

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: P311809

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA125-W2A-U-5000K**

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: P311809
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 7430.0 lumens
Efficiency: N/A
Efficacy: 115.6 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

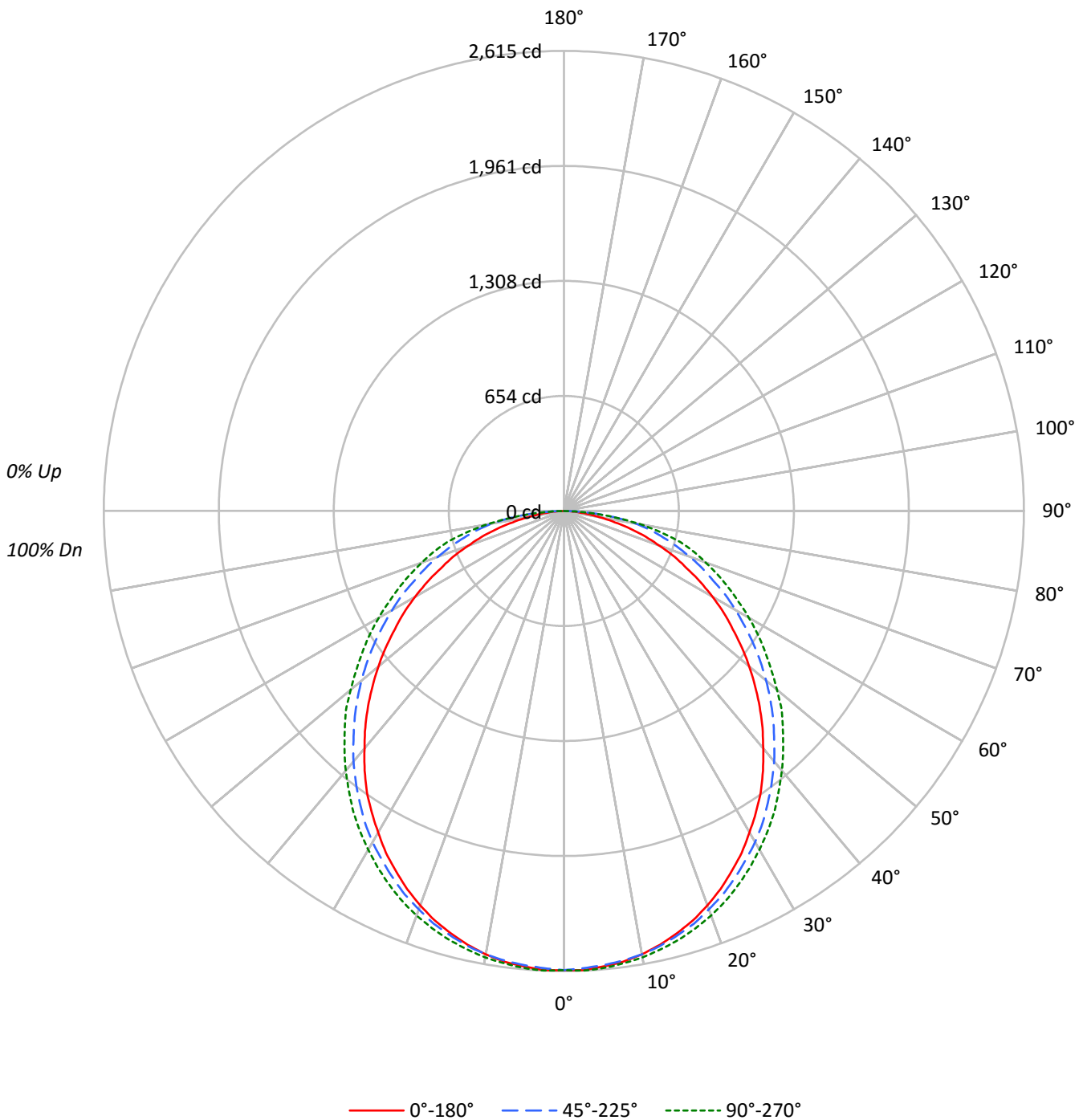
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3512	3512	3512
5°	3509	3500	3522
10°	3495	3495	3521
15°	3462	3478	3514
20°	3416	3450	3504
25°	3353	3416	3483
30°	3278	3377	3454
35°	3206	3322	3427
40°	3097	3266	3387
45°	2995	3202	3350
50°	2880	3142	3310
55°	2751	3084	3277
60°	2623	3036	3271
65°	2457	2983	3291
70°	2275	2999	3380
75°	2037	3055	3570
80°	1646	3236	3493
85°	1238	2842	2770



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.1	3.3
10°-20°	706.1	9.5
20°-30°	1061.4	14.3
30°-40°	1264.3	17.0
40°-50°	1293.9	17.4
50°-60°	1164.9	15.7
60°-70°	914.8	12.3
70°-80°	593.8	8.0
80°-90°	183.6	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°	2014.6	27.1
0°-40°	3278.9	44.1
0°-60°	5737.8	77.2
0°-90°	7430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7430.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2610	2610	2610	2610	2610	
5°	2598	2603	2591	2606	2608	247
15°	2485	2492	2497	2518	2523	701
25°	2259	2277	2301	2339	2346	1040
35°	1952	1975	2023	2072	2086	1218
45°	1574	1612	1683	1746	1761	1214
55°	1173	1225	1314	1383	1397	1052
65°	772	831	937	1015	1034	768
75°	392	467	588	668	687	415
85°	80	149	184	179	179	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2610.2	2610.2	2610.2	2610.2	2610.2
2.5°	2612.6	2612.6	2600.8	2612.6	2614.9
5°	2598.4	2603.1	2591.3	2605.5	2607.8
7.5°	2584.2	2584.2	2577.2	2591.3	2593.7
10°	2558.3	2560.6	2558.3	2574.8	2577.2
12.5°	2525.2	2530.0	2532.3	2548.8	2551.2
15°	2485.1	2492.2	2496.9	2518.2	2522.9
17.5°	2440.3	2447.4	2459.2	2482.8	2487.5
20°	2386.0	2395.4	2409.6	2440.3	2447.4
22.5°	2327.0	2336.4	2360.0	2388.4	2400.2
25°	2258.6	2277.4	2301.0	2338.8	2345.9
27.5°	2190.1	2206.6	2237.3	2277.4	2286.9
30°	2109.9	2135.8	2173.6	2213.7	2223.2
32.5°	2032.0	2058.0	2102.8	2145.3	2157.1
35°	1951.8	1975.4	2022.6	2072.1	2086.3
37.5°	1859.7	1890.4	1942.3	1991.9	2006.0
40°	1763.0	1800.7	1859.7	1911.6	1928.2
42.5°	1670.9	1711.0	1770.0	1826.7	1845.6
45°	1574.1	1611.9	1682.7	1746.4	1760.6
47.5°	1475.0	1517.5	1593.0	1656.8	1680.4
50°	1375.9	1420.7	1501.0	1567.1	1581.2
52.5°	1276.8	1324.0	1408.9	1479.7	1486.8
55°	1172.9	1224.9	1314.5	1383.0	1397.1
57.5°	1078.5	1123.4	1220.1	1290.9	1307.5
60°	974.7	1024.3	1128.1	1194.2	1215.4
62.5°	875.6	927.5	1036.1	1102.1	1121.0
65°	771.7	830.7	936.9	1014.8	1033.7
67.5°	682.1	738.7	852.0	927.5	946.4
70°	578.2	641.9	762.3	840.2	859.1
72.5°	488.5	554.6	675.0	750.5	778.8
75°	391.8	467.3	587.7	667.9	686.8
77.5°	297.4	384.7	507.4	568.8	568.8
80°	212.4	304.4	417.7	446.0	450.8
82.5°	139.2	228.9	309.2	306.8	306.8
85°	80.2	148.7	184.1	179.4	179.4
87.5°	30.7	61.4	66.1	66.1	63.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)