

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: P311121

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA08-W2A-U-3000K**

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: P311121  
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-L82765-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 3000K 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**

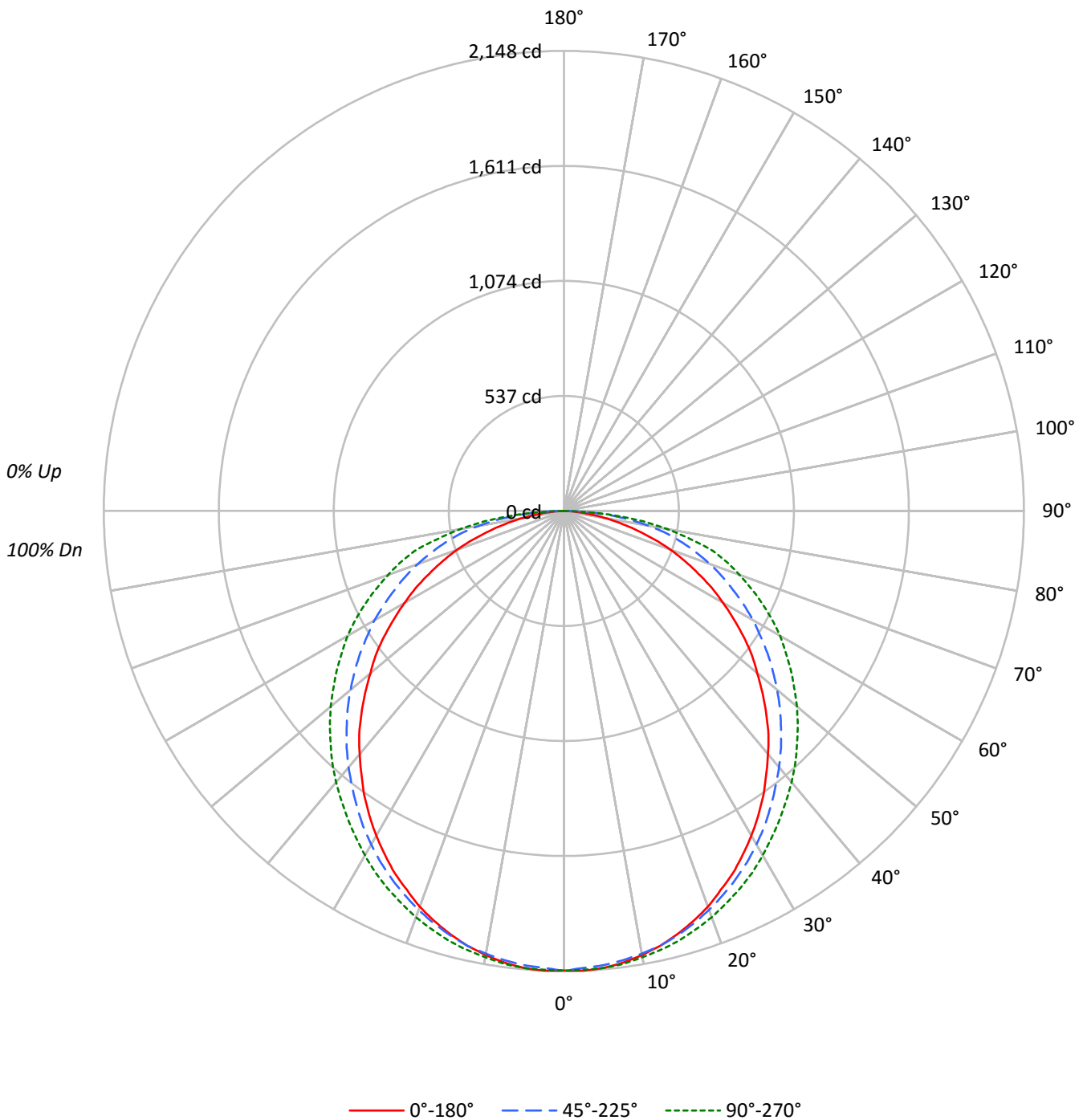
Lumens per Lamp: N/A  
Luminaire Lumens: 6507.0 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 62.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2887	2887	2887
5°	2893	2875	2893
10°	2876	2867	2891
15°	2851	2857	2893
20°	2816	2838	2890
25°	2772	2817	2888
30°	2720	2794	2885
35°	2667	2766	2886
40°	2605	2745	2905
45°	2543	2728	2929
50°	2467	2721	2974
55°	2406	2725	3034
60°	2312	2748	3137
65°	2206	2777	3251
70°	2089	2862	3431
75°	1863	2986	3749
80°	1589	3161	3831
85°	1133	3132	3666



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	203.1	3.1
10°-20°	580.7	8.9
20°-30°	877.1	13.5
30°-40°	1057.1	16.2
40°-50°	1109.8	17.1
50°-60°	1038.3	16.0
60°-70°	857.4	13.2
70°-80°	584.3	9.0
80°-90°	199.2	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°	1660.9	25.5
0°-40°	2718.0	41.8
0°-60°	4866.1	74.8
0°-90°	6507.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6507.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2146	2146	2146	2146	2146	
5°	2142	2140	2129	2142	2142	203
15°	2047	2049	2051	2072	2077	577
25°	1868	1876	1898	1934	1945	859
35°	1624	1641	1684	1740	1757	1015
45°	1336	1364	1434	1511	1539	1031
55°	1026	1066	1162	1256	1293	915
65°	693	751	872	982	1021	687
75°	358	440	574	682	721	382
85°	73	145	203	229	238	92
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2146.0	2146.0	2146.0	2146.0	2146.0
2.5°	2148.1	2146.0	2135.2	2146.0	2143.8
5°	2141.6	2139.5	2128.7	2141.6	2141.6
7.5°	2126.5	2126.5	2115.7	2130.8	2133.0
10°	2104.9	2104.9	2098.5	2115.7	2115.7
12.5°	2079.0	2079.0	2079.0	2096.3	2098.5
15°	2046.6	2048.8	2051.0	2072.5	2076.9
17.5°	2007.8	2012.1	2018.6	2044.5	2048.8
20°	1966.8	1971.1	1981.9	2012.1	2018.6
22.5°	1914.9	1925.7	1940.9	1975.4	1981.9
25°	1867.5	1876.1	1897.7	1934.4	1945.2
27.5°	1809.2	1822.1	1850.2	1889.0	1904.2
30°	1750.9	1763.8	1798.4	1843.7	1856.7
32.5°	1688.3	1707.7	1744.4	1791.9	1807.0
35°	1623.5	1640.8	1683.9	1740.1	1757.3
37.5°	1552.3	1576.0	1623.5	1683.9	1705.5
40°	1483.2	1509.1	1563.0	1627.8	1653.7
42.5°	1414.1	1440.0	1500.4	1573.8	1599.7
45°	1336.4	1364.4	1433.5	1511.2	1539.3
47.5°	1258.6	1293.2	1368.7	1450.8	1481.0
50°	1178.8	1217.6	1299.7	1386.0	1420.6
52.5°	1107.5	1144.2	1230.6	1323.4	1355.8
55°	1025.5	1066.5	1161.5	1256.5	1293.2
57.5°	941.3	986.6	1088.1	1191.7	1228.4
60°	859.2	908.9	1021.2	1124.8	1165.8
62.5°	779.4	829.0	945.6	1053.5	1094.6
65°	693.0	751.3	872.2	982.3	1021.2
67.5°	611.0	673.6	801.0	908.9	947.8
70°	531.1	591.5	727.6	833.3	872.2
72.5°	444.7	513.8	649.8	759.9	801.0
75°	358.4	440.4	574.3	682.2	721.1
77.5°	278.5	362.7	496.5	585.1	604.5
80°	205.1	291.5	408.0	470.6	494.4
82.5°	131.7	218.0	310.9	356.2	375.6
85°	73.4	144.6	202.9	228.8	237.5
87.5°	30.2	62.6	82.0	92.8	92.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)