

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: P311826

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP187-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: P311826
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-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB 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: 6883.0 lumens
Efficiency: N/A
Efficacy: 107.5 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

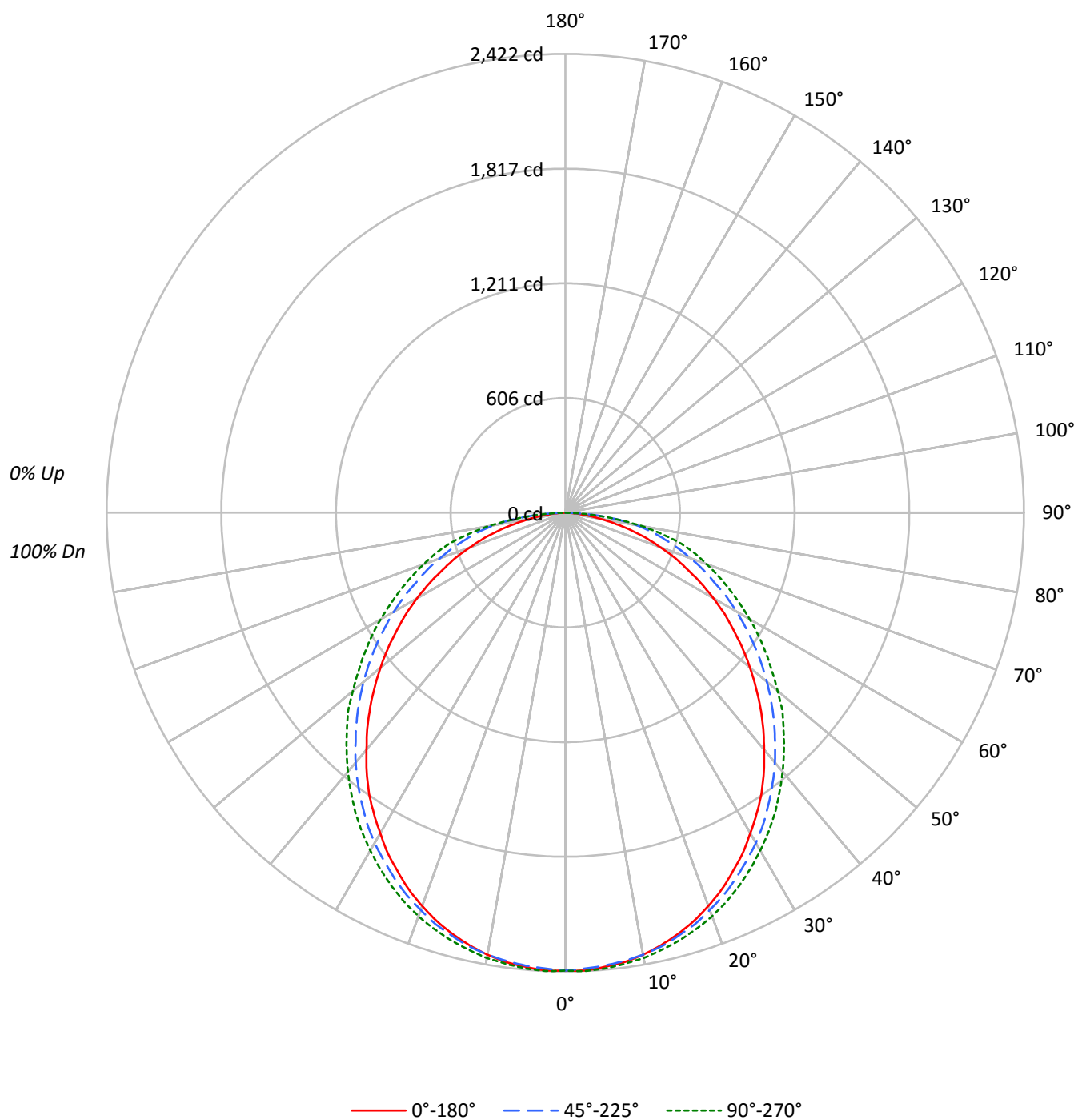
Input Watts (W): 64
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3253	3253	3253
5°	3251	3242	3263
10°	3238	3238	3262
15°	3207	3222	3255
20°	3165	3196	3246
25°	3106	3165	3226
30°	3037	3128	3200
35°	2970	3078	3175
40°	2869	3026	3137
45°	2775	2966	3103
50°	2668	2911	3066
55°	2549	2857	3036
60°	2430	2812	3030
65°	2276	2763	3049
70°	2107	2778	3131
75°	1887	2830	3307
80°	1525	2999	3236
85°	1147	2632	2566



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.9	3.3
10°-20°	654.1	9.5
20°-30°	983.3	14.3
30°-40°	1171.2	17.0
40°-50°	1198.7	17.4
50°-60°	1079.2	15.7
60°-70°	847.5	12.3
70°-80°	550.0	8.0
80°-90°	170.1	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°	1866.3	27.1
0°-40°	3037.5	44.1
0°-60°	5315.3	77.2
0°-90°	6883.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6883.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2418	2418	2418	2418	2418	
5°	2407	2412	2401	2414	2416	229
15°	2302	2309	2313	2333	2337	649
25°	2092	2110	2132	2167	2173	964
35°	1808	1830	1874	1920	1933	1128
45°	1458	1493	1559	1618	1631	1124
55°	1087	1135	1218	1281	1294	974
65°	715	770	868	940	958	712
75°	363	433	544	619	636	384
85°	74	138	170	166	166	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2418.0	2418.0	2418.0	2418.0	2418.0
2.5°	2420.2	2420.2	2409.3	2420.2	2422.4
5°	2407.1	2411.5	2400.6	2413.7	2415.9
7.5°	2394.0	2394.0	2387.4	2400.6	2402.7
10°	2369.9	2372.1	2369.9	2385.2	2387.4
12.5°	2339.3	2343.7	2345.9	2361.2	2363.4
15°	2302.2	2308.7	2313.1	2332.8	2337.1
17.5°	2260.6	2267.2	2278.1	2300.0	2304.4
20°	2210.3	2219.1	2232.2	2260.6	2267.2
22.5°	2155.7	2164.4	2186.3	2212.5	2223.5
25°	2092.3	2109.8	2131.6	2166.6	2173.2
27.5°	2028.9	2044.2	2072.6	2109.8	2118.5
30°	1954.5	1978.6	2013.6	2050.7	2059.5
32.5°	1882.4	1906.4	1948.0	1987.3	1998.3
35°	1808.1	1829.9	1873.7	1919.6	1932.7
37.5°	1722.8	1751.2	1799.3	1845.2	1858.4
40°	1633.2	1668.1	1722.8	1770.9	1786.2
42.5°	1547.9	1585.1	1639.7	1692.2	1709.7
45°	1458.3	1493.2	1558.8	1617.9	1631.0
47.5°	1366.4	1405.8	1475.7	1534.8	1556.6
50°	1274.6	1316.1	1390.5	1451.7	1464.8
52.5°	1182.8	1226.5	1305.2	1370.8	1377.4
55°	1086.6	1134.7	1217.8	1281.2	1294.3
57.5°	999.1	1040.7	1130.3	1195.9	1211.2
60°	902.9	948.9	1045.0	1106.3	1125.9
62.5°	811.1	859.2	959.8	1021.0	1038.5
65°	714.9	769.6	868.0	940.1	957.6
67.5°	631.8	684.3	789.3	859.2	876.7
70°	535.6	594.7	706.2	778.3	795.8
72.5°	452.6	513.8	625.3	695.2	721.5
75°	362.9	432.9	544.4	618.7	636.2
77.5°	275.5	356.4	470.1	526.9	526.9
80°	196.8	282.0	387.0	413.2	417.6
82.5°	129.0	212.1	286.4	284.2	284.2
85°	74.3	137.7	170.5	166.2	166.2
87.5°	28.4	56.8	61.2	61.2	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)