

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: P311801

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA08-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: P311801
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: 24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 7530.0 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

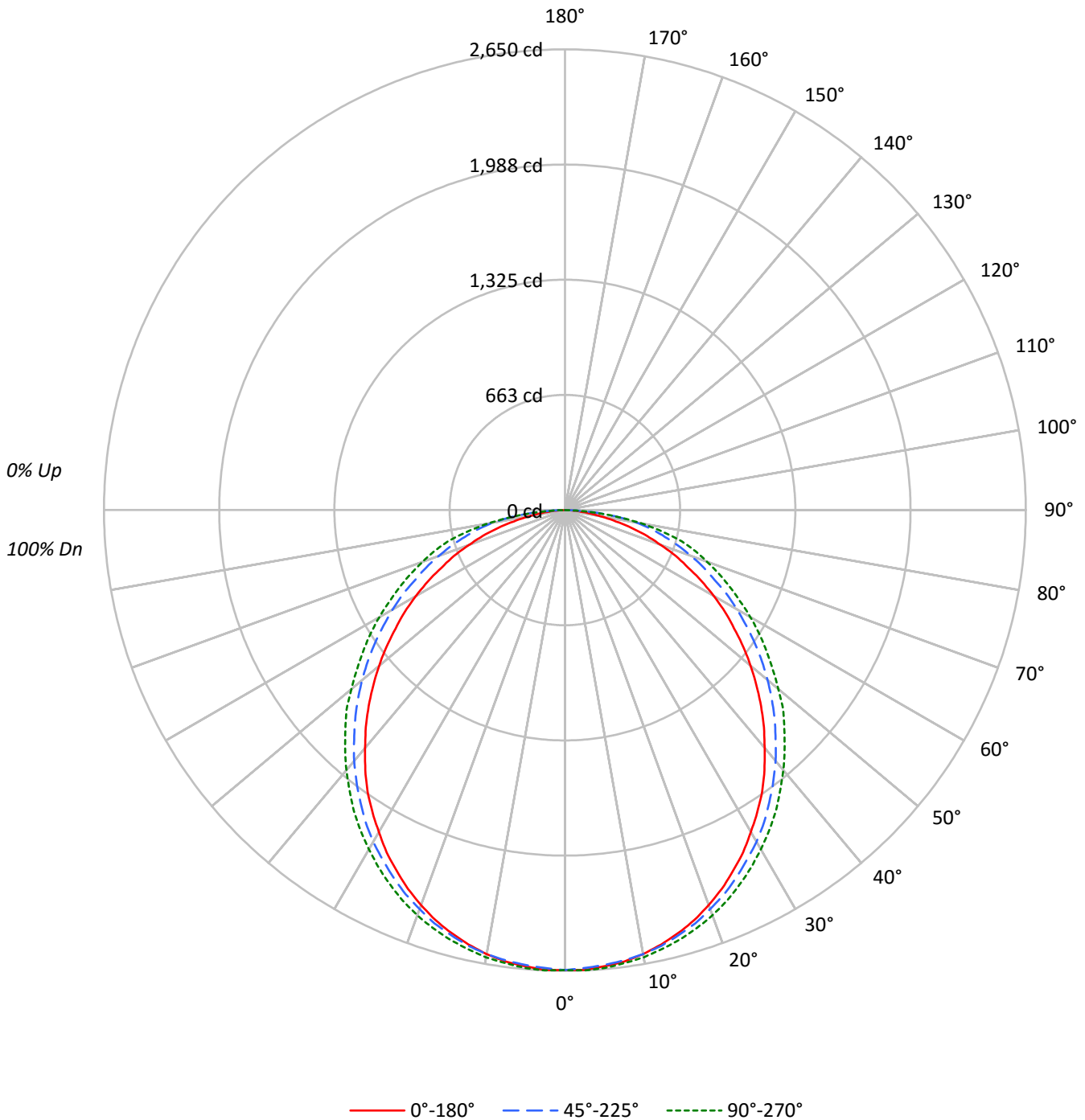
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	3559	3559	3559
5°	3557	3547	3570
10°	3542	3542	3568
15°	3508	3525	3562
20°	3462	3497	3551
25°	3398	3462	3530
30°	3322	3423	3501
35°	3249	3367	3473
40°	3138	3310	3432
45°	3036	3245	3395
50°	2919	3184	3354
55°	2788	3125	3321
60°	2658	3077	3315
65°	2490	3023	3335
70°	2305	3039	3425
75°	2064	3096	3618
80°	1668	3280	3539
85°	1255	2881	2807



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.4	3.3
10°-20°	715.6	9.5
20°-30°	1075.7	14.3
30°-40°	1281.3	17.0
40°-50°	1311.4	17.4
50°-60°	1180.6	15.7
60°-70°	927.2	12.3
70°-80°	601.8	8.0
80°-90°	186.1	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°	2041.7	27.1
0°-40°	3323.0	44.1
0°-60°	5815.0	77.2
0°-90°	7530.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7530.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2645	2645	2645	2645	2645	
5°	2633	2638	2626	2641	2643	250
15°	2519	2526	2530	2552	2557	710
25°	2289	2308	2332	2370	2378	1054
35°	1978	2002	2050	2100	2114	1234
45°	1595	1634	1705	1770	1784	1230
55°	1189	1241	1332	1402	1416	1066
65°	782	842	950	1028	1048	779
75°	397	474	596	677	696	420
85°	81	151	187	182	182	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2645.3	2645.3	2645.3	2645.3	2645.3
2.5°	2647.7	2647.7	2635.8	2647.7	2650.1
5°	2633.4	2638.2	2626.2	2640.6	2642.9
7.5°	2619.0	2619.0	2611.9	2626.2	2628.6
10°	2592.7	2595.1	2592.7	2609.5	2611.9
12.5°	2559.2	2564.0	2566.4	2583.2	2585.5
15°	2518.6	2525.7	2530.5	2552.1	2556.8
17.5°	2473.1	2480.3	2492.3	2516.2	2521.0
20°	2418.1	2427.7	2442.0	2473.1	2480.3
22.5°	2358.3	2367.9	2391.8	2420.5	2432.5
25°	2289.0	2308.1	2332.0	2370.3	2377.5
27.5°	2219.6	2236.3	2267.4	2308.1	2317.7
30°	2138.3	2164.6	2202.9	2243.5	2253.1
32.5°	2059.3	2085.7	2131.1	2174.2	2186.1
35°	1978.0	2001.9	2049.8	2100.0	2114.4
37.5°	1884.7	1915.8	1968.5	2018.7	2033.0
40°	1786.7	1824.9	1884.7	1937.4	1954.1
42.5°	1693.4	1734.1	1793.9	1851.3	1870.4
45°	1595.3	1633.6	1705.4	1769.9	1784.3
47.5°	1494.9	1537.9	1614.5	1679.0	1703.0
50°	1394.4	1439.9	1521.2	1588.2	1602.5
52.5°	1294.0	1341.8	1427.9	1499.7	1506.8
55°	1188.7	1241.3	1332.2	1401.6	1415.9
57.5°	1093.1	1138.5	1236.6	1308.3	1325.1
60°	987.8	1038.0	1143.3	1210.3	1231.8
62.5°	887.4	940.0	1050.0	1117.0	1136.1
65°	782.1	841.9	949.5	1028.5	1047.6
67.5°	691.2	748.6	863.4	940.0	959.1
70°	586.0	650.6	772.6	851.5	870.6
72.5°	495.1	562.1	684.1	760.6	789.3
75°	397.0	473.6	595.6	676.9	696.0
77.5°	301.4	389.9	514.2	576.4	576.4
80°	215.3	308.5	423.3	452.1	456.8
82.5°	141.1	232.0	313.3	310.9	310.9
85°	81.3	150.7	186.6	181.8	181.8
87.5°	31.1	62.2	67.0	67.0	64.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)