

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: P314156

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-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: P314156  
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-CP187-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED 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**

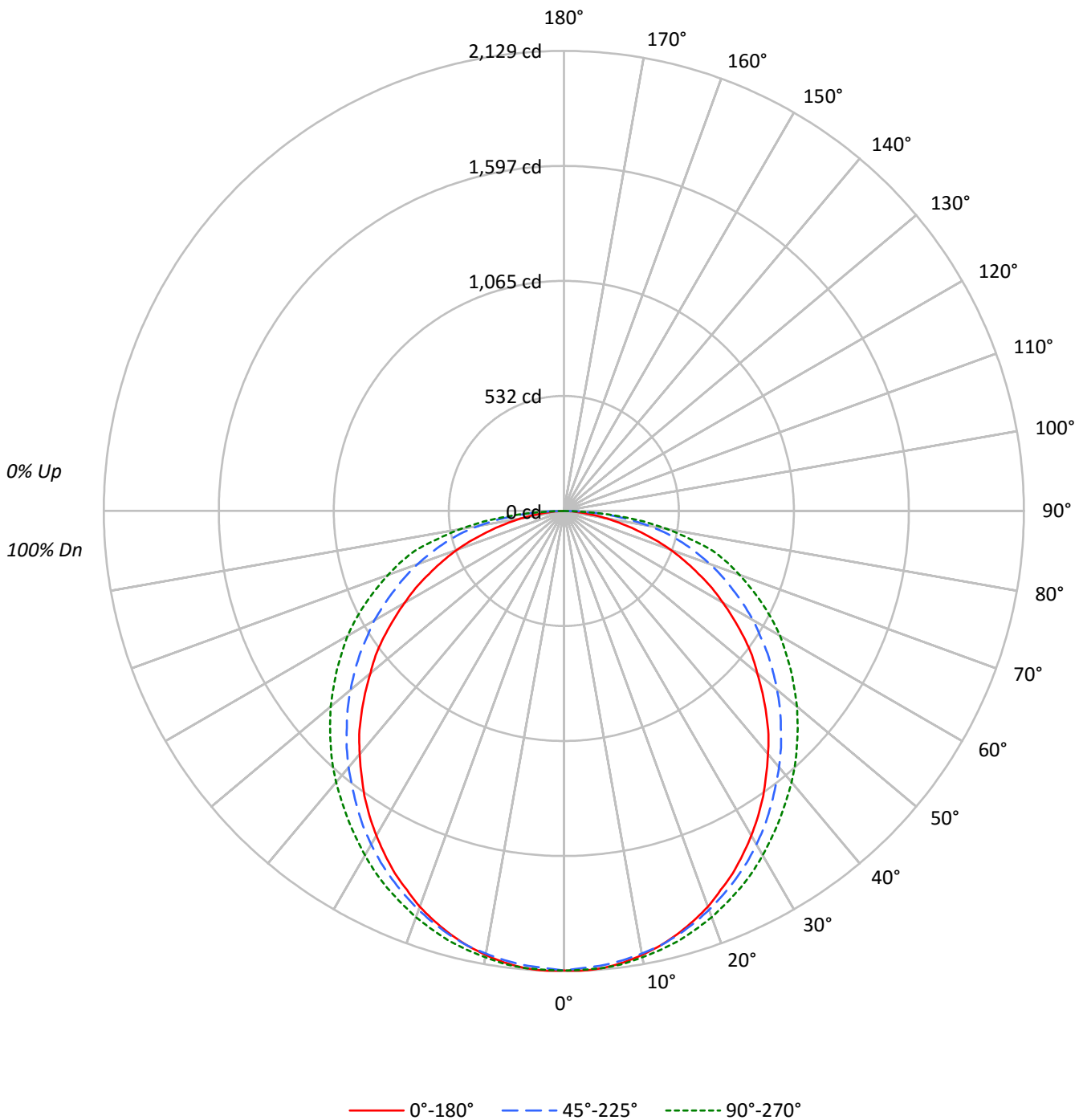
Lumens per Lamp: N/A  
Luminaire Lumens: 6449.0 lumens  
Efficiency: N/A  
Efficacy: 102.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 62.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2862	2862	2862
5°	2867	2849	2867
10°	2850	2842	2865
15°	2825	2831	2867
20°	2791	2812	2865
25°	2748	2792	2862
30°	2696	2769	2859
35°	2643	2741	2861
40°	2582	2721	2879
45°	2520	2703	2903
50°	2445	2696	2947
55°	2384	2700	3007
60°	2292	2724	3109
65°	2187	2752	3222
70°	2071	2837	3401
75°	1847	2959	3715
80°	1575	3133	3797
85°	1122	3105	3634



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.3	3.1
10°-20°	575.5	8.9
20°-30°	869.3	13.5
30°-40°	1047.7	16.2
40°-50°	1099.9	17.1
50°-60°	1029.0	16.0
60°-70°	849.8	13.2
70°-80°	579.1	9.0
80°-90°	197.5	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°	1646.1	25.5
0°-40°	2693.8	41.8
0°-60°	4822.7	74.8
0°-90°	6449.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6449.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2127	2127	2127	2127	2127	
5°	2122	2120	2110	2122	2122	201
15°	2028	2030	2033	2054	2058	572
25°	1851	1859	1881	1917	1928	852
35°	1609	1626	1669	1725	1742	1005
45°	1324	1352	1421	1498	1526	1021
55°	1016	1057	1151	1245	1282	907
65°	687	745	864	974	1012	681
75°	355	436	569	676	715	379
85°	73	143	201	227	235	91
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2126.8	2126.8	2126.8	2126.8	2126.8
2.5°	2129.0	2126.8	2116.1	2126.8	2124.7
5°	2122.5	2120.4	2109.7	2122.5	2122.5
7.5°	2107.6	2107.6	2096.9	2111.8	2114.0
10°	2086.2	2086.2	2079.8	2096.9	2096.9
12.5°	2060.5	2060.5	2060.5	2077.6	2079.8
15°	2028.4	2030.5	2032.7	2054.1	2058.4
17.5°	1989.9	1994.2	2000.6	2026.3	2030.5
20°	1949.2	1953.5	1964.2	1994.2	2000.6
22.5°	1897.9	1908.6	1923.6	1957.8	1964.2
25°	1850.8	1859.4	1880.8	1917.1	1927.8
27.5°	1793.0	1805.9	1833.7	1872.2	1887.2
30°	1735.3	1748.1	1782.3	1827.3	1840.1
32.5°	1673.2	1692.5	1728.8	1775.9	1790.9
35°	1609.0	1626.1	1668.9	1724.6	1741.7
37.5°	1538.4	1562.0	1609.0	1668.9	1690.3
40°	1469.9	1495.6	1549.1	1613.3	1639.0
42.5°	1401.5	1427.2	1487.1	1559.8	1585.5
45°	1324.5	1352.3	1420.7	1497.8	1525.6
47.5°	1247.4	1281.7	1356.5	1437.9	1467.8
50°	1168.3	1206.8	1288.1	1373.7	1407.9
52.5°	1097.6	1134.0	1219.6	1311.6	1343.7
55°	1016.3	1057.0	1151.1	1245.3	1281.7
57.5°	932.9	977.8	1078.4	1181.1	1217.5
60°	851.6	900.8	1012.1	1114.8	1155.4
62.5°	772.4	821.6	937.2	1044.2	1084.8
65°	686.8	744.6	864.4	973.5	1012.1
67.5°	605.5	667.6	793.8	900.8	939.3
70°	526.4	586.3	721.1	825.9	864.4
72.5°	440.8	509.2	644.0	753.2	793.8
75°	355.2	436.5	569.2	676.1	714.6
77.5°	276.0	359.5	492.1	579.8	599.1
80°	203.3	288.9	404.4	466.4	490.0
82.5°	130.5	216.1	308.1	353.0	372.3
85°	72.7	143.4	201.1	226.8	235.4
87.5°	30.0	62.1	81.3	92.0	92.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)