

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: P310319

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CA125-W2A-U-2700K**

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: P310319
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-60HE-UNV-L82765-RDP-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 2700K 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: 3391.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

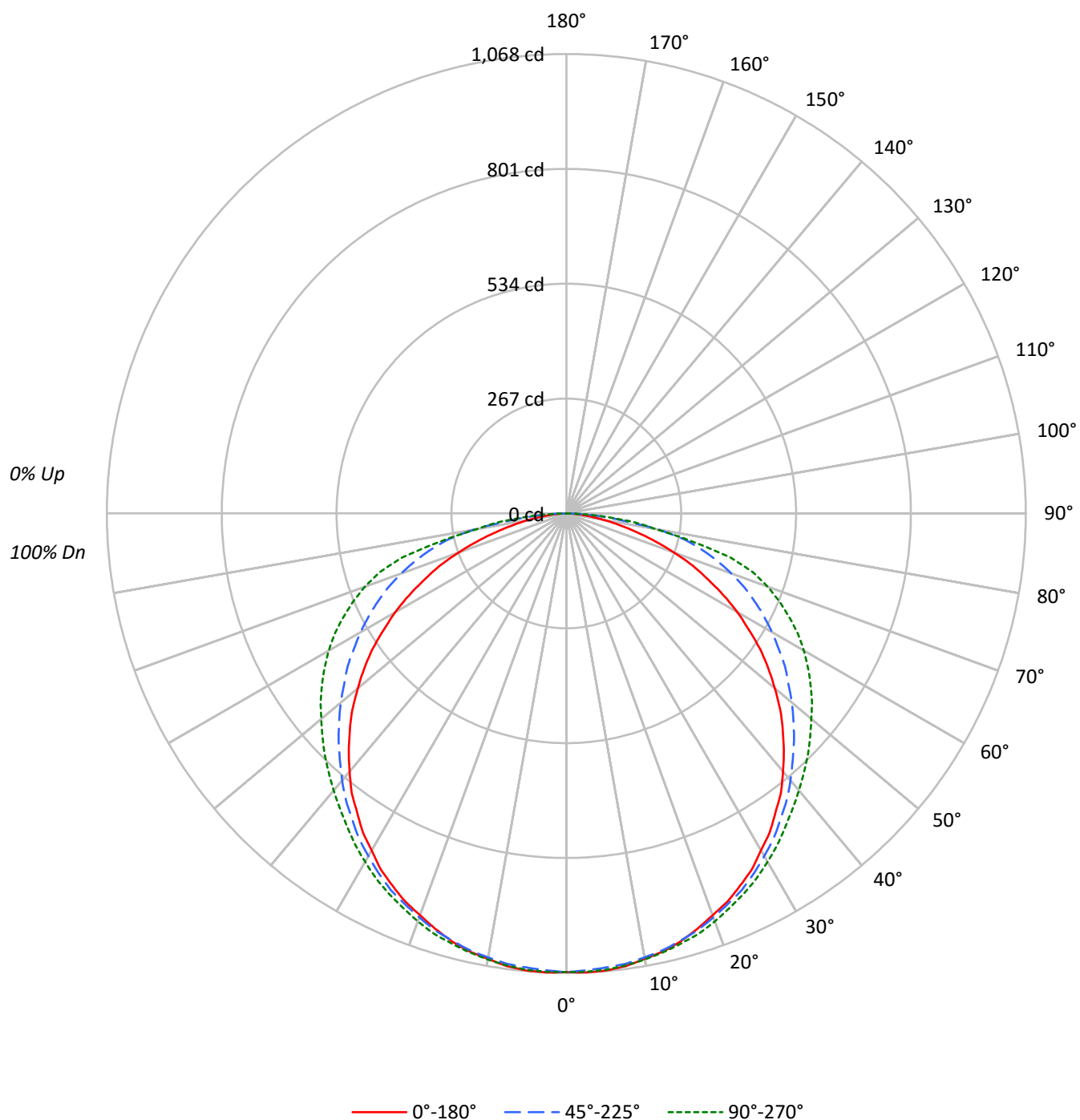
Input Watts (W): 47.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	68	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1435	1435	1435
5°	1440	1431	1438
10°	1436	1432	1439
15°	1434	1432	1441
20°	1423	1431	1445
25°	1418	1433	1448
30°	1406	1429	1453
35°	1392	1426	1459
40°	1377	1424	1477
45°	1354	1424	1511
50°	1324	1433	1556
55°	1290	1456	1626
60°	1236	1485	1715
65°	1157	1537	1821
70°	1052	1608	1959
75°	892	1696	2046
80°	704	1707	1655
85°	519	1298	1454



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	3.0
10°-20°	291.1	8.6
20°-30°	445.2	13.1
30°-40°	544.2	16.0
40°-50°	580.0	17.1
50°-60°	554.6	16.4
60°-70°	469.8	13.9
70°-80°	315.8	9.3
80°-90°	89.1	2.6
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°	837.5	24.7
0°-40°	1381.7	40.7
0°-60°	2516.3	74.2
0°-90°	3391.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3391.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1066	1066	1066	1066	1066	
5°	1066	1065	1060	1065	1065	101
15°	1029	1029	1028	1036	1034	290
25°	955	959	966	974	976	440
35°	848	854	868	885	888	531
45°	712	723	748	780	794	549
55°	550	570	621	669	693	490
65°	363	400	483	547	572	361
75°	172	234	326	382	394	184
85°	34	69	84	91	94	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1066.4	1066.4	1066.4	1066.4	1066.4
2.5°	1068.1	1068.1	1063.0	1066.4	1066.4
5°	1066.4	1064.7	1059.6	1064.7	1064.7
7.5°	1061.3	1059.6	1056.3	1061.3	1059.6
10°	1051.2	1051.2	1047.9	1052.9	1052.9
12.5°	1042.8	1041.1	1039.5	1046.2	1044.5
15°	1029.4	1029.4	1027.7	1036.1	1034.4
17.5°	1012.5	1014.2	1015.9	1022.6	1024.3
20°	994.0	997.4	999.1	1009.2	1009.2
22.5°	977.2	978.9	982.3	992.4	992.4
25°	955.4	958.7	965.5	973.9	975.5
27.5°	933.5	935.2	943.6	955.4	957.0
30°	904.9	909.9	920.0	933.5	935.2
32.5°	879.7	884.7	896.5	909.9	913.3
35°	847.7	854.4	867.9	884.7	888.1
37.5°	819.1	824.2	841.0	859.5	864.5
40°	783.8	793.9	810.7	832.6	841.0
42.5°	748.5	758.6	778.8	807.3	817.4
45°	711.5	723.2	748.5	780.4	793.9
47.5°	674.5	687.9	716.5	753.5	768.7
50°	632.4	649.2	684.6	726.6	743.4
52.5°	592.1	612.2	650.9	698.0	719.9
55°	550.0	570.2	620.6	669.4	693.0
57.5°	502.9	529.8	585.3	640.8	666.1
60°	459.2	484.4	551.7	612.2	637.5
62.5°	412.1	445.7	518.0	582.0	607.2
65°	363.3	400.3	482.7	546.6	571.9
67.5°	319.6	359.9	447.4	511.3	536.6
70°	267.4	317.9	408.7	472.6	497.9
72.5°	218.7	274.2	368.4	430.6	454.1
75°	171.6	233.8	326.3	381.8	393.6
77.5°	127.8	193.4	282.6	306.1	297.7
80°	90.8	154.7	220.3	208.6	213.6
82.5°	58.9	117.7	136.2	154.7	159.8
85°	33.6	69.0	84.1	90.8	94.2
87.5°	15.1	25.2	33.6	33.6	32.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)