

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P310982

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P310982  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 5500K TUNABLE CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

**Summary**

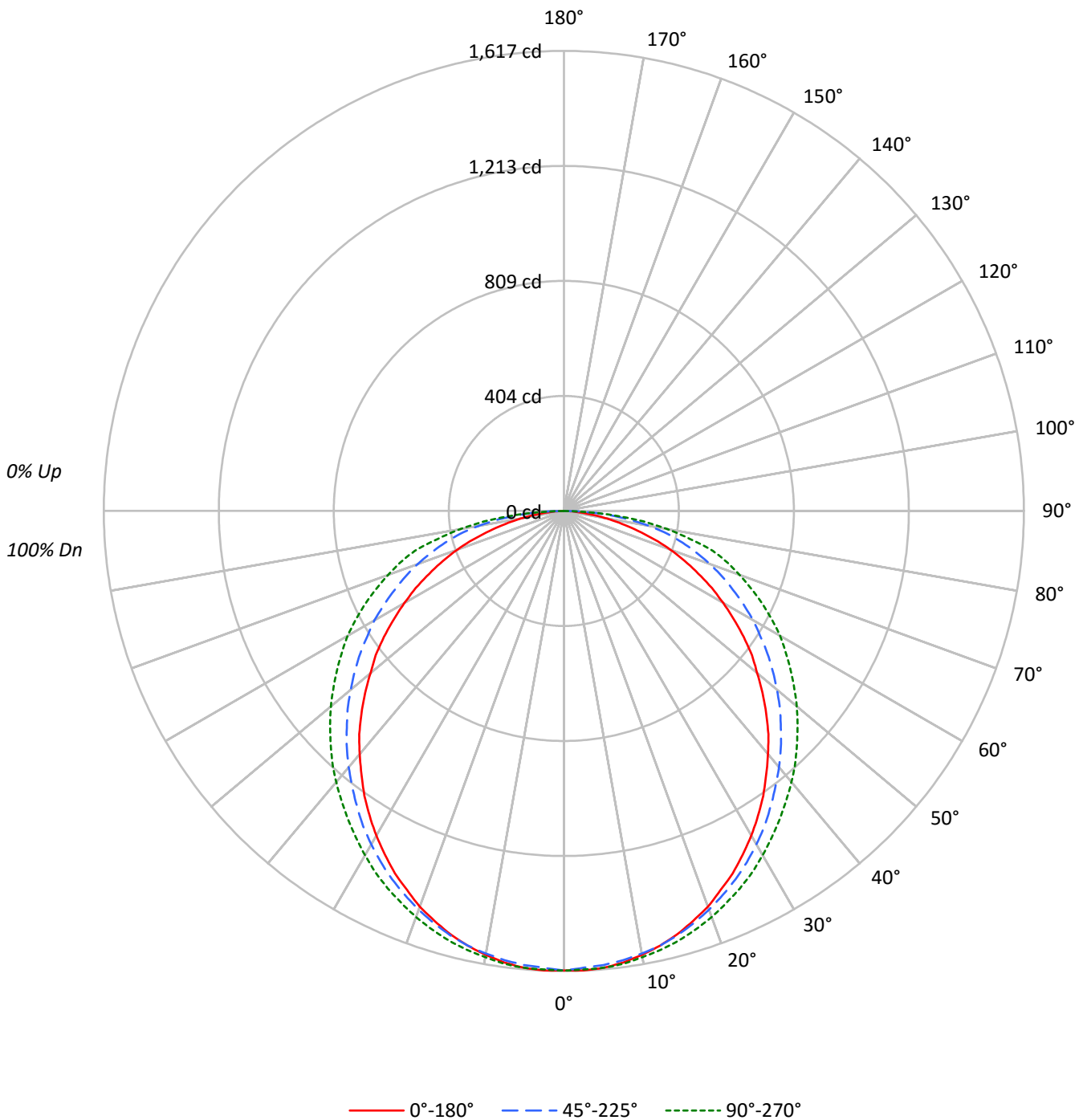
Lumens per Lamp: N/A  
Luminaire Lumens: 4897.0 lumens  
Efficiency: N/A  
Efficacy: 110.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 44.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 25 FT



TEST NUMBER: P310982

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5500K

### Luminous Intensity Polar Plot





TEST NUMBER: P310982

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5500K

**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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2173	2173	2173
5°	2177	2164	2177
10°	2164	2158	2175
15°	2146	2150	2177
20°	2119	2136	2175
25°	2086	2120	2173
30°	2047	2103	2171
35°	2007	2082	2172
40°	1961	2066	2186
45°	1914	2053	2204
50°	1857	2047	2238
55°	1810	2050	2283
60°	1740	2068	2361
65°	1660	2090	2447
70°	1572	2154	2582
75°	1402	2247	2821
80°	1196	2380	2883
85°	852	2357	2759



TEST NUMBER: P310982

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.8	3.1
10°-20°	437.0	8.9
20°-30°	660.1	13.5
30°-40°	795.6	16.2
40°-50°	835.2	17.1
50°-60°	781.4	16.0
60°-70°	645.3	13.2
70°-80°	439.7	9.0
80°-90°	150.0	3.1
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°	1249.9	25.5
0°-40°	2045.5	41.8
0°-60°	3662.1	74.8
0°-90°	4897.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4897.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1615	1615	1615	1615	1615	
5°	1612	1610	1602	1612	1612	153
15°	1540	1542	1544	1560	1563	434
25°	1405	1412	1428	1456	1464	647
35°	1222	1235	1267	1310	1322	764
45°	1006	1027	1079	1137	1158	776
55°	772	803	874	946	973	689
65°	522	565	656	739	768	517
75°	270	331	432	513	543	288
85°	55	109	153	172	179	69
90°	0	0	0	0	0	



TEST NUMBER: P310982

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1615.0	1615.0	1615.0	1615.0	1615.0
2.5°	1616.6	1615.0	1606.9	1615.0	1613.4
5°	1611.7	1610.1	1602.0	1611.7	1611.7
7.5°	1600.4	1600.4	1592.2	1603.6	1605.2
10°	1584.1	1584.1	1579.2	1592.2	1592.2
12.5°	1564.6	1564.6	1564.6	1577.6	1579.2
15°	1540.3	1541.9	1543.5	1559.7	1563.0
17.5°	1511.0	1514.3	1519.1	1538.6	1541.9
20°	1480.1	1483.4	1491.5	1514.3	1519.1
22.5°	1441.1	1449.3	1460.6	1486.6	1491.5
25°	1405.4	1411.9	1428.1	1455.8	1463.9
27.5°	1361.5	1371.3	1392.4	1421.6	1433.0
30°	1317.7	1327.4	1353.4	1387.5	1397.3
32.5°	1270.5	1285.2	1312.8	1348.5	1359.9
35°	1221.8	1234.8	1267.3	1309.5	1322.5
37.5°	1168.2	1186.1	1221.8	1267.3	1283.5
40°	1116.2	1135.7	1176.3	1225.1	1244.5
42.5°	1064.2	1083.7	1129.2	1184.4	1203.9
45°	1005.7	1026.8	1078.8	1137.3	1158.4
47.5°	947.2	973.2	1030.1	1091.8	1114.6
50°	887.1	916.4	978.1	1043.1	1069.1
52.5°	833.5	861.1	926.1	996.0	1020.3
55°	771.7	802.6	874.1	945.6	973.2
57.5°	708.4	742.5	818.9	896.9	924.5
60°	646.6	684.0	768.5	846.5	877.4
62.5°	586.5	623.9	711.6	792.9	823.7
65°	521.5	565.4	656.4	739.3	768.5
67.5°	459.8	506.9	602.8	684.0	713.3
70°	399.7	445.2	547.5	627.1	656.4
72.5°	334.7	386.7	489.0	571.9	602.8
75°	269.7	331.4	432.2	513.4	542.7
77.5°	209.6	273.0	373.7	440.3	454.9
80°	154.3	219.3	307.1	354.2	372.1
82.5°	99.1	164.1	234.0	268.1	282.7
85°	55.2	108.9	152.7	172.2	178.7
87.5°	22.7	47.1	61.7	69.9	69.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)