

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: P311768

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-CP125-W2A-U-2700K**

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: P311768  
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-2700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 2700K 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**

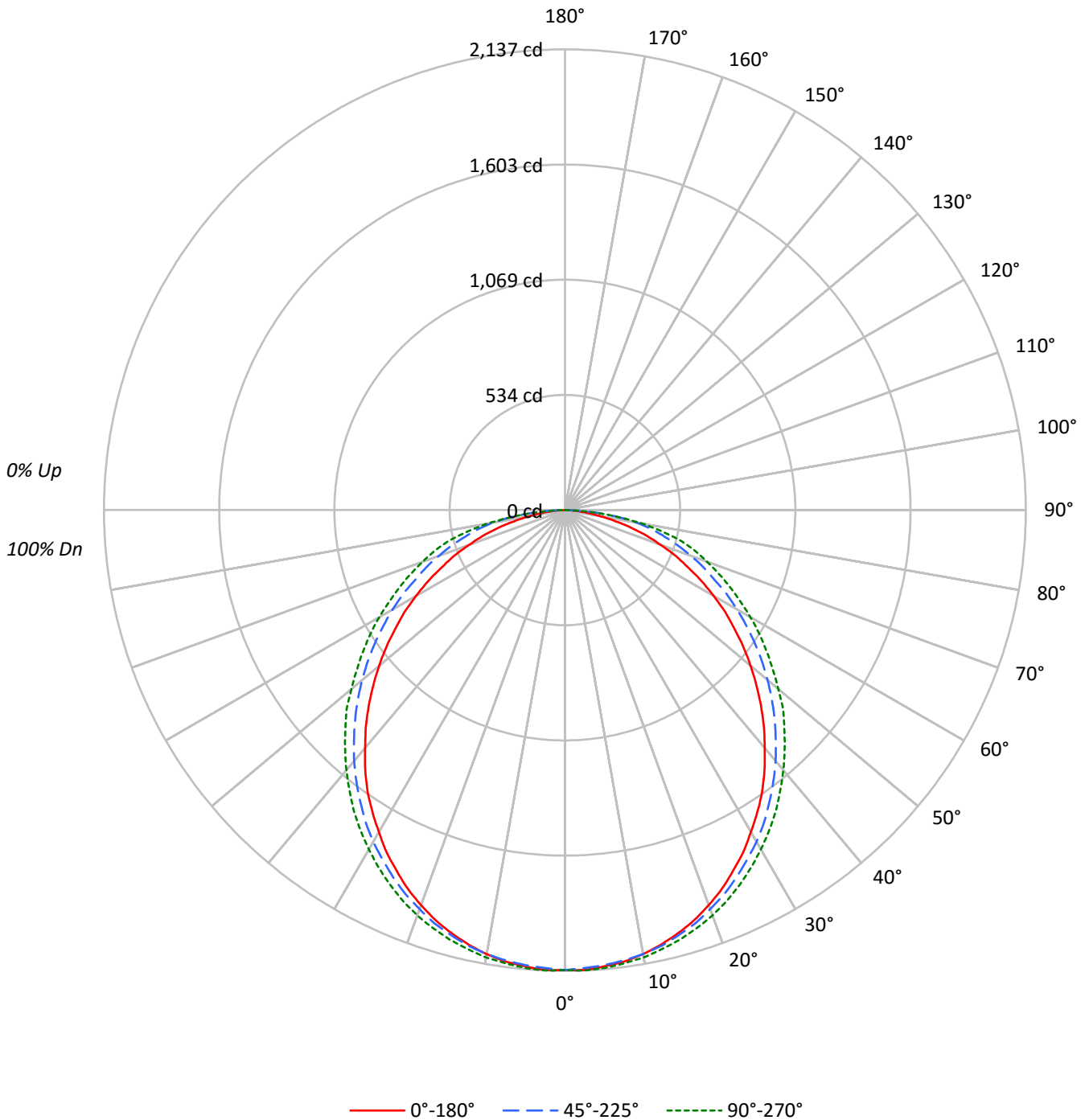
Lumens per Lamp: N/A  
Luminaire Lumens: 6073.0 lumens  
Efficiency: N/A  
Efficacy: 105.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 57.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2871	2871	2871
5°	2868	2861	2879
10°	2857	2857	2878
15°	2829	2843	2872
20°	2792	2820	2864
25°	2741	2792	2847
30°	2679	2760	2823
35°	2620	2715	2801
40°	2531	2670	2768
45°	2448	2617	2738
50°	2354	2568	2705
55°	2249	2521	2679
60°	2144	2481	2673
65°	2008	2438	2690
70°	1859	2451	2762
75°	1665	2497	2918
80°	1345	2645	2854
85°	1013	2323	2263



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.0	3.3
10°-20°	577.1	9.5
20°-30°	867.5	14.3
30°-40°	1033.4	17.0
40°-50°	1057.6	17.4
50°-60°	952.2	15.7
60°-70°	747.8	12.3
70°-80°	485.3	8.0
80°-90°	150.1	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°	1646.6	27.1
0°-40°	2680.0	44.1
0°-60°	4689.9	77.2
0°-90°	6073.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6073.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2134	2134	2134	2134	2134	
5°	2124	2128	2118	2130	2132	202
15°	2031	2037	2041	2058	2062	573
25°	1846	1862	1881	1912	1917	850
35°	1595	1615	1653	1694	1705	995
45°	1287	1318	1375	1428	1439	992
55°	959	1001	1074	1130	1142	859
65°	631	679	766	830	845	628
75°	320	382	480	546	561	339
85°	66	122	150	147	147	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2133.5	2133.5	2133.5	2133.5	2133.5
2.5°	2135.4	2135.4	2125.8	2135.4	2137.3
5°	2123.8	2127.7	2118.1	2129.6	2131.6
7.5°	2112.3	2112.3	2106.5	2118.1	2120.0
10°	2091.0	2093.0	2091.0	2104.5	2106.5
12.5°	2064.0	2067.9	2069.8	2083.3	2085.3
15°	2031.2	2037.0	2040.9	2058.3	2062.1
17.5°	1994.6	2000.4	2010.0	2029.3	2033.2
20°	1950.2	1957.9	1969.5	1994.6	2000.4
22.5°	1902.0	1909.7	1929.0	1952.2	1961.8
25°	1846.1	1861.5	1880.8	1911.6	1917.4
27.5°	1790.1	1803.6	1828.7	1861.5	1869.2
30°	1724.5	1745.8	1776.6	1809.4	1817.1
32.5°	1660.9	1682.1	1718.7	1753.5	1763.1
35°	1595.3	1614.6	1653.2	1693.7	1705.2
37.5°	1520.1	1545.1	1587.6	1628.1	1639.7
40°	1441.0	1471.8	1520.1	1562.5	1576.0
42.5°	1365.7	1398.5	1446.8	1493.1	1508.5
45°	1286.6	1317.5	1375.4	1427.5	1439.0
47.5°	1205.6	1240.4	1302.1	1354.2	1373.5
50°	1124.6	1161.3	1226.9	1280.9	1292.4
52.5°	1043.6	1082.2	1151.6	1209.5	1215.3
55°	958.7	1001.2	1074.5	1130.4	1142.0
57.5°	881.6	918.2	997.3	1055.2	1068.7
60°	796.7	837.2	922.1	976.1	993.4
62.5°	715.7	758.1	846.8	900.8	916.3
65°	630.8	679.0	765.8	829.5	844.9
67.5°	557.5	603.8	696.4	758.1	773.5
70°	472.6	524.7	623.1	686.7	702.2
72.5°	399.3	453.3	551.7	613.4	636.6
75°	320.2	381.9	480.3	545.9	561.3
77.5°	243.1	314.4	414.7	464.9	464.9
80°	173.6	248.8	341.4	364.6	368.4
82.5°	113.8	187.1	252.7	250.8	250.8
85°	65.6	121.5	150.5	146.6	146.6
87.5°	25.1	50.2	54.0	54.0	52.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)