

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: P311763

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-CA125-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: P311763
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 6857.0 lumens
Efficiency: N/A
Efficacy: 116.6 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

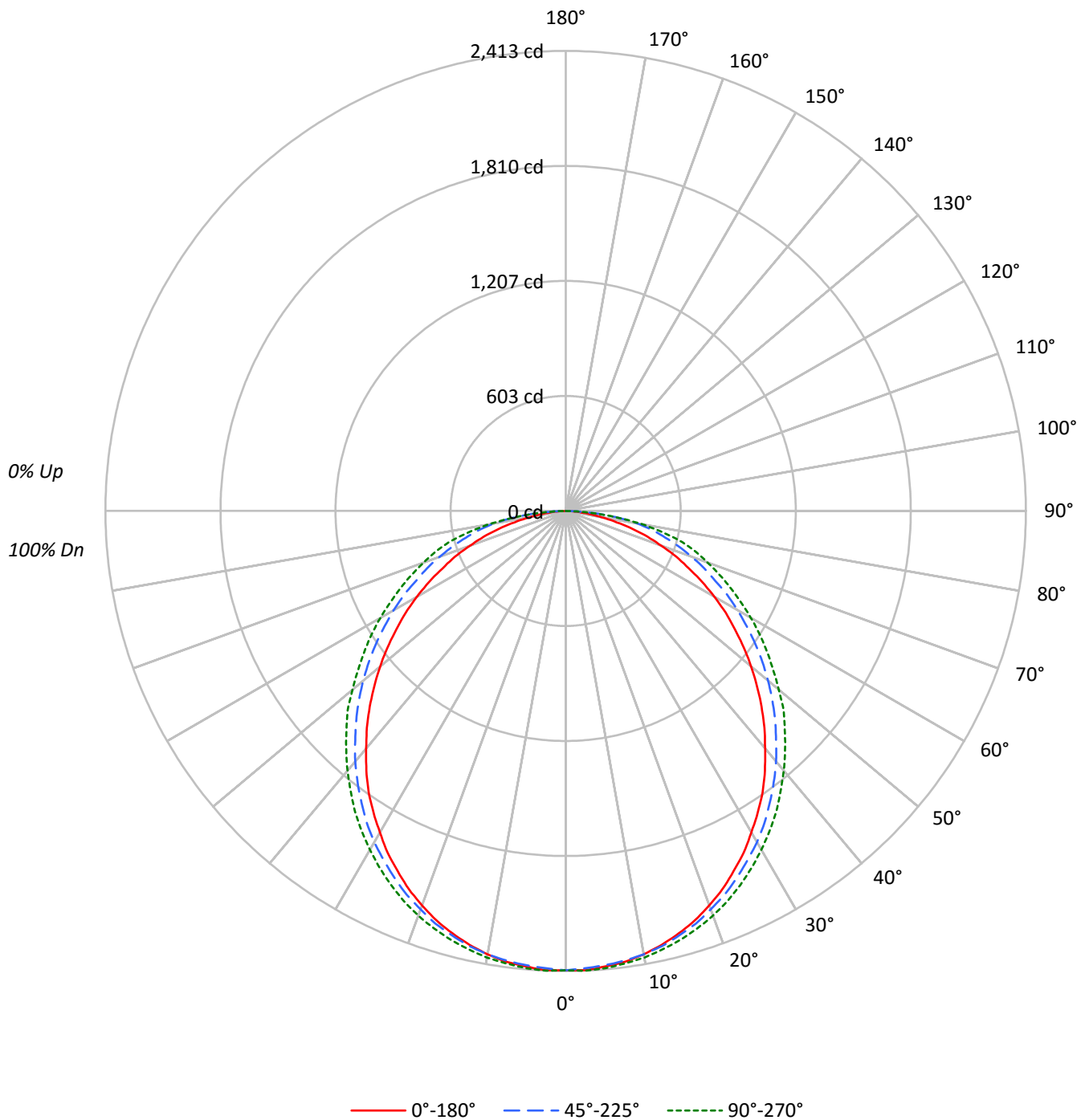
Input Watts (W): 58.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3241	3241	3241
5°	3239	3230	3251
10°	3226	3226	3249
15°	3195	3210	3243
20°	3153	3184	3234
25°	3094	3153	3214
30°	3025	3117	3188
35°	2959	3066	3163
40°	2858	3015	3126
45°	2764	2955	3092
50°	2658	2900	3055
55°	2539	2846	3025
60°	2421	2802	3018
65°	2267	2753	3037
70°	2099	2768	3119
75°	1880	2819	3295
80°	1519	2987	3223
85°	1144	2623	2555



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.1	3.3
10°-20°	651.6	9.5
20°-30°	979.5	14.3
30°-40°	1166.8	17.0
40°-50°	1194.2	17.4
50°-60°	1075.1	15.7
60°-70°	844.3	12.3
70°-80°	548.0	8.0
80°-90°	169.5	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°	1859.2	27.1
0°-40°	3026.0	44.1
0°-60°	5295.3	77.2
0°-90°	6857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2409	2409	2409	2409	2409	
5°	2398	2402	2392	2405	2407	228
15°	2294	2300	2304	2324	2328	647
25°	2084	2102	2124	2158	2165	960
35°	1801	1823	1867	1912	1925	1124
45°	1453	1488	1553	1612	1625	1120
55°	1082	1130	1213	1276	1289	970
65°	712	767	865	937	954	709
75°	362	431	542	616	634	383
85°	74	137	170	166	166	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2408.9	2408.9	2408.9	2408.9	2408.9
2.5°	2411.1	2411.1	2400.2	2411.1	2413.3
5°	2398.0	2402.4	2391.5	2404.6	2406.7
7.5°	2385.0	2385.0	2378.4	2391.5	2393.7
10°	2361.0	2363.2	2361.0	2376.2	2378.4
12.5°	2330.5	2334.9	2337.0	2352.3	2354.5
15°	2293.5	2300.0	2304.4	2324.0	2328.3
17.5°	2252.1	2258.6	2269.5	2291.3	2295.7
20°	2202.0	2210.7	2223.8	2252.1	2258.6
22.5°	2147.5	2156.3	2178.0	2204.2	2215.1
25°	2084.4	2101.8	2123.6	2158.4	2165.0
27.5°	2021.2	2036.5	2064.8	2101.8	2110.5
30°	1947.2	1971.1	2006.0	2043.0	2051.7
32.5°	1875.3	1899.2	1940.6	1979.8	1990.7
35°	1801.2	1823.0	1866.6	1912.3	1925.4
37.5°	1716.3	1744.6	1792.5	1838.3	1851.3
40°	1627.0	1661.8	1716.3	1764.2	1779.5
42.5°	1542.1	1579.1	1633.5	1685.8	1703.2
45°	1452.8	1487.6	1552.9	1611.7	1624.8
47.5°	1361.3	1400.5	1470.2	1529.0	1550.8
50°	1269.8	1311.2	1385.2	1446.2	1459.3
52.5°	1178.3	1221.9	1300.3	1365.6	1372.2
55°	1082.5	1130.4	1213.2	1276.3	1289.4
57.5°	995.4	1036.7	1126.0	1191.4	1206.6
60°	899.5	945.3	1041.1	1102.1	1121.7
62.5°	808.1	856.0	956.2	1017.1	1034.6
65°	712.2	766.7	864.7	936.6	954.0
67.5°	629.5	681.7	786.3	856.0	873.4
70°	533.6	592.4	703.5	775.4	792.8
72.5°	450.9	511.8	622.9	692.6	718.8
75°	361.6	431.3	542.3	616.4	633.8
77.5°	274.4	355.0	468.3	524.9	524.9
80°	196.0	281.0	385.5	411.6	416.0
82.5°	128.5	211.3	285.3	283.1	283.1
85°	74.1	137.2	169.9	165.5	165.5
87.5°	28.3	56.6	61.0	61.0	58.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)