

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: P311808

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA125-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: P311808
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 7330.0 lumens
Efficiency: N/A
Efficacy: 114.5 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

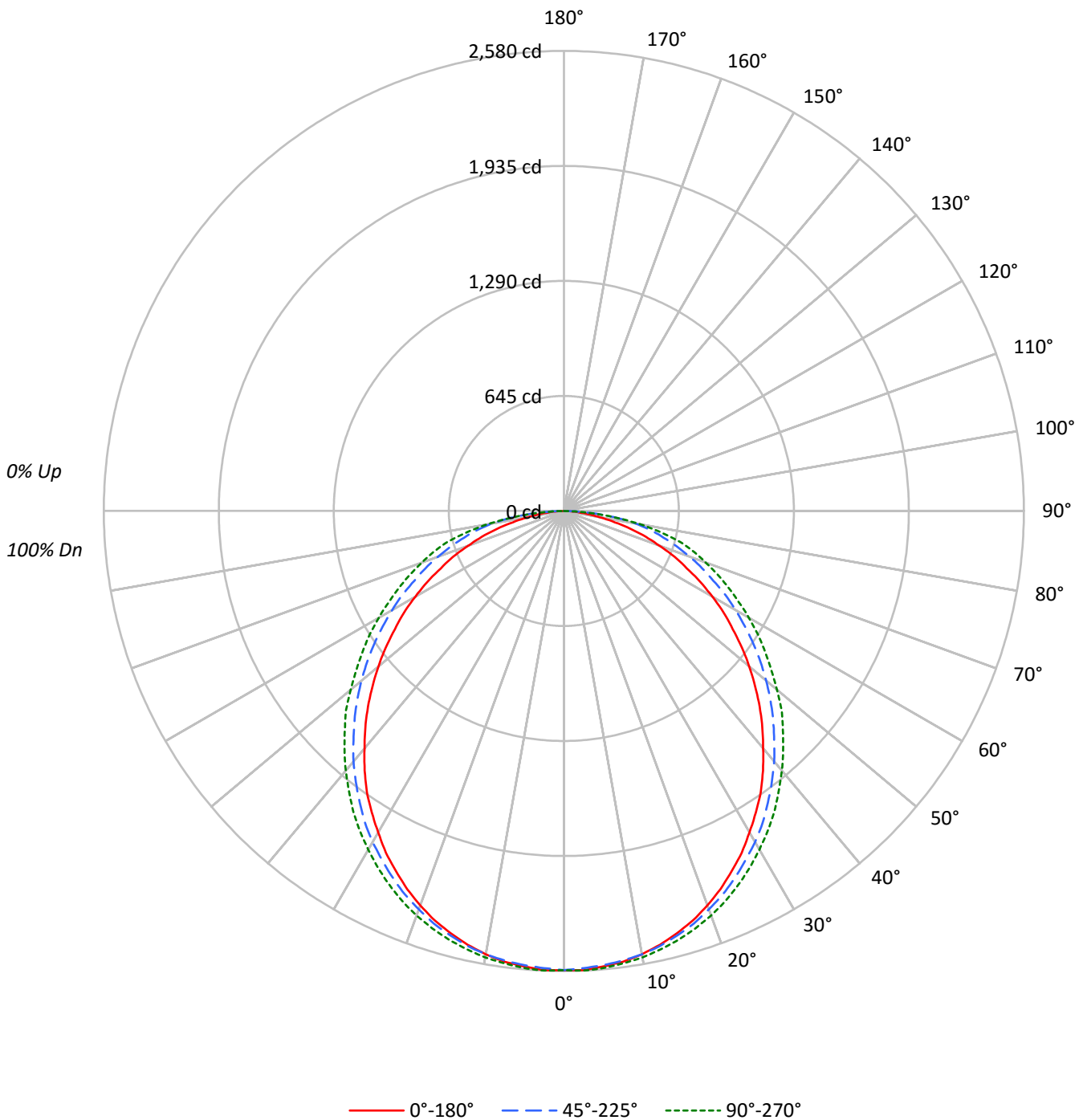
Input Watts (W): 64
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3465	3465	3465
5°	3462	3453	3475
10°	3448	3448	3474
15°	3415	3431	3467
20°	3370	3404	3457
25°	3308	3370	3436
30°	3234	3331	3407
35°	3163	3277	3381
40°	3055	3222	3341
45°	2955	3159	3305
50°	2841	3100	3265
55°	2715	3042	3233
60°	2588	2995	3227
65°	2424	2943	3247
70°	2244	2958	3334
75°	2009	3014	3522
80°	1623	3193	3446
85°	1223	2803	2731



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.8	3.3
10°-20°	696.6	9.5
20°-30°	1047.1	14.3
30°-40°	1247.3	17.0
40°-50°	1276.5	17.4
50°-60°	1149.3	15.7
60°-70°	902.5	12.3
70°-80°	585.8	8.0
80°-90°	181.2	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°	1987.5	27.1
0°-40°	3234.8	44.1
0°-60°	5660.6	77.2
0°-90°	7330.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2575	2575	2575	2575	2575	
5°	2563	2568	2556	2570	2573	244
15°	2452	2459	2463	2484	2489	691
25°	2228	2247	2270	2307	2314	1026
35°	1926	1949	1995	2044	2058	1201
45°	1553	1590	1660	1723	1737	1197
55°	1157	1208	1297	1364	1378	1037
65°	761	820	924	1001	1020	758
75°	386	461	580	659	678	409
85°	79	147	182	177	177	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2575.1	2575.1	2575.1	2575.1	2575.1
2.5°	2577.4	2577.4	2565.8	2577.4	2579.7
5°	2563.4	2568.1	2556.5	2570.4	2572.7
7.5°	2549.5	2549.5	2542.5	2556.5	2558.8
10°	2523.9	2526.2	2523.9	2540.2	2542.5
12.5°	2491.3	2495.9	2498.2	2514.5	2516.9
15°	2451.7	2458.7	2463.3	2484.3	2488.9
17.5°	2407.4	2414.4	2426.1	2449.3	2454.0
20°	2353.9	2363.2	2377.2	2407.4	2414.4
22.5°	2295.7	2305.0	2328.3	2356.2	2367.9
25°	2228.2	2246.8	2270.1	2307.3	2314.3
27.5°	2160.6	2176.9	2207.2	2246.8	2256.1
30°	2081.5	2107.1	2144.3	2183.9	2193.2
32.5°	2004.6	2030.3	2074.5	2116.4	2128.0
35°	1925.5	1948.8	1995.3	2044.2	2058.2
37.5°	1834.7	1865.0	1916.2	1965.1	1979.0
40°	1739.2	1776.5	1834.7	1885.9	1902.2
42.5°	1648.4	1688.0	1746.2	1802.1	1820.7
45°	1553.0	1590.2	1660.1	1722.9	1736.9
47.5°	1455.2	1497.1	1571.6	1634.5	1657.7
50°	1357.4	1401.6	1480.8	1546.0	1559.9
52.5°	1259.6	1306.2	1390.0	1459.8	1466.8
55°	1157.2	1208.4	1296.9	1364.4	1378.3
57.5°	1064.0	1108.3	1203.7	1273.6	1289.9
60°	961.6	1010.5	1112.9	1178.1	1199.1
62.5°	863.8	915.0	1022.1	1087.3	1105.9
65°	761.3	819.6	924.3	1001.2	1019.8
67.5°	672.9	728.8	840.5	915.0	933.6
70°	570.4	633.3	752.0	828.9	847.5
72.5°	482.0	547.1	665.9	740.4	768.3
75°	386.5	461.0	579.7	658.9	677.5
77.5°	293.4	379.5	500.6	561.1	561.1
80°	209.5	300.3	412.1	440.0	444.7
82.5°	137.4	225.8	305.0	302.7	302.7
85°	79.2	146.7	181.6	176.9	176.9
87.5°	30.3	60.5	65.2	65.2	62.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)