

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: P311820

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP125-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: P311820
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-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 7377.0 lumens
Efficiency: N/A
Efficacy: 114.2 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

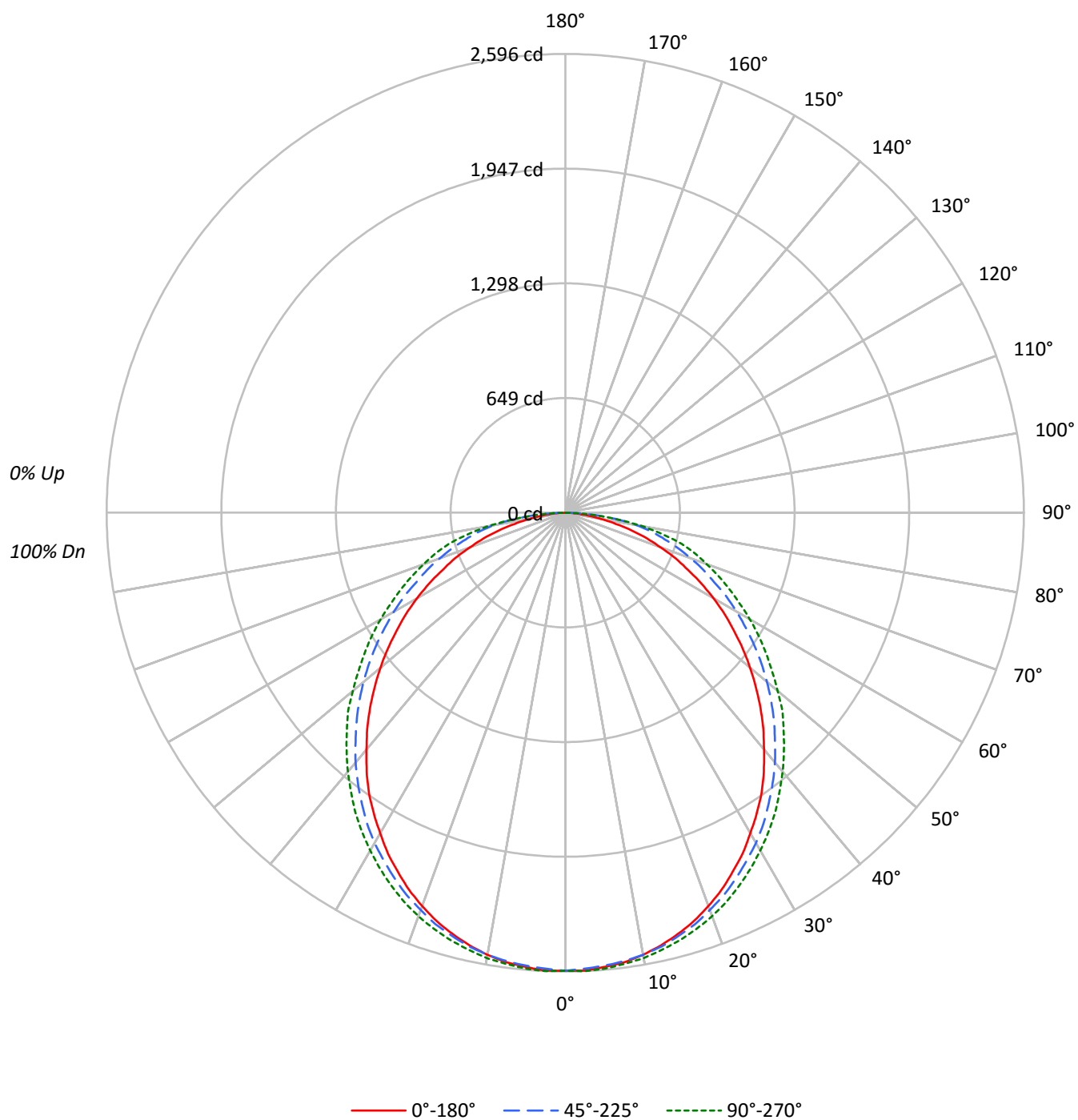
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3487	3487	3487
5°	3484	3475	3497
10°	3470	3470	3496
15°	3437	3453	3489
20°	3392	3426	3479
25°	3329	3392	3458
30°	3255	3353	3429
35°	3183	3298	3402
40°	3074	3243	3362
45°	2974	3179	3326
50°	2860	3120	3286
55°	2732	3062	3254
60°	2604	3014	3247
65°	2439	2962	3267
70°	2258	2978	3355
75°	2022	3033	3545
80°	1634	3213	3468
85°	1230	2822	2749



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.3	3.3
10°-20°	701.0	9.5
20°-30°	1053.8	14.3
30°-40°	1255.3	17.0
40°-50°	1284.7	17.4
50°-60°	1156.6	15.7
60°-70°	908.3	12.3
70°-80°	589.5	8.0
80°-90°	182.3	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°	2000.2	27.1
0°-40°	3255.5	44.1
0°-60°	5696.8	77.2
0°-90°	7377.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7377.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2592	2592	2592	2592	2592	
5°	2580	2585	2573	2587	2589	245
15°	2467	2474	2479	2500	2505	696
25°	2242	2261	2285	2322	2329	1033
35°	1938	1961	2008	2057	2071	1209
45°	1563	1600	1671	1734	1748	1205
55°	1165	1216	1305	1373	1387	1044
65°	766	825	930	1008	1026	763
75°	389	464	584	663	682	412
85°	80	148	183	178	178	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2591.6	2591.6	2591.6	2591.6	2591.6
2.5°	2593.9	2593.9	2582.2	2593.9	2596.3
5°	2579.9	2584.6	2572.8	2586.9	2589.2
7.5°	2565.8	2565.8	2558.8	2572.8	2575.2
10°	2540.0	2542.4	2540.0	2556.4	2558.8
12.5°	2507.2	2511.9	2514.3	2530.7	2533.0
15°	2467.4	2474.4	2479.1	2500.2	2504.9
17.5°	2422.9	2429.9	2441.6	2465.1	2469.7
20°	2369.0	2378.4	2392.4	2422.9	2429.9
22.5°	2310.4	2319.8	2343.2	2371.3	2383.0
25°	2242.5	2261.2	2284.6	2322.1	2329.1
27.5°	2174.5	2190.9	2221.4	2261.2	2270.6
30°	2094.8	2120.6	2158.1	2197.9	2207.3
32.5°	2017.5	2043.3	2087.8	2130.0	2141.7
35°	1937.8	1961.3	2008.1	2057.3	2071.4
37.5°	1846.4	1876.9	1928.5	1977.7	1991.7
40°	1750.4	1787.9	1846.4	1898.0	1914.4
42.5°	1659.0	1698.8	1757.4	1813.6	1832.4
45°	1562.9	1600.4	1670.7	1734.0	1748.0
47.5°	1464.5	1506.7	1581.7	1644.9	1668.4
50°	1366.1	1410.6	1490.3	1555.9	1569.9
52.5°	1267.7	1314.5	1398.9	1469.2	1476.2
55°	1164.6	1216.1	1305.2	1373.1	1387.2
57.5°	1070.8	1115.4	1211.4	1281.7	1298.1
60°	967.7	1017.0	1120.1	1185.7	1206.8
62.5°	869.3	920.9	1028.7	1094.3	1113.0
65°	766.2	824.8	930.3	1007.6	1026.3
67.5°	677.2	733.4	845.9	920.9	939.6
70°	574.1	637.4	756.9	834.2	852.9
72.5°	485.0	550.7	670.2	745.1	773.3
75°	389.0	464.0	583.5	663.1	681.9
77.5°	295.2	381.9	503.8	564.7	564.7
80°	210.9	302.3	414.7	442.9	447.6
82.5°	138.2	227.3	307.0	304.6	304.6
85°	79.7	147.6	182.8	178.1	178.1
87.5°	30.5	60.9	65.6	65.6	63.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)