

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: P311837

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP250-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: P311837
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 6988.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

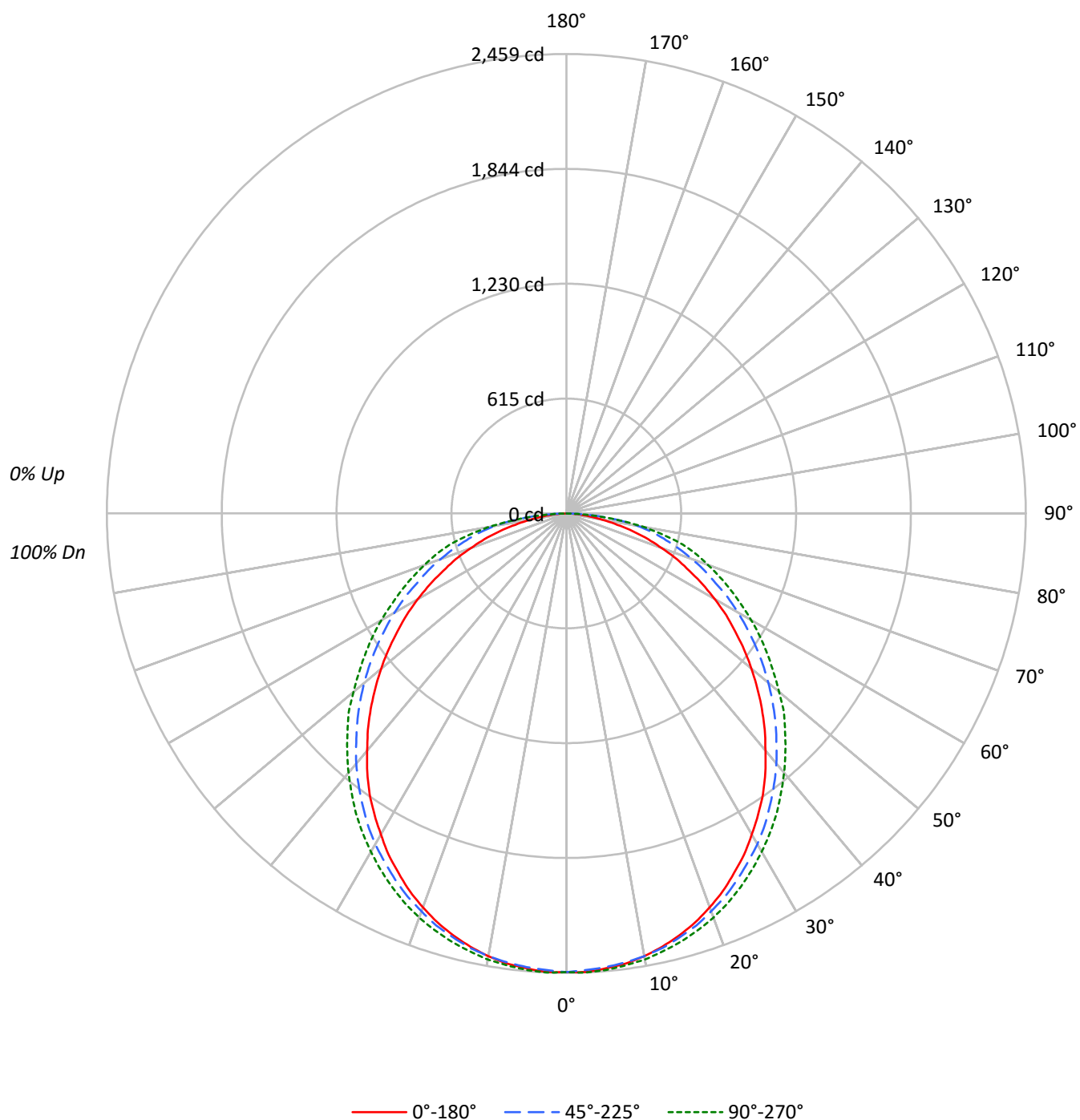
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3303	3303	3303
5°	3301	3292	3313
10°	3287	3287	3312
15°	3256	3271	3305
20°	3213	3245	3296
25°	3154	3213	3275
30°	3083	3176	3249
35°	3015	3124	3223
40°	2912	3072	3185
45°	2817	3011	3151
50°	2709	2955	3113
55°	2588	2900	3082
60°	2467	2855	3076
65°	2311	2805	3095
70°	2139	2820	3179
75°	1916	2873	3358
80°	1548	3044	3285
85°	1166	2672	2604



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.4	3.3
10°-20°	664.1	9.5
20°-30°	998.3	14.3
30°-40°	1189.1	17.0
40°-50°	1217.0	17.4
50°-60°	1095.6	15.7
60°-70°	860.4	12.3
70°-80°	558.4	8.0
80°-90°	172.7	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°	1894.8	27.1
0°-40°	3083.8	44.1
0°-60°	5396.4	77.2
0°-90°	6988.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6988.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2455	2455	2455	2455	2455	
5°	2444	2448	2437	2450	2453	232
15°	2337	2344	2348	2368	2373	659
25°	2124	2142	2164	2200	2206	979
35°	1836	1858	1902	1949	1962	1145
45°	1480	1516	1583	1642	1656	1141
55°	1103	1152	1236	1301	1314	989
65°	726	781	881	954	972	723
75°	368	440	553	628	646	390
85°	76	140	173	169	169	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2454.9	2454.9	2454.9	2454.9	2454.9
2.5°	2457.1	2457.1	2446.1	2457.1	2459.4
5°	2443.8	2448.3	2437.2	2450.5	2452.7
7.5°	2430.5	2430.5	2423.9	2437.2	2439.4
10°	2406.1	2408.3	2406.1	2421.6	2423.9
12.5°	2375.0	2379.5	2381.7	2397.2	2399.4
15°	2337.3	2343.9	2348.4	2368.4	2372.8
17.5°	2295.1	2301.8	2312.9	2335.1	2339.5
20°	2244.1	2252.9	2266.3	2295.1	2301.8
22.5°	2188.6	2197.5	2219.6	2246.3	2257.4
25°	2124.2	2142.0	2164.2	2199.7	2206.3
27.5°	2059.8	2075.4	2104.2	2142.0	2150.8
30°	1984.4	2008.8	2044.3	2082.0	2090.9
32.5°	1911.1	1935.5	1977.7	2017.7	2028.8
35°	1835.6	1857.8	1902.2	1948.9	1962.2
37.5°	1749.1	1777.9	1826.8	1873.4	1886.7
40°	1658.1	1693.6	1749.1	1797.9	1813.5
42.5°	1571.5	1609.2	1664.7	1718.0	1735.8
45°	1480.5	1516.0	1582.6	1642.5	1655.9
47.5°	1387.3	1427.2	1498.3	1558.2	1580.4
50°	1294.1	1336.2	1411.7	1473.8	1487.2
52.5°	1200.8	1245.2	1325.1	1391.7	1398.4
55°	1103.2	1152.0	1236.3	1300.7	1314.0
57.5°	1014.4	1056.6	1147.6	1214.1	1229.7
60°	916.7	963.3	1061.0	1123.1	1143.1
62.5°	823.5	872.3	974.4	1036.6	1054.3
65°	725.8	781.3	881.2	954.4	972.2
67.5°	641.5	694.7	801.3	872.3	890.1
70°	543.8	603.7	716.9	790.2	808.0
72.5°	459.5	521.6	634.8	705.8	732.5
75°	368.5	439.5	552.7	628.2	645.9
77.5°	279.7	361.8	477.2	534.9	534.9
80°	199.8	286.3	392.9	419.5	424.0
82.5°	131.0	215.3	290.8	288.6	288.6
85°	75.5	139.8	173.1	168.7	168.7
87.5°	28.9	57.7	62.2	62.2	59.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)