.7	1558.7
2.5°	1547.9	1547.9	1547.9	1546.1	1546.1
5°	1531.7	1529.9	1529.9	1528.1	1528.1
7.5°	1519.1	1517.3	1515.5	1513.7	1510.1
10°	1501.1	1501.1	1499.3	1490.2	1488.4
12.5°	1472.2	1470.4	1463.2	1450.6	1447.0
15°	1432.6	1432.6	1418.2	1403.8	1398.3
17.5°	1389.3	1387.5	1369.5	1355.1	1347.9
20°	1342.5	1338.9	1320.9	1297.4	1284.8
22.5°	1290.2	1290.2	1268.6	1238.0	1225.4
25°	1241.6	1234.4	1214.5	1171.3	1138.9
27.5°	1185.7	1174.9	1153.3	1092.0	1054.2
30°	1124.4	1119.0	1088.4	1009.1	980.3
32.5°	1066.8	1057.8	1025.3	942.4	919.0
35°	1007.3	1000.1	951.5	879.4	857.7
37.5°	947.8	938.8	877.6	819.9	792.9
40°	888.4	877.6	810.9	758.6	729.8
42.5°	832.5	818.1	753.2	697.4	664.9
45°	773.1	756.8	692.0	634.3	609.1
47.5°	713.6	699.2	639.7	580.2	551.4
50°	650.5	637.9	583.8	524.4	493.7
52.5°	598.3	578.4	526.2	466.7	441.5
55°	537.0	520.8	472.1	416.3	394.6
57.5°	481.1	464.9	419.9	367.6	349.6
60°	428.9	405.4	367.6	322.6	308.1
62.5°	371.2	353.2	320.8	282.9	300.9
65°	319.0	300.9	272.1	277.5	230.7
67.5°	261.3	252.3	227.1	201.8	194.6
70°	212.6	201.8	192.8	165.8	158.6
72.5°	169.4	158.6	146.0	131.5	126.1
75°	127.9	118.9	111.7	106.3	117.1
77.5°	88.3	84.7	79.3	73.9	72.1
80°	57.7	55.9	54.1	52.3	50.5
82.5°	34.2	34.2	34.2	34.2	34.2
85°	18.0	19.8	21.6	23.4	25.2
87.5°	10.8	10.8	12.6	14.4	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)