

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: P311772

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-CP125-W2A-U-4500K**

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: P311772  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
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-S-CP125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4500K 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: 6723.0 lumens  
Efficiency: N/A  
Efficacy: 114.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

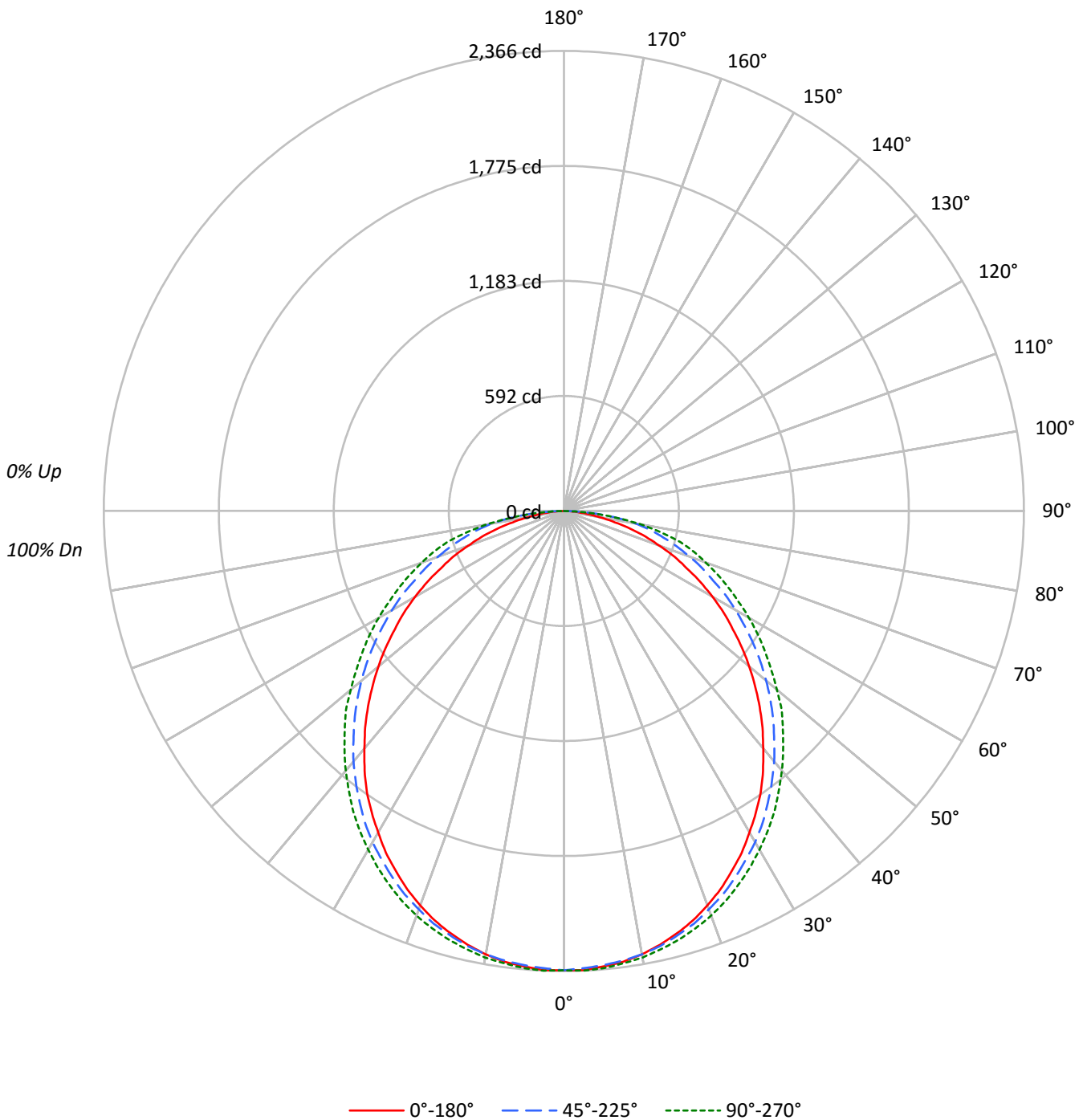
Input Watts (W): 58.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-70HE-UNV-L82765-S-CP125-W2A-U-4500K

**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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3178	3178	3178
5°	3176	3167	3187
10°	3163	3163	3186
15°	3132	3147	3180
20°	3091	3122	3171
25°	3034	3091	3151
30°	2966	3056	3125
35°	2901	3006	3101
40°	2802	2956	3064
45°	2710	2897	3031
50°	2606	2843	2995
55°	2490	2790	2966
60°	2373	2747	2960
65°	2223	2699	2978
70°	2058	2714	3058
75°	1843	2764	3230
80°	1489	2929	3161
85°	1121	2572	2506



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	223.6	3.3
10°-20°	638.9	9.5
20°-30°	960.4	14.3
30°-40°	1144.0	17.0
40°-50°	1170.8	17.4
50°-60°	1054.1	15.7
60°-70°	827.8	12.3
70°-80°	537.2	8.0
80°-90°	166.2	2.5
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°	1822.9	27.1
0°-40°	2966.9	44.1
0°-60°	5191.8	77.2
0°-90°	6723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6723.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2362	2362	2362	2362	2362	
5°	2351	2355	2345	2358	2360	223
15°	2249	2255	2259	2279	2283	634
25°	2044	2061	2082	2116	2123	941
35°	1766	1787	1830	1875	1888	1102
45°	1424	1458	1523	1580	1593	1098
55°	1061	1108	1190	1251	1264	951
65°	698	752	848	918	935	695
75°	354	423	532	604	621	375
85°	73	134	167	162	162	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2361.8	2361.8	2361.8	2361.8	2361.8
2.5°	2364.0	2364.0	2353.3	2364.0	2366.1
5°	2351.2	2355.4	2344.8	2357.6	2359.7
7.5°	2338.3	2338.3	2331.9	2344.8	2346.9
10°	2314.9	2317.0	2314.9	2329.8	2331.9
12.5°	2285.0	2289.2	2291.4	2306.3	2308.4
15°	2248.7	2255.1	2259.3	2278.6	2282.8
17.5°	2208.1	2214.5	2225.2	2246.5	2250.8
20°	2159.0	2167.5	2180.3	2208.1	2214.5
22.5°	2105.6	2114.1	2135.5	2161.1	2171.8
25°	2043.6	2060.7	2082.1	2116.3	2122.7
27.5°	1981.7	1996.7	2024.4	2060.7	2069.3
30°	1909.1	1932.6	1966.8	2003.1	2011.6
32.5°	1838.6	1862.1	1902.7	1941.1	1951.8
35°	1766.0	1787.4	1830.1	1874.9	1887.8
37.5°	1682.8	1710.5	1757.5	1802.3	1815.2
40°	1595.2	1629.4	1682.8	1729.7	1744.7
42.5°	1511.9	1548.2	1601.6	1652.9	1669.9
45°	1424.4	1458.5	1522.6	1580.3	1593.1
47.5°	1334.7	1373.1	1441.4	1499.1	1520.5
50°	1245.0	1285.6	1358.2	1418.0	1430.8
52.5°	1155.3	1198.0	1274.9	1338.9	1345.3
55°	1061.3	1108.3	1189.5	1251.4	1264.2
57.5°	975.9	1016.5	1104.0	1168.1	1183.1
60°	882.0	926.8	1020.8	1080.5	1099.8
62.5°	792.3	839.2	937.5	997.3	1014.3
65°	698.3	751.7	847.8	918.3	935.3
67.5°	617.2	668.4	770.9	839.2	856.3
70°	523.2	580.8	689.8	760.2	777.3
72.5°	442.0	501.8	610.7	679.1	704.7
75°	354.5	422.8	531.7	604.3	621.4
77.5°	269.1	348.1	459.1	514.6	514.6
80°	192.2	275.5	378.0	403.6	407.9
82.5°	126.0	207.1	279.7	277.6	277.6
85°	72.6	134.5	166.6	162.3	162.3
87.5°	27.8	55.5	59.8	59.8	57.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)