

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: P314506

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-S-CP187-W2A-U-3500K**

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: P314506  
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-L83050-S-CP187-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET  
Light Source: (336) 3500K 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**

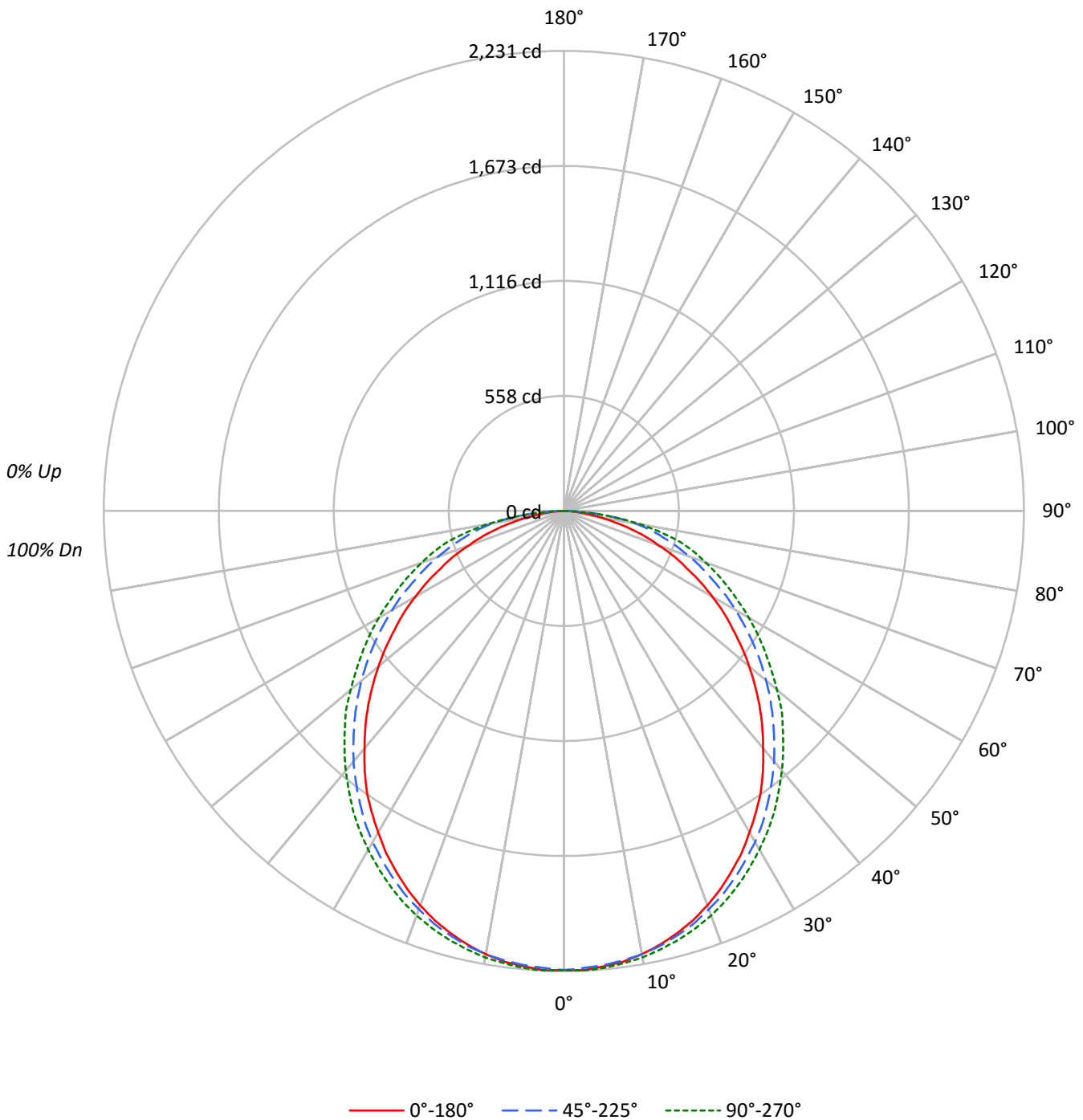
Lumens per Lamp: N/A  
Luminaire Lumens: 6338.0 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 57.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2996	2996	2996
5°	2994	2986	3005
10°	2982	2982	3004
15°	2953	2967	2998
20°	2914	2943	2989
25°	2860	2914	2971
30°	2796	2881	2946
35°	2735	2834	2923
40°	2641	2786	2889
45°	2555	2731	2858
50°	2457	2680	2823
55°	2347	2630	2796
60°	2237	2590	2790
65°	2096	2544	2807
70°	1940	2558	2883
75°	1737	2606	3045
80°	1404	2761	2979
85°	1056	2424	2362



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.8	3.3
10°-20°	602.3	9.5
20°-30°	905.4	14.3
30°-40°	1078.5	17.0
40°-50°	1103.8	17.4
50°-60°	993.7	15.7
60°-70°	780.4	12.3
70°-80°	506.5	8.0
80°-90°	156.6	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°	1718.5	27.1
0°-40°	2797.0	44.1
0°-60°	4894.5	77.2
0°-90°	6338.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6338.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2227	2227	2227	2227	2227	
5°	2216	2220	2210	2223	2225	211
15°	2120	2126	2130	2148	2152	598
25°	1927	1943	1963	1995	2001	888
35°	1665	1685	1725	1768	1780	1039
45°	1343	1375	1435	1490	1502	1035
55°	1001	1045	1121	1180	1192	897
65°	658	709	799	866	882	655
75°	334	399	501	570	586	354
85°	68	127	157	153	153	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2226.6	2226.6	2226.6	2226.6	2226.6
2.5°	2228.6	2228.6	2218.5	2228.6	2230.6
5°	2216.5	2220.5	2210.5	2222.6	2224.6
7.5°	2204.4	2204.4	2198.4	2210.5	2212.5
10°	2182.3	2184.3	2182.3	2196.4	2198.4
12.5°	2154.1	2158.1	2160.1	2174.2	2176.3
15°	2119.9	2125.9	2129.9	2148.1	2152.1
17.5°	2081.6	2087.7	2097.7	2117.9	2121.9
20°	2035.3	2043.4	2055.5	2081.6	2087.7
22.5°	1985.0	1993.1	2013.2	2037.3	2047.4
25°	1926.6	1942.7	1962.9	1995.1	2001.1
27.5°	1868.2	1882.3	1908.5	1942.7	1950.8
30°	1799.8	1821.9	1854.1	1888.4	1896.4
32.5°	1733.4	1755.5	1793.7	1830.0	1840.0
35°	1664.9	1685.0	1725.3	1767.6	1779.7
37.5°	1586.4	1612.6	1656.8	1699.1	1711.2
40°	1503.8	1536.1	1586.4	1630.7	1644.8
42.5°	1425.3	1459.6	1509.9	1558.2	1574.3
45°	1342.8	1375.0	1435.4	1489.8	1501.8
47.5°	1258.2	1294.5	1358.9	1413.3	1433.4
50°	1173.7	1211.9	1280.4	1336.8	1348.8
52.5°	1089.1	1129.4	1201.9	1262.3	1268.3
55°	1000.6	1044.8	1121.3	1179.7	1191.8
57.5°	920.0	958.3	1040.8	1101.2	1115.3
60°	831.4	873.7	962.3	1018.7	1036.8
62.5°	746.9	791.2	883.8	940.2	956.3
65°	658.3	708.6	799.2	865.7	881.8
67.5°	581.8	630.1	726.8	791.2	807.3
70°	493.2	547.6	650.3	716.7	732.8
72.5°	416.7	473.1	575.8	640.2	664.4
75°	334.2	398.6	501.3	569.7	585.8
77.5°	253.7	328.1	432.8	485.2	485.2
80°	181.2	259.7	356.3	380.5	384.5
82.5°	118.8	195.3	263.7	261.7	261.7
85°	68.4	126.8	157.0	153.0	153.0
87.5°	26.2	52.3	56.4	56.4	54.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)