

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: P311095

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-CP125-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: P311095
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: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 6152.0 lumens
Efficiency: N/A
Efficacy: 106.1 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

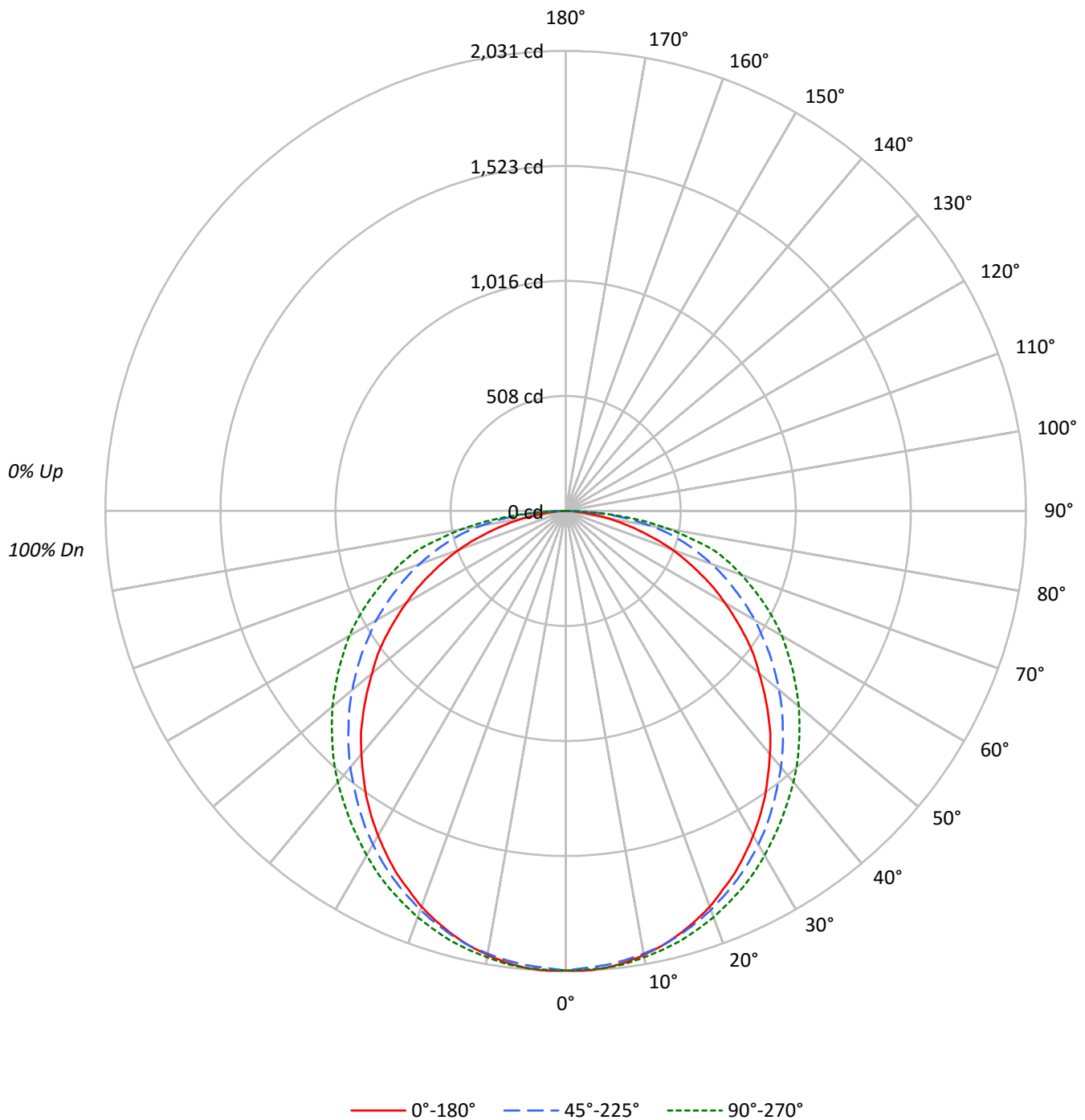
Input Watts (W): 58
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2730	2730	2730
5°	2735	2718	2735
10°	2719	2711	2733
15°	2695	2701	2735
20°	2663	2683	2733
25°	2621	2663	2730
30°	2572	2642	2727
35°	2521	2615	2729
40°	2463	2596	2746
45°	2404	2579	2769
50°	2333	2572	2811
55°	2274	2576	2868
60°	2186	2598	2966
65°	2086	2625	3074
70°	1975	2706	3244
75°	1761	2822	3544
80°	1502	2989	3622
85°	1071	2963	3466



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.0	3.1
10°-20°	549.0	8.9
20°-30°	829.3	13.5
30°-40°	999.4	16.2
40°-50°	1049.2	17.1
50°-60°	981.6	16.0
60°-70°	810.6	13.2
70°-80°	552.4	9.0
80°-90°	188.4	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°	1570.3	25.5
0°-40°	2569.7	41.8
0°-60°	4600.6	74.8
0°-90°	6152.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6152.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2029	2029	2029	2029	2029	
5°	2025	2023	2012	2025	2025	192
15°	1935	1937	1939	1960	1964	545
25°	1766	1774	1794	1829	1839	812
35°	1535	1551	1592	1645	1662	959
45°	1264	1290	1355	1429	1455	974
55°	970	1008	1098	1188	1223	865
65°	655	710	825	929	966	650
75°	339	416	543	645	682	361
85°	69	137	192	216	224	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2028.9	2028.9	2028.9	2028.9	2028.9
2.5°	2030.9	2028.9	2018.7	2028.9	2026.8
5°	2024.8	2022.8	2012.5	2024.8	2024.8
7.5°	2010.5	2010.5	2000.3	2014.6	2016.6
10°	1990.1	1990.1	1984.0	2000.3	2000.3
12.5°	1965.6	1965.6	1965.6	1981.9	1984.0
15°	1935.0	1937.0	1939.1	1959.5	1963.6
17.5°	1898.2	1902.3	1908.4	1932.9	1937.0
20°	1859.5	1863.5	1873.8	1902.3	1908.4
22.5°	1810.5	1820.7	1835.0	1867.6	1873.8
25°	1765.6	1773.7	1794.1	1828.8	1839.1
27.5°	1710.5	1722.7	1749.2	1786.0	1800.3
30°	1655.4	1667.6	1700.3	1743.1	1755.4
32.5°	1596.2	1614.5	1649.2	1694.1	1708.4
35°	1534.9	1551.3	1592.1	1645.1	1661.5
37.5°	1467.6	1490.0	1534.9	1592.1	1612.5
40°	1402.3	1426.7	1477.8	1539.0	1563.5
42.5°	1336.9	1361.4	1418.6	1488.0	1512.5
45°	1263.5	1290.0	1355.3	1428.8	1455.3
47.5°	1190.0	1222.6	1294.1	1371.6	1400.2
50°	1114.5	1151.2	1228.8	1310.4	1343.1
52.5°	1047.1	1081.8	1163.4	1251.2	1281.8
55°	969.5	1008.3	1098.1	1187.9	1222.6
57.5°	889.9	932.8	1028.7	1126.7	1161.4
60°	812.4	859.3	965.5	1063.4	1102.2
62.5°	736.8	783.8	894.0	996.1	1034.8
65°	655.2	710.3	824.6	928.7	965.5
67.5°	577.6	636.8	757.3	859.3	896.1
70°	502.1	559.3	687.9	787.9	824.6
72.5°	420.5	485.8	614.4	718.5	757.3
75°	338.8	416.4	542.9	645.0	681.7
77.5°	263.3	342.9	469.5	553.1	571.5
80°	193.9	275.6	385.8	445.0	467.4
82.5°	124.5	206.2	293.9	336.8	355.2
85°	69.4	136.8	191.9	216.4	224.5
87.5°	28.6	59.2	77.6	87.8	87.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)