

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: P309563

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP125-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: P309563
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L82765-HRP-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 3110.0 lumens
Efficiency: N/A
Efficacy: 72.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

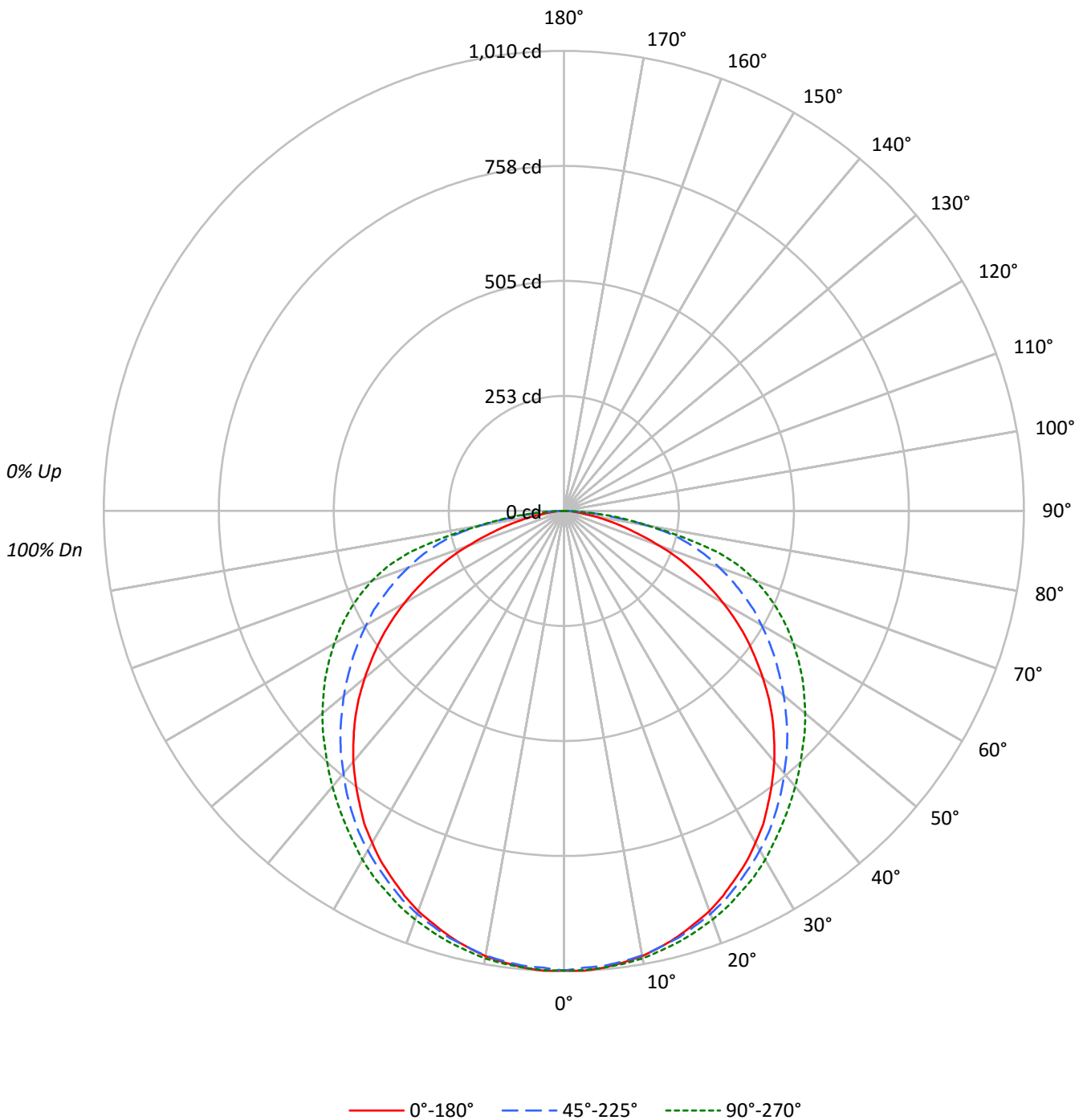
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1358	1358	1358
5°	1359	1354	1359
10°	1355	1354	1363
15°	1348	1351	1364
20°	1338	1348	1367
25°	1322	1341	1368
30°	1307	1337	1374
35°	1285	1330	1375
40°	1262	1322	1388
45°	1234	1321	1410
50°	1194	1319	1447
55°	1152	1329	1500
60°	1086	1349	1566
65°	1003	1380	1654
70°	876	1429	1762
75°	711	1502	1821
80°	525	1473	1473
85°	401	1085	1226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	3.1
10°-20°	274.5	8.8
20°-30°	417.9	13.4
30°-40°	507.4	16.3
40°-50°	536.1	17.2
50°-60°	505.8	16.3
60°-70°	420.6	13.5
70°-80°	276.7	8.9
80°-90°	75.4	2.4
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°	788.0	25.3
0°-40°	1295.4	41.7
0°-60°	2337.3	75.2
0°-90°	3110.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3110.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1009	1009	1009	1009	1009	
5°	1006	1006	1002	1006	1006	96
15°	967	969	970	979	979	273
25°	891	896	904	919	922	411
35°	782	792	810	831	837	490
45°	648	661	694	728	741	499
55°	491	512	566	620	639	437
65°	315	352	434	497	520	311
75°	137	199	289	342	350	147
85°	26	57	70	78	79	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1009.0	1009.0	1009.0	1009.0	1009.0
2.5°	1010.3	1009.0	1003.8	1009.0	1009.0
5°	1006.4	1006.4	1002.5	1006.4	1006.4
7.5°	999.9	999.9	997.3	1002.5	1002.5
10°	992.1	992.1	990.8	997.3	997.3
12.5°	980.4	981.7	980.4	988.2	988.2
15°	967.4	968.7	970.0	979.1	979.1
17.5°	950.5	953.1	955.7	966.1	967.4
20°	934.8	936.1	941.3	953.1	954.4
22.5°	914.0	917.9	924.4	936.1	940.0
25°	890.6	895.8	903.6	919.2	921.8
27.5°	868.4	872.3	882.7	899.7	904.9
30°	841.1	847.6	860.6	877.5	884.1
32.5°	815.0	821.6	837.2	855.4	860.6
35°	782.5	791.6	809.8	830.7	837.2
37.5°	751.2	760.4	782.5	805.9	813.7
40°	718.7	729.1	752.5	779.9	790.3
42.5°	683.5	697.9	723.9	753.9	765.6
45°	648.4	661.4	694.0	727.8	740.8
47.5°	610.6	626.3	661.4	701.8	717.4
50°	570.3	589.8	630.2	674.4	691.4
52.5°	529.9	552.0	597.6	647.1	665.3
55°	490.9	511.7	566.4	619.7	639.3
57.5°	447.9	473.9	533.8	591.1	610.6
60°	403.6	432.3	501.3	561.2	582.0
62.5°	359.3	391.9	470.0	529.9	552.0
65°	315.1	351.5	433.6	497.4	519.5
67.5°	272.1	312.5	399.7	463.5	485.6
70°	222.6	273.4	363.3	425.8	447.9
72.5°	177.1	235.7	328.1	386.7	406.2
75°	136.7	199.2	289.0	342.4	350.2
77.5°	100.3	162.7	248.7	266.9	268.2
80°	67.7	130.2	190.1	187.5	190.1
82.5°	44.3	97.6	119.8	134.1	135.4
85°	26.0	57.3	70.3	78.1	79.4
87.5°	13.0	19.5	24.7	26.0	28.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)