

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: P562357

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562357
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-24-4-LD4-1STD-40-UNV-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3820.0 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

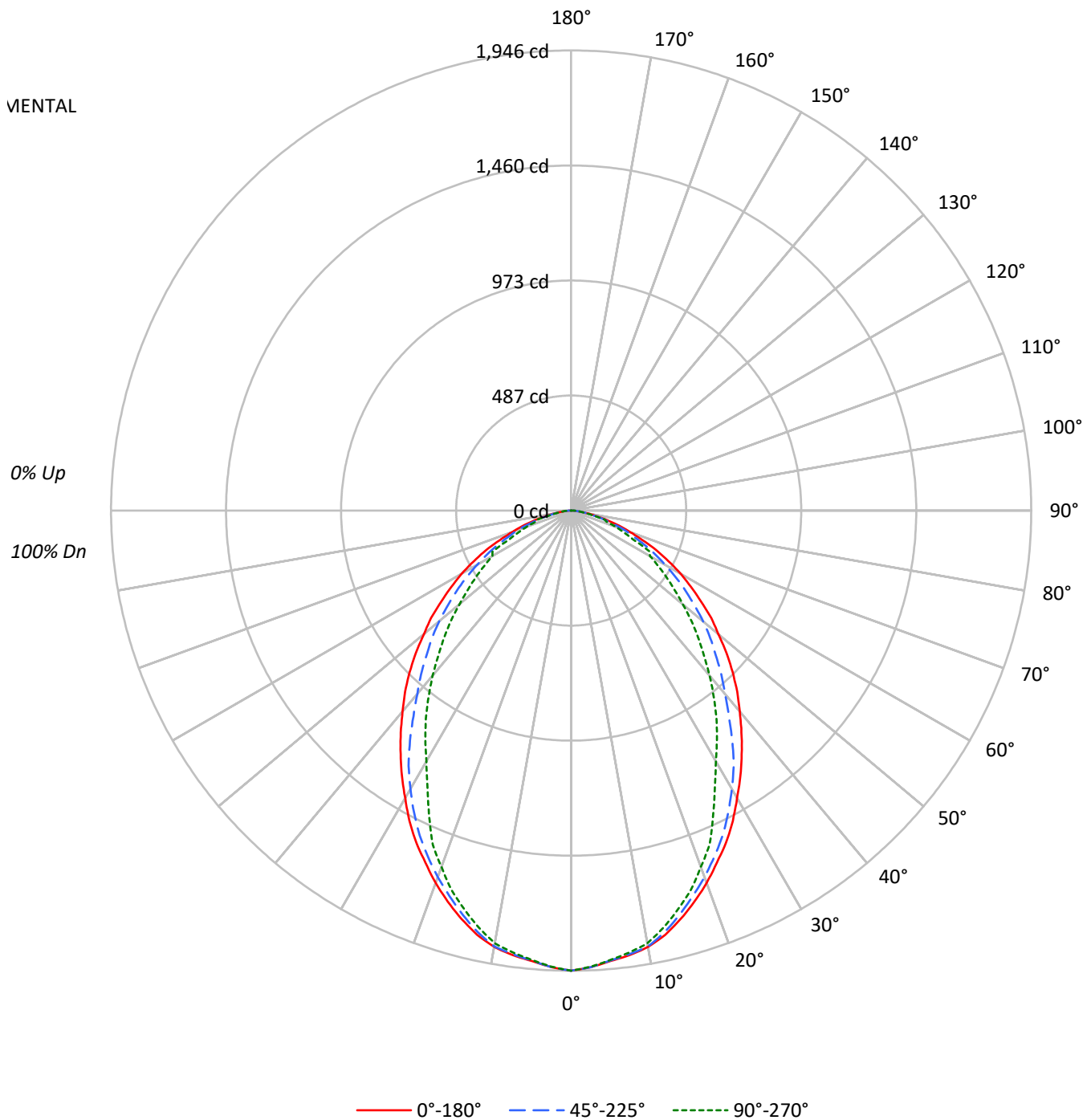
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2618	2618	2618
5°	2583	2580	2576
10°	2560	2557	2539
15°	2491	2466	2432
20°	2400	2361	2297
25°	2301	2251	2111
30°	2181	2111	1901
35°	2065	1951	1759
40°	1948	1778	1600
45°	1836	1644	1447
50°	1700	1526	1290
55°	1573	1383	1156
60°	1441	1235	1035
65°	1268	1082	917
70°	1044	947	779
75°	830	725	760
80°	558	523	488
85°	347	417	486

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.1	4.7
10°-20°	497.1	13.0
20°-30°	688.2	18.0
30°-40°	733.8	19.2
40°-50°	669.5	17.5
50°-60°	524.5	13.7
60°-70°	341.8	8.9
70°-80°	151.4	4.0
80°-90°	32.5	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°	1366.4	35.8
0°-40°	2100.3	55.0
0°-60°	3294.2	86.2
0°-90°	3820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1946	1946	1946	1946	1946	
5°	1912	1910	1910	1908	1908	182
15°	1788	1788	1770	1752	1746	503
25°	1550	1541	1516	1462	1422	712
35°	1258	1248	1188	1098	1071	786
45°	965	945	864	792	760	743
55°	670	650	589	520	493	601
65°	398	376	340	346	288	392
75°	160	148	140	133	146	171
85°	22	25	27	29	32	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1945.9	1945.9	1945.9	1945.9	1945.9
2.5°	1932.4	1932.4	1932.4	1930.1	1930.1
5°	1912.1	1909.9	1909.9	1907.6	1907.6
7.5°	1896.4	1894.1	1891.9	1889.6	1885.1
10°	1873.9	1873.9	1871.6	1860.4	1858.1
12.5°	1837.9	1835.6	1826.6	1810.9	1806.4
15°	1788.4	1788.4	1770.4	1752.4	1745.6
17.5°	1734.4	1732.2	1709.7	1691.7	1682.7
20°	1675.9	1671.4	1648.9	1619.7	1603.9
22.5°	1610.7	1610.7	1583.7	1545.4	1529.7
25°	1549.9	1540.9	1516.2	1462.2	1421.7
27.5°	1480.2	1466.7	1439.7	1363.2	1316.0
30°	1403.7	1397.0	1358.7	1259.7	1223.8
32.5°	1331.7	1320.5	1280.0	1176.5	1147.3
35°	1257.5	1248.5	1187.8	1097.8	1070.8
37.5°	1183.3	1172.0	1095.5	1023.5	989.8
40°	1109.0	1095.5	1012.3	947.1	911.1
42.5°	1039.3	1021.3	940.3	870.6	830.1
45°	965.1	944.8	863.8	791.8	760.3
47.5°	890.8	872.8	798.6	724.4	688.4
50°	812.1	796.3	728.9	654.6	616.4
52.5°	746.8	722.1	656.9	582.6	551.1
55°	670.4	650.1	589.4	519.6	492.7
57.5°	600.6	580.4	524.1	458.9	436.4
60°	535.4	506.1	458.9	402.7	384.7
62.5°	463.4	440.9	400.4	353.2	375.7
65°	398.2	375.7	339.7	346.4	287.9
67.5°	326.2	314.9	283.4	251.9	243.0
70°	265.4	251.9	240.7	207.0	198.0
72.5°	211.5	198.0	182.2	164.2	157.5
75°	159.7	148.5	139.5	132.7	146.2
77.5°	110.2	105.7	99.0	92.2	90.0
80°	72.0	69.7	67.5	65.2	63.0
82.5°	42.7	42.7	42.7	42.7	42.7
85°	22.5	24.7	27.0	29.2	31.5
87.5°	13.5	13.5	15.7	18.0	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)