

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: P311163

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CP250-W2A-U-5700K**

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: P311163  
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: 24FCZ2-75HE-UNV-L82765-CP250-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 5700K 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**

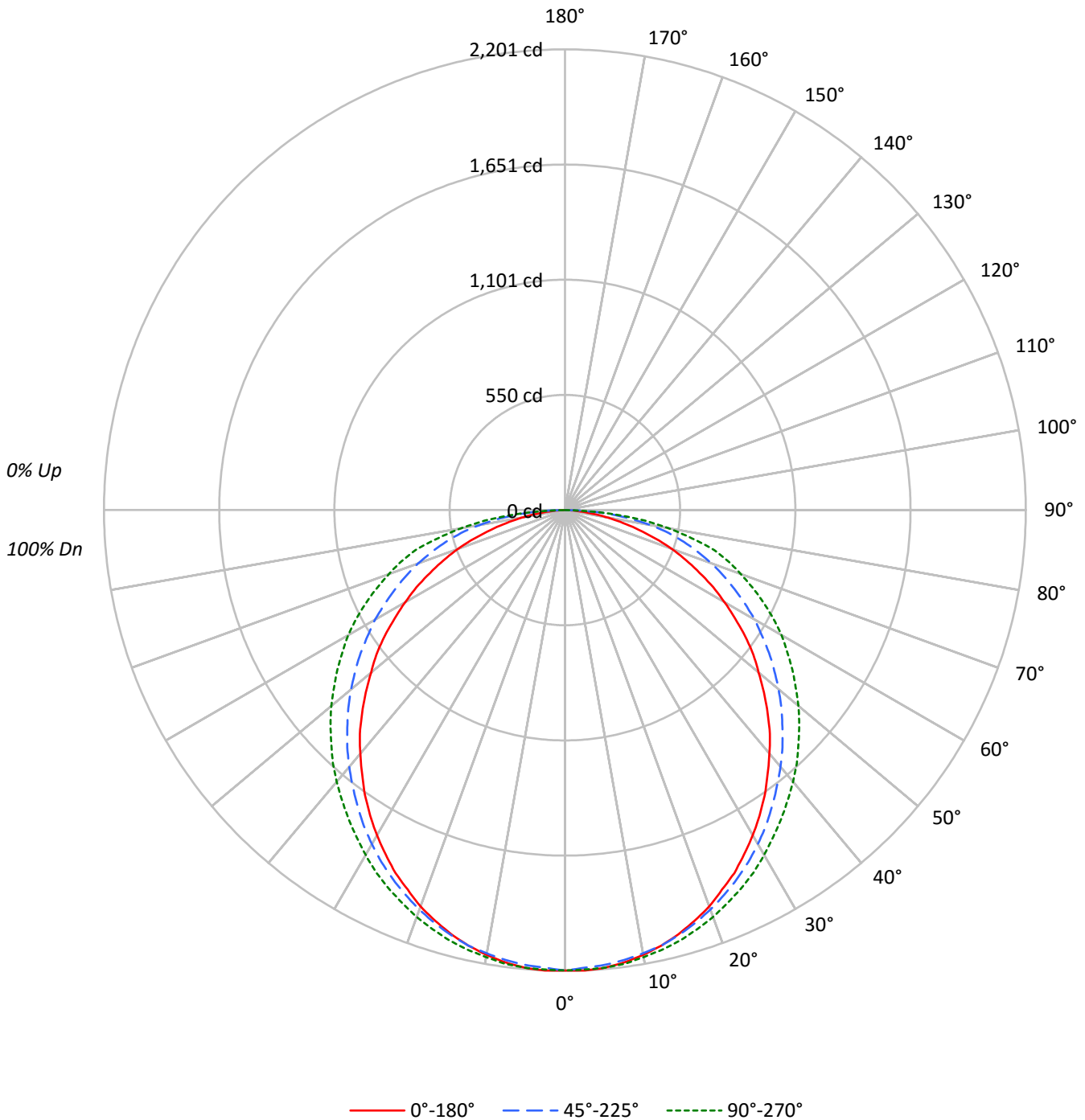
Lumens per Lamp: N/A  
Luminaire Lumens: 6668.0 lumens  
Efficiency: N/A  
Efficacy: 103.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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: P311163

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-CP250-W2A-U-5700K

### Luminous Intensity Polar Plot





TEST NUMBER: P311163

CATALOG NUMBER: 24FC22-75HE-UNV-L82765-CP250-W2A-U-5700K

**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°	2959	2959	2959
5°	2964	2946	2964
10°	2947	2938	2962
15°	2921	2928	2965
20°	2886	2908	2962
25°	2841	2887	2959
30°	2788	2863	2956
35°	2733	2834	2958
40°	2670	2813	2976
45°	2606	2795	3001
50°	2528	2788	3047
55°	2465	2792	3109
60°	2369	2816	3215
65°	2261	2846	3331
70°	2141	2933	3516
75°	1909	3059	3841
80°	1629	3240	3925
85°	1161	3211	3758



TEST NUMBER: P311163

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-CP250-W2A-U-5700K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	208.1	3.1
10°-20°	595.1	8.9
20°-30°	898.8	13.5
30°-40°	1083.3	16.2
40°-50°	1137.2	17.1
50°-60°	1063.9	16.0
60°-70°	878.6	13.2
70°-80°	598.7	9.0
80°-90°	204.2	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°	1702.0	25.5
0°-40°	2785.3	41.8
0°-60°	4986.5	74.8
0°-90°	6668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6668.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2199	2199	2199	2199	2199	
5°	2195	2192	2181	2195	2195	208
15°	2097	2100	2102	2124	2128	591
25°	1914	1922	1945	1982	1993	880
35°	1664	1681	1726	1783	1801	1040
45°	1369	1398	1469	1549	1577	1056
55°	1051	1093	1190	1288	1325	938
65°	710	770	894	1007	1046	704
75°	367	451	588	699	739	392
85°	75	148	208	234	243	94
90°	0	0	0	0	0	



TEST NUMBER: P311163

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-CP250-W2A-U-5700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2199.0	2199.0	2199.0	2199.0	2199.0
2.5°	2201.3	2199.0	2188.0	2199.0	2196.8
5°	2194.6	2192.4	2181.3	2194.6	2194.6
7.5°	2179.1	2179.1	2168.1	2183.6	2185.8
10°	2157.0	2157.0	2150.4	2168.1	2168.1
12.5°	2130.5	2130.5	2130.5	2148.2	2150.4
15°	2097.3	2099.5	2101.7	2123.8	2128.3
17.5°	2057.5	2061.9	2068.5	2095.1	2099.5
20°	2015.4	2019.9	2030.9	2061.9	2068.5
22.5°	1962.3	1973.4	1988.9	2024.3	2030.9
25°	1913.7	1922.5	1944.6	1982.2	1993.3
27.5°	1853.9	1867.2	1896.0	1935.8	1951.3
30°	1794.2	1807.5	1842.9	1889.3	1902.6
32.5°	1730.0	1749.9	1787.6	1836.2	1851.7
35°	1663.7	1681.4	1725.6	1783.1	1800.8
37.5°	1590.7	1615.0	1663.7	1725.6	1747.7
40°	1519.9	1546.4	1601.7	1668.1	1694.6
42.5°	1449.1	1475.6	1537.6	1612.8	1639.3
45°	1369.4	1398.2	1469.0	1548.6	1577.4
47.5°	1289.8	1325.2	1402.6	1486.7	1517.7
50°	1207.9	1247.7	1331.8	1420.3	1455.7
52.5°	1134.9	1172.5	1261.0	1356.2	1389.3
55°	1050.9	1092.9	1190.2	1287.6	1325.2
57.5°	964.6	1011.0	1115.0	1221.2	1258.8
60°	880.5	931.4	1046.4	1152.6	1194.7
62.5°	798.6	849.5	969.0	1079.6	1121.6
65°	710.2	769.9	893.8	1006.6	1046.4
67.5°	626.1	690.2	820.8	931.4	971.2
70°	544.2	606.2	745.6	854.0	893.8
72.5°	455.7	526.5	665.9	778.7	820.8
75°	367.2	451.3	588.5	699.1	738.9
77.5°	285.4	371.7	508.8	599.5	619.5
80°	210.2	298.7	418.1	482.3	506.6
82.5°	135.0	223.4	318.6	365.0	384.9
85°	75.2	148.2	208.0	234.5	243.4
87.5°	31.0	64.2	84.1	95.1	95.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)