

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: P560223

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-82-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560223
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-82-97-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3397.0 lumens
Efficiency: N/A
Efficacy: 78.6 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

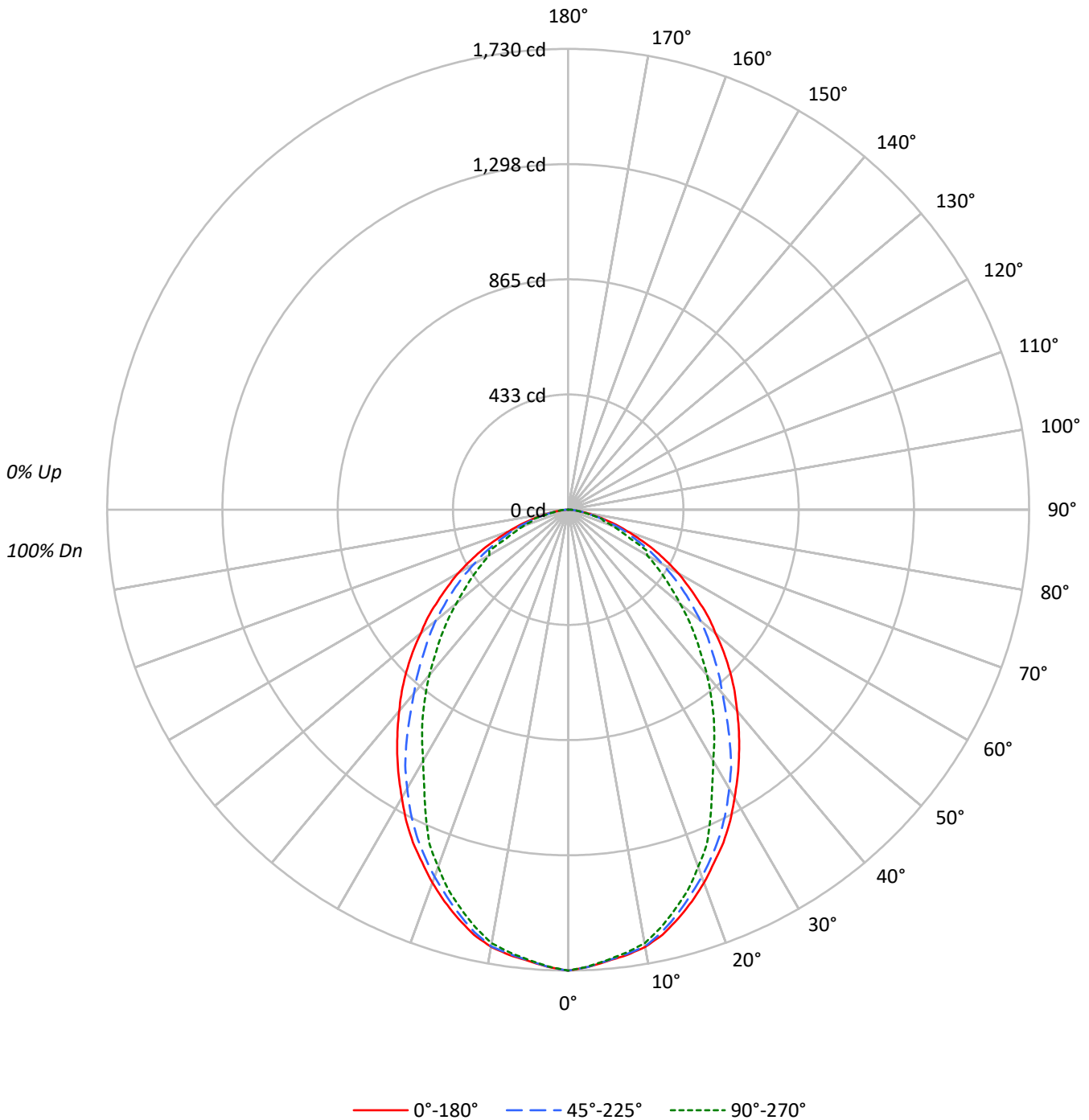
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9313	9313	9313
5°	9186	9176	9165
10°	9107	9096	9030
15°	8861	8772	8649
20°	8535	8398	8169
25°	8185	8007	7508
30°	7758	7509	6763
35°	7347	6939	6256
40°	6929	6324	5692
45°	6532	5847	5147
50°	6047	5426	4589
55°	5593	4918	4111
60°	5125	4393	3682
65°	4509	3847	3261
70°	3715	3367	2769
75°	2953	2578	2703
80°	1984	1860	1736
85°	1235	1482	1729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6532 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.1	4.7
10°-20°	442.1	13.0
20°-30°	612.0	18.0
30°-40°	652.6	19.2
40°-50°	595.3	17.5
50°-60°	466.4	13.7
60°-70°	304.0	8.9
70°-80°	134.6	4.0
80°-90°	28.9	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°	1215.1	35.8
0°-40°	1867.7	55.0
0°-60°	2929.4	86.2
0°-90°	3397.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3397.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1730	1730	1730	1730	1730	
5°	1700	1698	1698	1696	1696	161
15°	1590	1590	1574	1558	1552	447
25°	1378	1370	1348	1300	1264	633
35°	1118	1110	1056	976	952	699
45°	858	840	768	704	676	661
55°	596	578	524	462	438	535
65°	354	334	302	308	256	349
75°	142	132	124	118	130	152
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1730.4	1730.4	1730.4	1730.4	1730.4
2.5°	1718.4	1718.4	1718.4	1716.4	1716.4
5°	1700.4	1698.4	1698.4	1696.4	1696.4
7.5°	1686.4	1684.4	1682.4	1680.4	1676.4
10°	1666.4	1666.4	1664.4	1654.4	1652.4
12.5°	1634.4	1632.4	1624.4	1610.4	1606.4
15°	1590.4	1590.4	1574.4	1558.3	1552.3
17.5°	1542.3	1540.3	1520.3	1504.3	1496.3
20°	1490.3	1486.3	1466.3	1440.3	1426.3
22.5°	1432.3	1432.3	1408.3	1374.3	1360.3
25°	1378.3	1370.3	1348.3	1300.3	1264.3
27.5°	1316.3	1304.3	1280.3	1212.3	1170.3
30°	1248.3	1242.3	1208.3	1120.3	1088.2
32.5°	1184.3	1174.3	1138.3	1046.2	1020.2
35°	1118.2	1110.2	1056.2	976.2	952.2
37.5°	1052.2	1042.2	974.2	910.2	880.2
40°	986.2	974.2	900.2	842.2	810.2
42.5°	924.2	908.2	836.2	774.2	738.2
45°	858.2	840.2	768.2	704.2	676.2
47.5°	792.2	776.2	710.2	644.1	612.1
50°	722.2	708.2	648.1	582.1	548.1
52.5°	664.1	642.1	584.1	518.1	490.1
55°	596.1	578.1	524.1	462.1	438.1
57.5°	534.1	516.1	466.1	408.1	388.1
60°	476.1	450.1	408.1	358.1	342.1
62.5°	412.1	392.1	356.1	314.1	334.1
65°	354.1	334.1	302.1	308.1	256.1
67.5°	290.1	280.1	252.1	224.1	216.0
70°	236.1	224.1	214.0	184.0	176.0
72.5°	188.0	176.0	162.0	146.0	140.0
75°	142.0	132.0	124.0	118.0	130.0
77.5°	98.0	94.0	88.0	82.0	80.0
80°	64.0	62.0	60.0	58.0	56.0
82.5°	38.0	38.0	38.0	38.0	38.0
85°	20.0	22.0	24.0	26.0	28.0
87.5°	12.0	12.0	14.0	16.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)