

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: P311802

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-5700K**

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: P311802
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5700K 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: 7550.0 lumens
Efficiency: N/A
Efficacy: 116.9 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

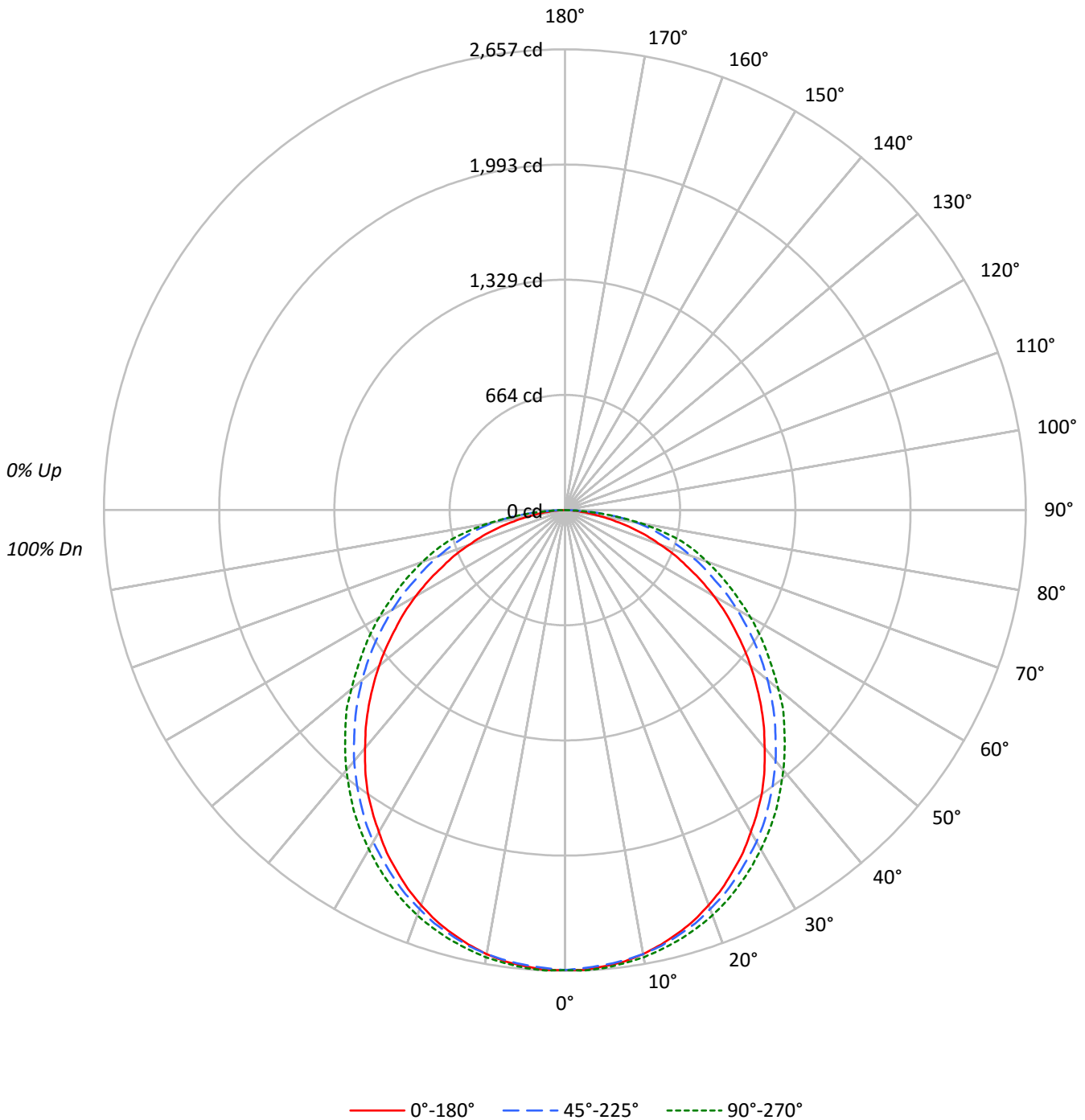
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-75HE-UNV-L82765-S-CA08-W2A-U-5700K

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°	3569	3569	3569
5°	3566	3556	3579
10°	3552	3552	3578
15°	3518	3534	3571
20°	3471	3506	3561
25°	3407	3471	3539
30°	3331	3432	3510
35°	3258	3376	3482
40°	3146	3319	3441
45°	3044	3254	3404
50°	2927	3193	3363
55°	2796	3134	3330
60°	2665	3085	3324
65°	2497	3031	3344
70°	2311	3047	3434
75°	2070	3104	3628
80°	1672	3289	3549
85°	1258	2888	2814



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.1	3.3
10°-20°	717.5	9.5
20°-30°	1078.5	14.3
30°-40°	1284.7	17.0
40°-50°	1314.8	17.4
50°-60°	1183.7	15.7
60°-70°	929.6	12.3
70°-80°	603.3	8.0
80°-90°	186.6	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°	2047.1	27.1
0°-40°	3331.8	44.1
0°-60°	5830.4	77.2
0°-90°	7550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7550.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2652	2652	2652	2652	2652	
5°	2640	2645	2633	2648	2650	251
15°	2525	2532	2537	2559	2564	712
25°	2295	2314	2338	2377	2384	1057
35°	1983	2007	2055	2106	2120	1237
45°	1600	1638	1710	1775	1789	1233
55°	1192	1245	1336	1405	1420	1069
65°	784	844	952	1031	1050	781
75°	398	475	597	679	698	421
85°	82	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°	2652.4	2652.4	2652.4	2652.4	2652.4
2.5°	2654.8	2654.8	2642.8	2654.8	2657.2
5°	2640.4	2645.2	2633.2	2647.6	2650.0
7.5°	2626.0	2626.0	2618.8	2633.2	2635.6
10°	2599.6	2602.0	2599.6	2616.4	2618.8
12.5°	2566.0	2570.8	2573.2	2590.0	2592.4
15°	2525.3	2532.5	2537.3	2558.8	2563.6
17.5°	2479.7	2486.9	2498.9	2522.9	2527.7
20°	2424.5	2434.1	2448.5	2479.7	2486.9
22.5°	2364.6	2374.2	2398.2	2426.9	2438.9
25°	2295.0	2314.2	2338.2	2376.6	2383.8
27.5°	2225.5	2242.3	2273.5	2314.2	2323.8
30°	2144.0	2170.3	2208.7	2249.5	2259.1
32.5°	2064.8	2091.2	2136.8	2179.9	2191.9
35°	1983.3	2007.3	2055.2	2105.6	2120.0
37.5°	1889.7	1920.9	1973.7	2024.0	2038.4
40°	1791.4	1829.8	1889.7	1942.5	1959.3
42.5°	1697.9	1738.7	1798.6	1856.2	1875.4
45°	1599.6	1637.9	1709.9	1774.6	1789.0
47.5°	1498.8	1542.0	1618.8	1683.5	1707.5
50°	1398.1	1443.7	1525.2	1592.4	1606.8
52.5°	1297.4	1345.4	1431.7	1503.6	1510.8
55°	1191.9	1244.6	1335.8	1405.3	1419.7
57.5°	1096.0	1141.5	1239.8	1311.8	1328.6
60°	990.4	1040.8	1146.3	1213.5	1235.1
62.5°	889.7	942.5	1052.8	1119.9	1139.1
65°	784.2	844.2	952.1	1031.2	1050.4
67.5°	693.1	750.6	865.7	942.5	961.7
70°	587.5	652.3	774.6	853.7	872.9
72.5°	496.4	563.6	685.9	762.6	791.4
75°	398.1	474.8	597.1	678.7	697.9
77.5°	302.2	390.9	515.6	578.0	578.0
80°	215.8	309.4	424.5	453.3	458.0
82.5°	141.5	232.6	314.2	311.8	311.8
85°	81.5	151.1	187.1	182.3	182.3
87.5°	31.2	62.4	67.1	67.1	64.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)