

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: P311099

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5500K**

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: P311099
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-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5500K 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: 6550.0 lumens
Efficiency: N/A
Efficacy: 110.5 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

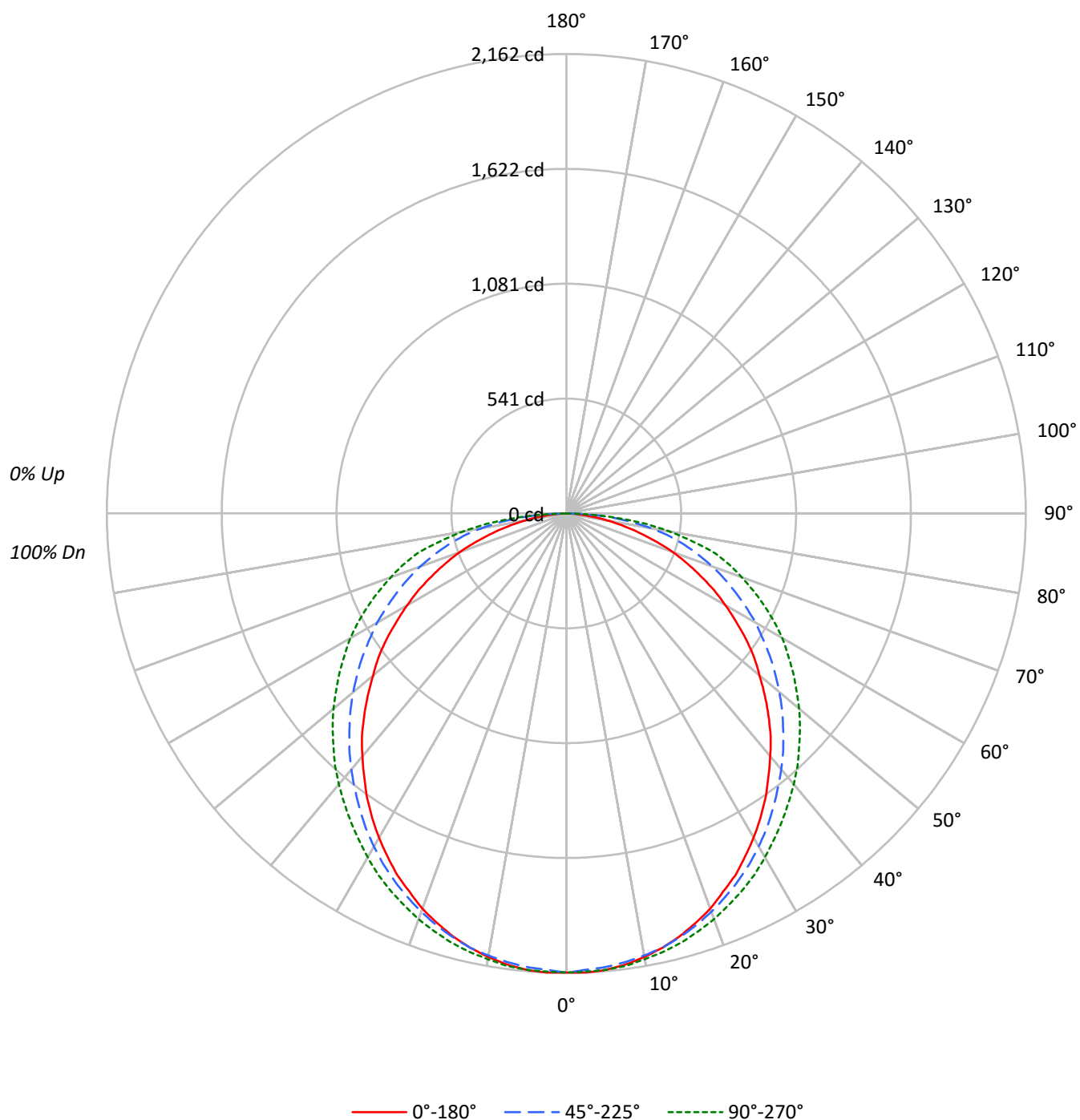
Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311099

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P311099

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5500K

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°	2906	2906	2906
5°	2912	2894	2912
10°	2895	2886	2910
15°	2870	2876	2912
20°	2835	2857	2909
25°	2791	2836	2907
30°	2738	2813	2904
35°	2684	2784	2906
40°	2622	2764	2924
45°	2560	2746	2948
50°	2484	2738	2993
55°	2422	2743	3054
60°	2327	2766	3158
65°	2221	2795	3273
70°	2103	2881	3454
75°	1875	3005	3773
80°	1600	3182	3856
85°	1141	3154	3690



TEST NUMBER: P311099

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.4	3.1
10°-20°	584.5	8.9
20°-30°	882.9	13.5
30°-40°	1064.1	16.2
40°-50°	1117.1	17.1
50°-60°	1045.1	16.0
60°-70°	863.1	13.2
70°-80°	588.1	9.0
80°-90°	200.6	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°	1671.9	25.5
0°-40°	2736.0	41.8
0°-60°	4898.2	74.8
0°-90°	6550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6550.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2160	2160	2160	2160	2160	
5°	2156	2154	2143	2156	2156	205
15°	2060	2062	2064	2086	2091	581
25°	1880	1888	1910	1947	1958	865
35°	1634	1652	1695	1752	1769	1021
45°	1345	1373	1443	1521	1550	1037
55°	1032	1074	1169	1265	1302	921
65°	698	756	878	989	1028	692
75°	361	443	578	687	726	385
85°	74	146	204	230	239	93
90°	0	0	0	0	0	



TEST NUMBER: P311099

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-CP125-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2160.1	2160.1	2160.1	2160.1	2160.1
2.5°	2162.3	2160.1	2149.3	2160.1	2158.0
5°	2155.8	2153.6	2142.7	2155.8	2155.8
7.5°	2140.6	2140.6	2129.7	2144.9	2147.1
10°	2118.8	2118.8	2112.3	2129.7	2129.7
12.5°	2092.8	2092.8	2092.8	2110.2	2112.3
15°	2060.2	2062.3	2064.5	2086.2	2090.6
17.5°	2021.1	2025.4	2031.9	2058.0	2062.3
20°	1979.8	1984.1	1995.0	2025.4	2031.9
22.5°	1927.6	1938.5	1953.7	1988.5	1995.0
25°	1879.8	1888.5	1910.2	1947.2	1958.0
27.5°	1821.1	1834.2	1862.4	1901.5	1916.7
30°	1762.4	1775.5	1810.3	1855.9	1868.9
32.5°	1699.4	1719.0	1755.9	1803.7	1818.9
35°	1634.2	1651.6	1695.1	1751.6	1769.0
37.5°	1562.5	1586.4	1634.2	1695.1	1716.8
40°	1493.0	1519.0	1573.4	1638.6	1664.6
42.5°	1423.4	1449.5	1510.4	1584.2	1610.3
45°	1345.2	1373.4	1443.0	1521.2	1549.5
47.5°	1267.0	1301.7	1377.8	1460.4	1490.8
50°	1186.6	1225.7	1308.2	1395.2	1429.9
52.5°	1114.8	1151.8	1238.7	1332.2	1364.8
55°	1032.3	1073.5	1169.2	1264.8	1301.7
57.5°	947.5	993.1	1095.3	1199.6	1236.5
60°	864.9	914.9	1027.9	1132.2	1173.5
62.5°	784.5	834.5	951.8	1060.5	1101.8
65°	697.6	756.3	878.0	988.8	1027.9
67.5°	615.0	678.0	806.2	914.9	954.0
70°	534.6	595.4	732.4	838.8	878.0
72.5°	447.7	517.2	654.1	765.0	806.2
75°	360.7	443.3	578.1	686.7	725.8
77.5°	280.3	365.1	499.8	588.9	608.5
80°	206.5	293.4	410.7	473.8	497.7
82.5°	132.6	219.5	312.9	358.6	378.1
85°	73.9	145.6	204.3	230.4	239.0
87.5°	30.4	63.0	82.6	93.4	93.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)