

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: P311773

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-CP125-W2A-U-5000K**

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: P311773  
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: 24FCZ2-70HE-UNV-L82765-S-CP125-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 5000K 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**

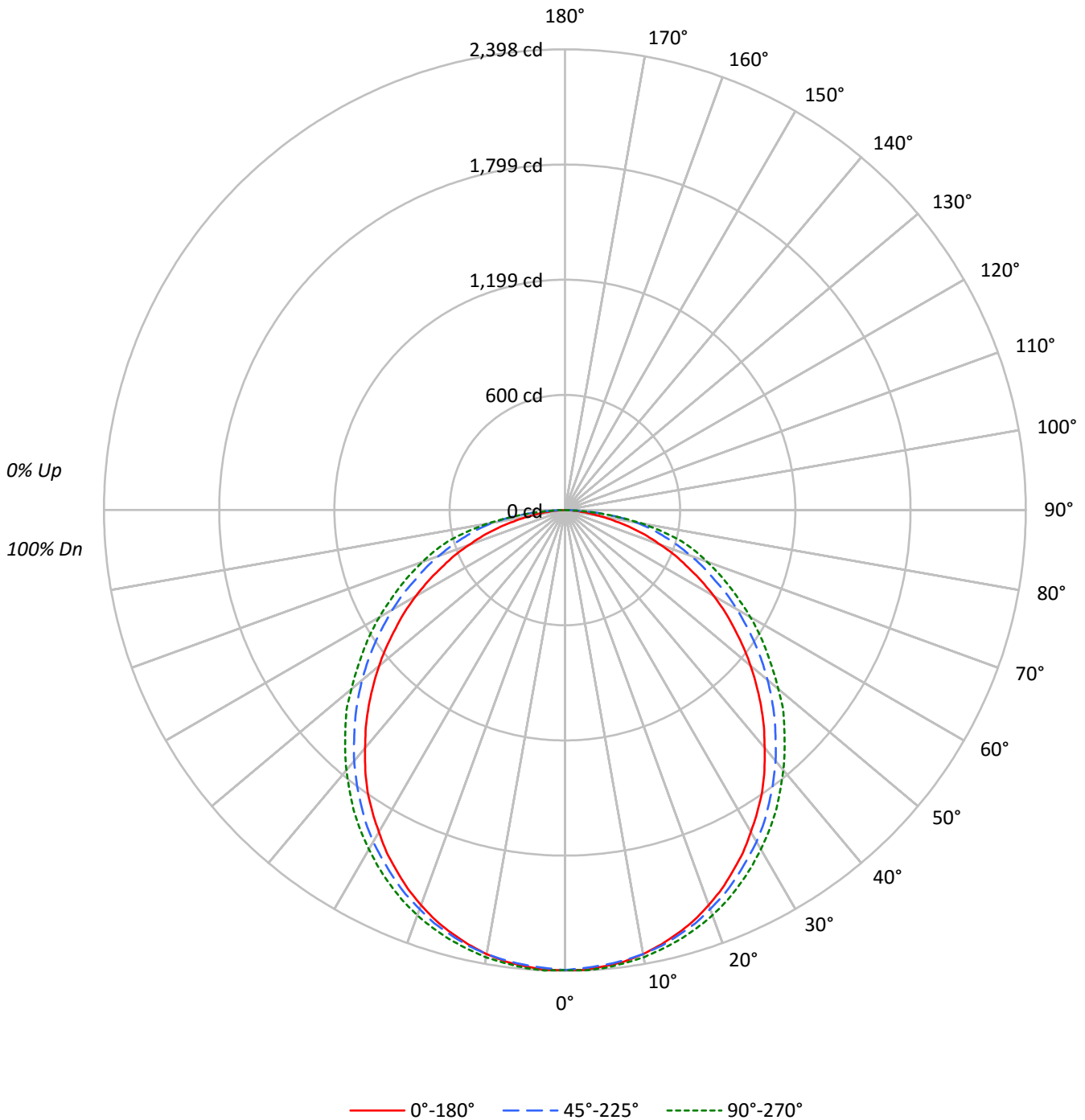
Lumens per Lamp: N/A  
Luminaire Lumens: 6814.0 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 59.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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



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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	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°	3221	3221	3221
5°	3219	3210	3230
10°	3205	3205	3229
15°	3175	3190	3223
20°	3133	3164	3214
25°	3075	3133	3194
30°	3006	3097	3168
35°	2940	3047	3143
40°	2840	2996	3106
45°	2747	2936	3072
50°	2641	2881	3035
55°	2523	2828	3006
60°	2405	2784	3000
65°	2253	2736	3018
70°	2086	2750	3099
75°	1868	2802	3274
80°	1509	2968	3203
85°	1136	2606	2540



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.6	3.3
10°-20°	647.5	9.5
20°-30°	973.4	14.3
30°-40°	1159.5	17.0
40°-50°	1186.7	17.4
50°-60°	1068.3	15.7
60°-70°	839.0	12.3
70°-80°	544.5	8.0
80°-90°	168.4	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°	1847.6	27.1
0°-40°	3007.0	44.1
0°-60°	5262.1	77.2
0°-90°	6814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6814.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2394	2394	2394	2394	2394	
5°	2383	2387	2376	2390	2392	226
15°	2279	2286	2290	2309	2314	643
25°	2071	2089	2110	2145	2151	954
35°	1790	1812	1855	1900	1913	1117
45°	1444	1478	1543	1602	1615	1113
55°	1076	1123	1206	1268	1281	964
65°	708	762	859	931	948	705
75°	359	428	539	612	630	380
85°	74	136	169	164	164	89
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2393.8	2393.8	2393.8	2393.8	2393.8
2.5°	2396.0	2396.0	2385.1	2396.0	2398.1
5°	2383.0	2387.3	2376.5	2389.5	2391.6
7.5°	2370.0	2370.0	2363.5	2376.5	2378.7
10°	2346.2	2348.4	2346.2	2361.3	2363.5
12.5°	2315.9	2320.2	2322.4	2337.5	2339.7
15°	2279.1	2285.6	2289.9	2309.4	2313.7
17.5°	2238.0	2244.5	2255.3	2276.9	2281.3
20°	2188.2	2196.8	2209.8	2238.0	2244.5
22.5°	2134.1	2142.7	2164.4	2190.4	2201.2
25°	2071.3	2088.6	2110.3	2144.9	2151.4
27.5°	2008.5	2023.7	2051.8	2088.6	2097.3
30°	1935.0	1958.8	1993.4	2030.2	2038.8
32.5°	1863.5	1887.3	1928.5	1967.4	1978.2
35°	1789.9	1811.6	1854.9	1900.3	1913.3
37.5°	1705.5	1733.7	1781.3	1826.7	1839.7
40°	1616.8	1651.4	1705.5	1753.1	1768.3
42.5°	1532.4	1569.2	1623.3	1675.2	1692.5
45°	1443.6	1478.3	1543.2	1601.6	1614.6
47.5°	1352.7	1391.7	1461.0	1519.4	1541.0
50°	1261.8	1303.0	1376.5	1437.1	1450.1
52.5°	1170.9	1214.2	1292.1	1357.1	1363.6
55°	1075.7	1123.3	1205.6	1268.3	1281.3
57.5°	989.1	1030.2	1119.0	1183.9	1199.1
60°	893.9	939.3	1034.6	1095.2	1114.7
62.5°	803.0	850.6	950.2	1010.8	1028.1
65°	707.8	761.9	859.3	930.7	948.0
67.5°	625.5	677.5	781.3	850.6	867.9
70°	530.3	588.7	699.1	770.5	787.8
72.5°	448.0	508.6	619.0	688.3	714.2
75°	359.3	428.5	538.9	612.5	629.8
77.5°	272.7	352.8	465.3	521.6	521.6
80°	194.8	279.2	383.1	409.1	413.4
82.5°	127.7	209.9	283.5	281.4	281.4
85°	73.6	136.4	168.8	164.5	164.5
87.5°	28.1	56.3	60.6	60.6	58.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)