

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: P314517

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-S-CA08-W2A-U-4000K**

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: P314517
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-L83050-S-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 4000K 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: 7604.0 lumens
Efficiency: N/A
Efficacy: 118.4 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

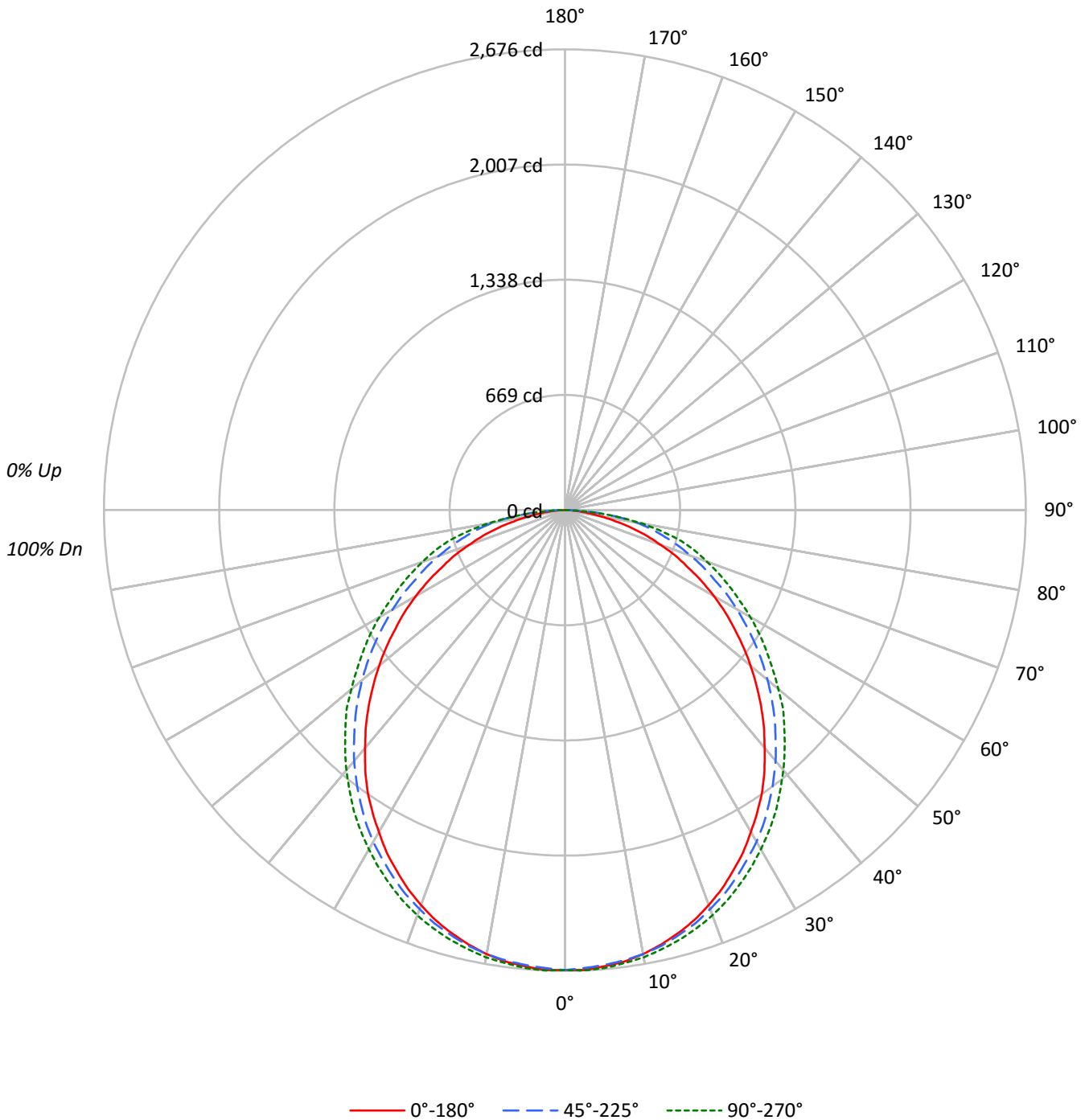
Input Watts (W): 64.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3594	3594	3594
5°	3592	3582	3605
10°	3577	3577	3603
15°	3543	3560	3597
20°	3496	3531	3586
25°	3432	3496	3564
30°	3355	3456	3535
35°	3281	3400	3507
40°	3169	3343	3466
45°	3065	3277	3428
50°	2947	3215	3387
55°	2816	3156	3354
60°	2684	3107	3347
65°	2514	3053	3368
70°	2328	3069	3459
75°	2084	3126	3654
80°	1684	3312	3574
85°	1267	2908	2834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.9	3.3
10°-20°	722.6	9.5
20°-30°	1086.3	14.3
30°-40°	1293.9	17.0
40°-50°	1324.2	17.4
50°-60°	1192.2	15.7
60°-70°	936.3	12.3
70°-80°	607.7	8.0
80°-90°	187.9	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°	2061.8	27.1
0°-40°	3355.7	44.1
0°-60°	5872.1	77.2
0°-90°	7604.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7604.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2671	2671	2671	2671	2671	
5°	2659	2664	2652	2666	2669	253
15°	2543	2551	2555	2577	2582	717
25°	2312	2331	2355	2394	2401	1065
35°	1998	2022	2070	2121	2135	1246
45°	1611	1650	1722	1787	1802	1242
55°	1200	1254	1345	1415	1430	1076
65°	790	850	959	1039	1058	786
75°	401	478	601	684	703	424
85°	82	152	188	184	184	99
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2671.3	2671.3	2671.3	2671.3	2671.3
2.5°	2673.8	2673.8	2661.7	2673.8	2676.2
5°	2659.3	2664.1	2652.0	2666.5	2668.9
7.5°	2644.8	2644.8	2637.5	2652.0	2654.4
10°	2618.2	2620.6	2618.2	2635.1	2637.5
12.5°	2584.4	2589.2	2591.6	2608.5	2611.0
15°	2543.3	2550.6	2555.4	2577.1	2582.0
17.5°	2497.4	2504.7	2516.8	2540.9	2545.7
20°	2441.9	2451.5	2466.0	2497.4	2504.7
22.5°	2381.5	2391.2	2415.3	2444.3	2456.4
25°	2311.5	2330.8	2354.9	2393.6	2400.8
27.5°	2241.4	2258.3	2289.7	2330.8	2340.4
30°	2159.3	2185.9	2224.5	2265.6	2275.2
32.5°	2079.6	2106.2	2152.0	2195.5	2207.6
35°	1997.5	2021.6	2069.9	2120.6	2135.1
37.5°	1903.3	1934.7	1987.8	2038.5	2053.0
40°	1804.2	1842.9	1903.3	1956.4	1973.3
42.5°	1710.0	1751.1	1811.5	1869.5	1888.8
45°	1611.0	1649.7	1722.1	1787.3	1801.8
47.5°	1509.6	1553.0	1630.3	1695.5	1719.7
50°	1408.1	1454.0	1536.1	1603.8	1618.3
52.5°	1306.7	1355.0	1441.9	1514.4	1521.6
55°	1200.4	1253.5	1345.3	1415.4	1429.9
57.5°	1103.8	1149.7	1248.7	1321.2	1338.1
60°	997.5	1048.2	1154.5	1222.1	1243.9
62.5°	896.1	949.2	1060.3	1128.0	1147.3
65°	789.8	850.2	958.9	1038.6	1057.9
67.5°	698.0	756.0	871.9	949.2	968.5
70°	591.8	657.0	780.1	859.9	879.2
72.5°	500.0	567.6	690.8	768.1	797.1
75°	400.9	478.2	601.4	683.5	702.9
77.5°	304.3	393.7	519.3	582.1	582.1
80°	217.4	311.6	427.5	456.5	461.3
82.5°	142.5	234.3	316.4	314.0	314.0
85°	82.1	152.2	188.4	183.6	183.6
87.5°	31.4	62.8	67.6	67.6	65.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)