

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: P311098

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5000K**

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: P311098
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-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5000K 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: 6485.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

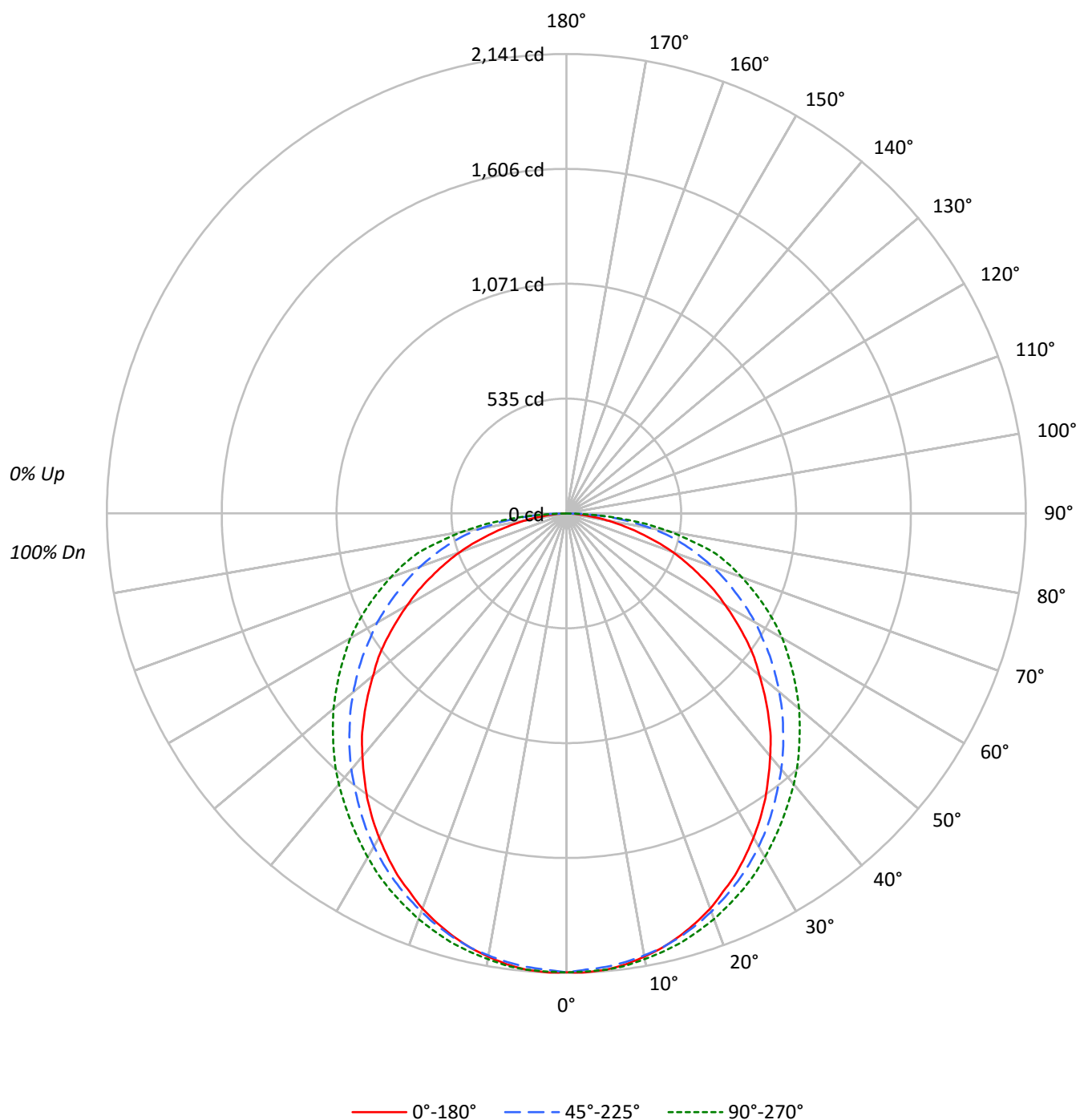
Input Watts (W): 59.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311098

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P311098

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5000K

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°	2878	2878	2878
5°	2883	2865	2883
10°	2866	2857	2881
15°	2841	2847	2883
20°	2807	2828	2881
25°	2763	2808	2878
30°	2711	2785	2875
35°	2658	2757	2877
40°	2596	2736	2895
45°	2534	2719	2919
50°	2459	2711	2964
55°	2397	2715	3023
60°	2304	2739	3127
65°	2199	2767	3240
70°	2082	2853	3419
75°	1857	2975	3736
80°	1584	3151	3818
85°	1130	3123	3654



TEST NUMBER: P311098

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.4	3.1
10°-20°	578.7	8.9
20°-30°	874.1	13.5
30°-40°	1053.5	16.2
40°-50°	1106.0	17.1
50°-60°	1034.8	16.0
60°-70°	854.5	13.2
70°-80°	582.3	9.0
80°-90°	198.6	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°	1655.3	25.5
0°-40°	2708.8	41.8
0°-60°	4849.6	74.8
0°-90°	6485.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6485.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2139	2139	2139	2139	2139	
5°	2134	2132	2122	2134	2134	203
15°	2040	2042	2044	2066	2070	575
25°	1861	1870	1891	1928	1939	856
35°	1618	1635	1678	1734	1751	1011
45°	1332	1360	1429	1506	1534	1027
55°	1022	1063	1158	1252	1289	912
65°	691	749	869	979	1018	685
75°	357	439	572	680	719	381
85°	73	144	202	228	237	92
90°	0	0	0	0	0	



TEST NUMBER: P311098

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2138.7	2138.7	2138.7	2138.7	2138.7
2.5°	2140.8	2138.7	2127.9	2138.7	2136.5
5°	2134.4	2132.2	2121.5	2134.4	2134.4
7.5°	2119.3	2119.3	2108.6	2123.6	2125.8
10°	2097.8	2097.8	2091.4	2108.6	2108.6
12.5°	2072.0	2072.0	2072.0	2089.2	2091.4
15°	2039.7	2041.9	2044.0	2065.5	2069.8
17.5°	2001.0	2005.3	2011.8	2037.6	2041.9
20°	1960.1	1964.4	1975.2	2005.3	2011.8
22.5°	1908.5	1919.2	1934.3	1968.7	1975.2
25°	1861.1	1869.7	1891.3	1927.8	1938.6
27.5°	1803.0	1816.0	1843.9	1882.7	1897.7
30°	1745.0	1757.9	1792.3	1837.5	1850.4
32.5°	1682.6	1701.9	1738.5	1785.8	1800.9
35°	1618.0	1635.2	1678.3	1734.2	1751.4
37.5°	1547.0	1570.7	1618.0	1678.3	1699.8
40°	1478.2	1504.0	1557.8	1622.3	1648.1
42.5°	1409.3	1435.1	1495.4	1568.5	1594.3
45°	1331.8	1359.8	1428.7	1506.1	1534.1
47.5°	1254.4	1288.8	1364.1	1445.9	1476.0
50°	1174.8	1213.5	1295.3	1381.3	1415.8
52.5°	1103.8	1140.4	1226.4	1318.9	1351.2
55°	1022.0	1062.9	1157.6	1252.2	1288.8
57.5°	938.1	983.3	1084.4	1187.7	1224.3
60°	856.3	905.8	1017.7	1121.0	1161.9
62.5°	776.7	826.2	942.4	1050.0	1090.9
65°	690.7	748.8	869.2	979.0	1017.7
67.5°	608.9	671.3	798.2	905.8	944.6
70°	529.3	589.5	725.1	830.5	869.2
72.5°	443.2	512.1	647.6	757.4	798.2
75°	357.2	438.9	572.3	679.9	718.6
77.5°	277.6	361.5	494.9	583.1	602.4
80°	204.4	290.5	406.7	469.1	492.7
82.5°	131.2	217.3	309.8	355.0	374.4
85°	73.2	144.2	202.3	228.1	236.7
87.5°	30.1	62.4	81.8	92.5	92.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)