

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: P311798

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-4000K**

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: P311798  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
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-S-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 4000K 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**

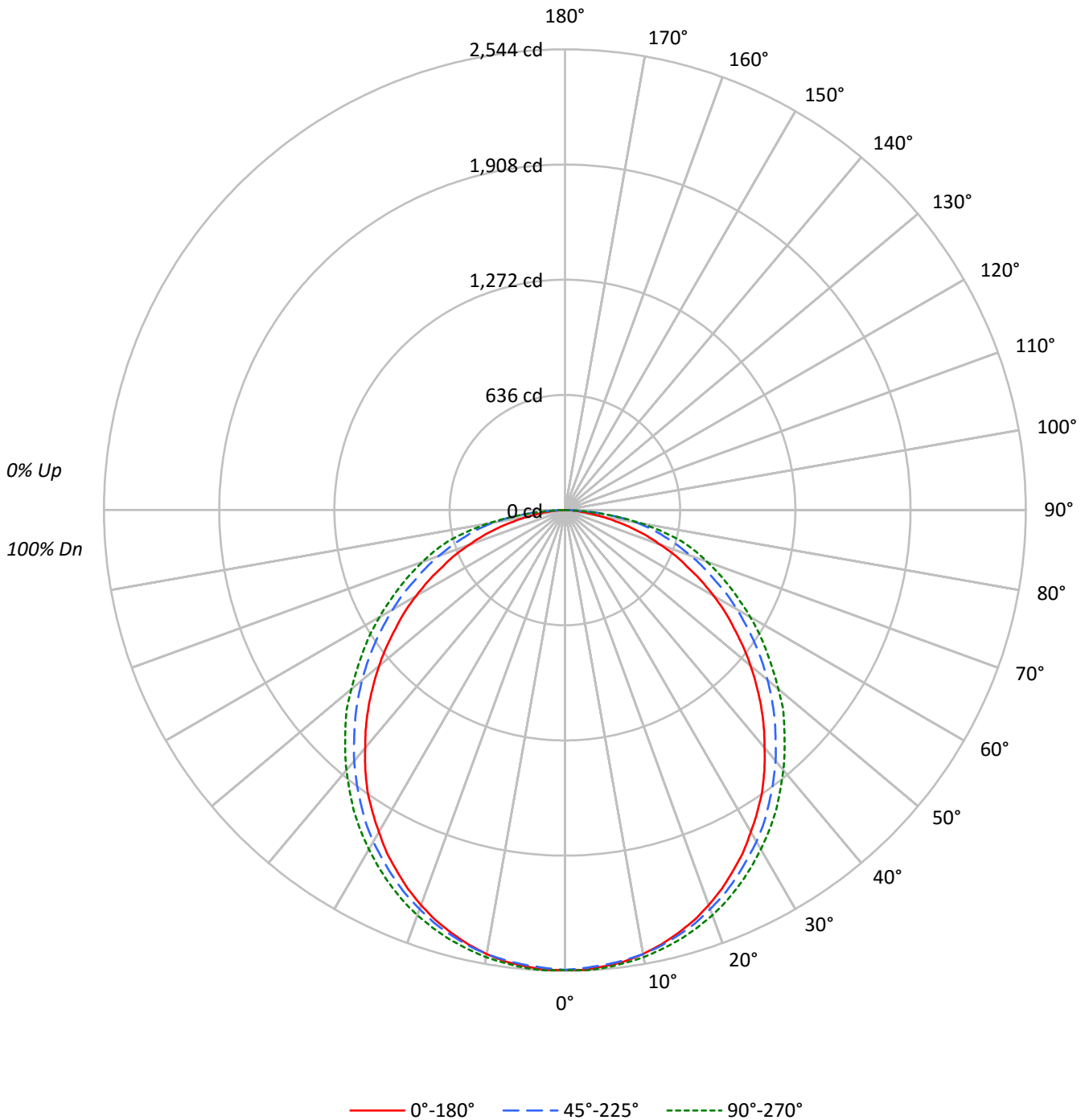
Lumens per Lamp: N/A  
Luminaire Lumens: 7228.0 lumens  
Efficiency: N/A  
Efficacy: 113.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 63.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: 25 FT



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### Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-75HE-UNV-L82765-S-CA08-W2A-U-4000K

**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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	3416	3416	3416
5°	3414	3405	3426
10°	3400	3400	3425
15°	3368	3383	3419
20°	3323	3356	3409
25°	3262	3323	3388
30°	3189	3285	3360
35°	3119	3232	3334
40°	3012	3178	3295
45°	2914	3115	3259
50°	2802	3057	3220
55°	2677	3000	3188
60°	2552	2953	3182
65°	2390	2902	3202
70°	2213	2917	3288
75°	1981	2972	3473
80°	1601	3149	3398
85°	1206	2765	2694



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	240.4	3.3
10°-20°	686.9	9.5
20°-30°	1032.5	14.3
30°-40°	1229.9	17.0
40°-50°	1258.8	17.4
50°-60°	1133.3	15.7
60°-70°	890.0	12.3
70°-80°	577.6	8.0
80°-90°	178.7	2.5
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°	1959.8	27.1
0°-40°	3189.7	44.1
0°-60°	5581.8	77.2
0°-90°	7228.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7228.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2539	2539	2539	2539	2539	
5°	2528	2532	2521	2535	2537	240
15°	2418	2424	2429	2450	2454	682
25°	2197	2216	2238	2275	2282	1012
35°	1899	1922	1968	2016	2030	1185
45°	1531	1568	1637	1699	1713	1181
55°	1141	1192	1279	1345	1359	1023
65°	751	808	912	987	1006	747
75°	381	455	572	650	668	403
85°	78	145	179	174	174	94
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2539.2	2539.2	2539.2	2539.2	2539.2
2.5°	2541.5	2541.5	2530.1	2541.5	2543.8
5°	2527.8	2532.4	2520.9	2534.7	2536.9
7.5°	2514.0	2514.0	2507.1	2520.9	2523.2
10°	2488.7	2491.0	2488.7	2504.8	2507.1
12.5°	2456.6	2461.2	2463.5	2479.6	2481.8
15°	2417.6	2424.4	2429.0	2449.7	2454.3
17.5°	2373.9	2380.8	2392.3	2415.3	2419.9
20°	2321.1	2330.3	2344.1	2373.9	2380.8
22.5°	2263.7	2272.9	2295.9	2323.4	2334.9
25°	2197.2	2215.5	2238.5	2275.2	2282.1
27.5°	2130.6	2146.6	2176.5	2215.5	2224.7
30°	2052.5	2077.8	2114.5	2153.5	2162.7
32.5°	1976.8	2002.0	2045.6	2087.0	2098.4
35°	1898.7	1921.7	1967.6	2015.8	2029.6
37.5°	1809.2	1839.0	1889.5	1937.7	1951.5
40°	1715.0	1751.8	1809.2	1859.7	1875.7
42.5°	1625.5	1664.5	1721.9	1777.0	1795.4
45°	1531.4	1568.1	1637.0	1699.0	1712.7
47.5°	1434.9	1476.3	1549.7	1611.7	1634.7
50°	1338.5	1382.1	1460.2	1524.5	1538.2
52.5°	1242.1	1288.0	1370.6	1439.5	1446.4
55°	1141.1	1191.6	1278.8	1345.4	1359.2
57.5°	1049.2	1092.8	1187.0	1255.8	1271.9
60°	948.2	996.4	1097.4	1161.7	1182.4
62.5°	851.8	902.3	1007.9	1072.2	1090.5
65°	750.8	808.1	911.5	987.2	1005.6
67.5°	663.5	718.6	828.8	902.3	920.6
70°	562.5	624.5	741.6	817.3	835.7
72.5°	475.2	539.5	656.6	730.1	757.6
75°	381.1	454.6	571.7	649.7	668.1
77.5°	289.3	374.2	493.6	553.3	553.3
80°	206.6	296.2	406.4	433.9	438.5
82.5°	135.5	222.7	300.8	298.5	298.5
85°	78.1	144.6	179.1	174.5	174.5
87.5°	29.8	59.7	64.3	64.3	62.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)