

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: P314161

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CP250-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: P314161  
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-L83050-CP250-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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**

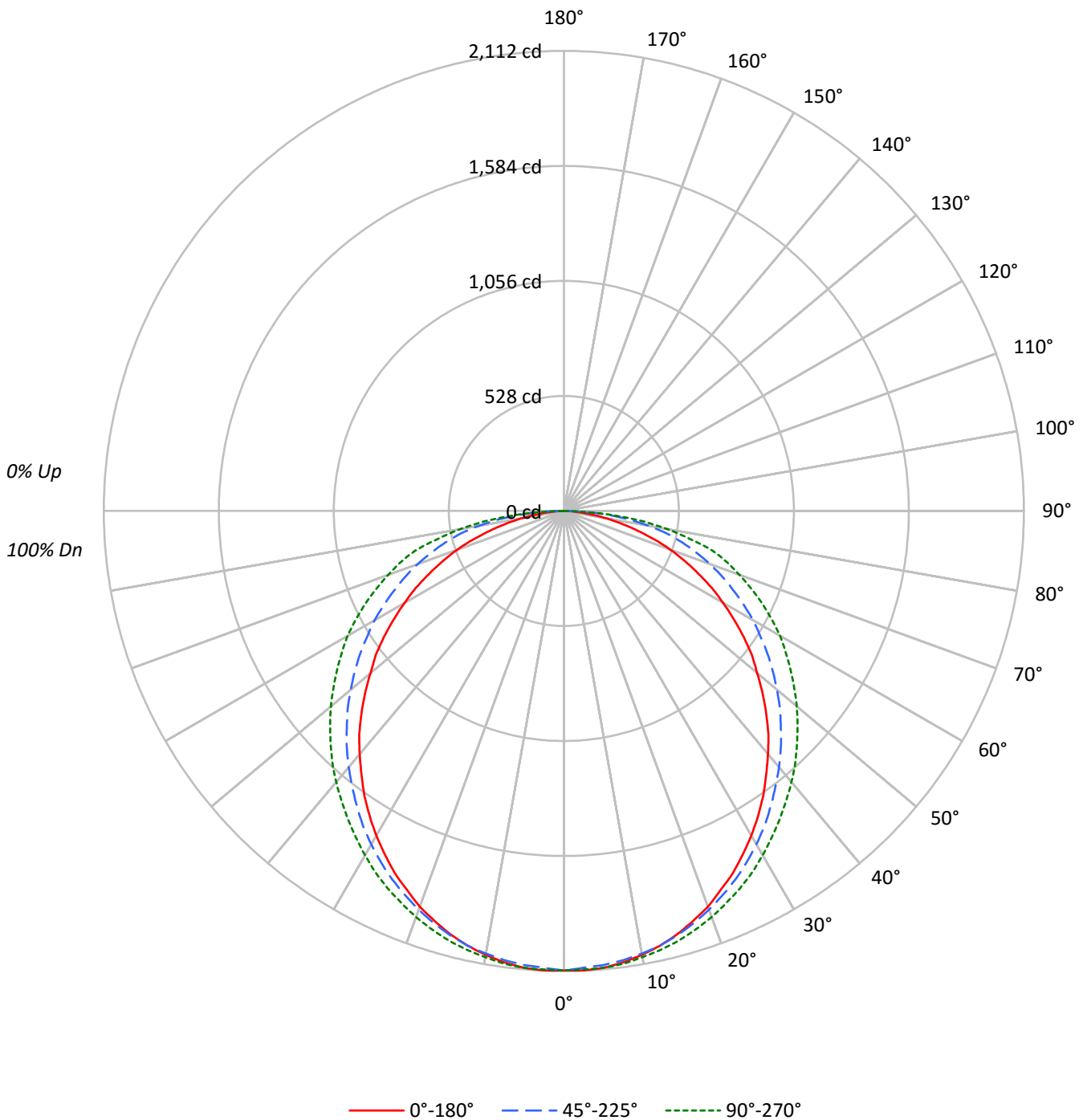
Lumens per Lamp: N/A  
Luminaire Lumens: 6396.0 lumens  
Efficiency: N/A  
Efficacy: 101.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 62.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	2838	2838	2838
5°	2843	2826	2843
10°	2827	2818	2841
15°	2802	2808	2844
20°	2768	2789	2841
25°	2725	2769	2839
30°	2674	2746	2835
35°	2621	2719	2837
40°	2561	2699	2855
45°	2500	2681	2879
50°	2425	2674	2923
55°	2365	2678	2982
60°	2273	2701	3084
65°	2169	2729	3195
70°	2054	2813	3373
75°	1831	2935	3685
80°	1562	3108	3766
85°	1115	3080	3603



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	199.6	3.1
10°-20°	570.8	8.9
20°-30°	862.1	13.5
30°-40°	1039.1	16.2
40°-50°	1090.9	17.1
50°-60°	1020.5	16.0
60°-70°	842.8	13.2
70°-80°	574.3	9.0
80°-90°	195.8	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°	1632.6	25.5
0°-40°	2671.7	41.8
0°-60°	4783.1	74.8
0°-90°	6396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6396.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2109	2109	2109	2109	2109	
5°	2105	2103	2092	2105	2105	200
15°	2012	2014	2016	2037	2041	567
25°	1836	1844	1865	1901	1912	845
35°	1596	1613	1655	1710	1727	997
45°	1314	1341	1409	1486	1513	1013
55°	1008	1048	1142	1235	1271	900
65°	681	738	857	966	1004	676
75°	352	433	564	671	709	376
85°	72	142	200	225	233	90
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2109.3	2109.3	2109.3	2109.3	2109.3
2.5°	2111.5	2109.3	2098.7	2109.3	2107.2
5°	2105.1	2103.0	2092.4	2105.1	2105.1
7.5°	2090.2	2090.2	2079.6	2094.5	2096.6
10°	2069.0	2069.0	2062.7	2079.6	2079.6
12.5°	2043.6	2043.6	2043.6	2060.5	2062.7
15°	2011.7	2013.9	2016.0	2037.2	2041.4
17.5°	1973.5	1977.8	1984.1	2009.6	2013.9
20°	1933.2	1937.5	1948.1	1977.8	1984.1
22.5°	1882.3	1892.9	1907.7	1941.7	1948.1
25°	1835.6	1844.1	1865.3	1901.4	1912.0
27.5°	1778.3	1791.0	1818.6	1856.8	1871.7
30°	1721.0	1733.7	1767.7	1812.3	1825.0
32.5°	1659.5	1678.6	1714.6	1761.3	1776.2
35°	1595.8	1612.8	1655.2	1710.4	1727.4
37.5°	1525.8	1549.1	1595.8	1655.2	1676.4
40°	1457.9	1483.3	1536.4	1600.0	1625.5
42.5°	1390.0	1415.4	1474.8	1547.0	1572.5
45°	1313.6	1341.2	1409.1	1485.5	1513.0
47.5°	1237.2	1271.1	1345.4	1426.0	1455.7
50°	1158.7	1196.9	1277.5	1362.4	1396.3
52.5°	1088.6	1124.7	1209.6	1300.8	1332.7
55°	1008.0	1048.3	1141.7	1235.0	1271.1
57.5°	925.2	969.8	1069.5	1171.4	1207.5
60°	844.6	893.4	1003.7	1105.6	1145.9
62.5°	766.1	814.9	929.5	1035.6	1075.9
65°	681.2	738.5	857.3	965.5	1003.7
67.5°	600.5	662.1	787.3	893.4	931.6
70°	522.0	581.4	715.1	819.1	857.3
72.5°	437.1	505.1	638.7	747.0	787.3
75°	352.3	432.9	564.5	670.6	708.8
77.5°	273.7	356.5	488.1	575.1	594.2
80°	201.6	286.5	401.1	462.6	486.0
82.5°	129.4	214.3	305.6	350.1	369.2
85°	72.2	142.2	199.5	224.9	233.4
87.5°	29.7	61.5	80.6	91.2	91.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)