

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: P309207

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP125-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: P309207
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: 24FCZ2-30-UNV-L82765-HRP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (168) 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: 2088.0 lumens
Efficiency: N/A
Efficacy: 87.7 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

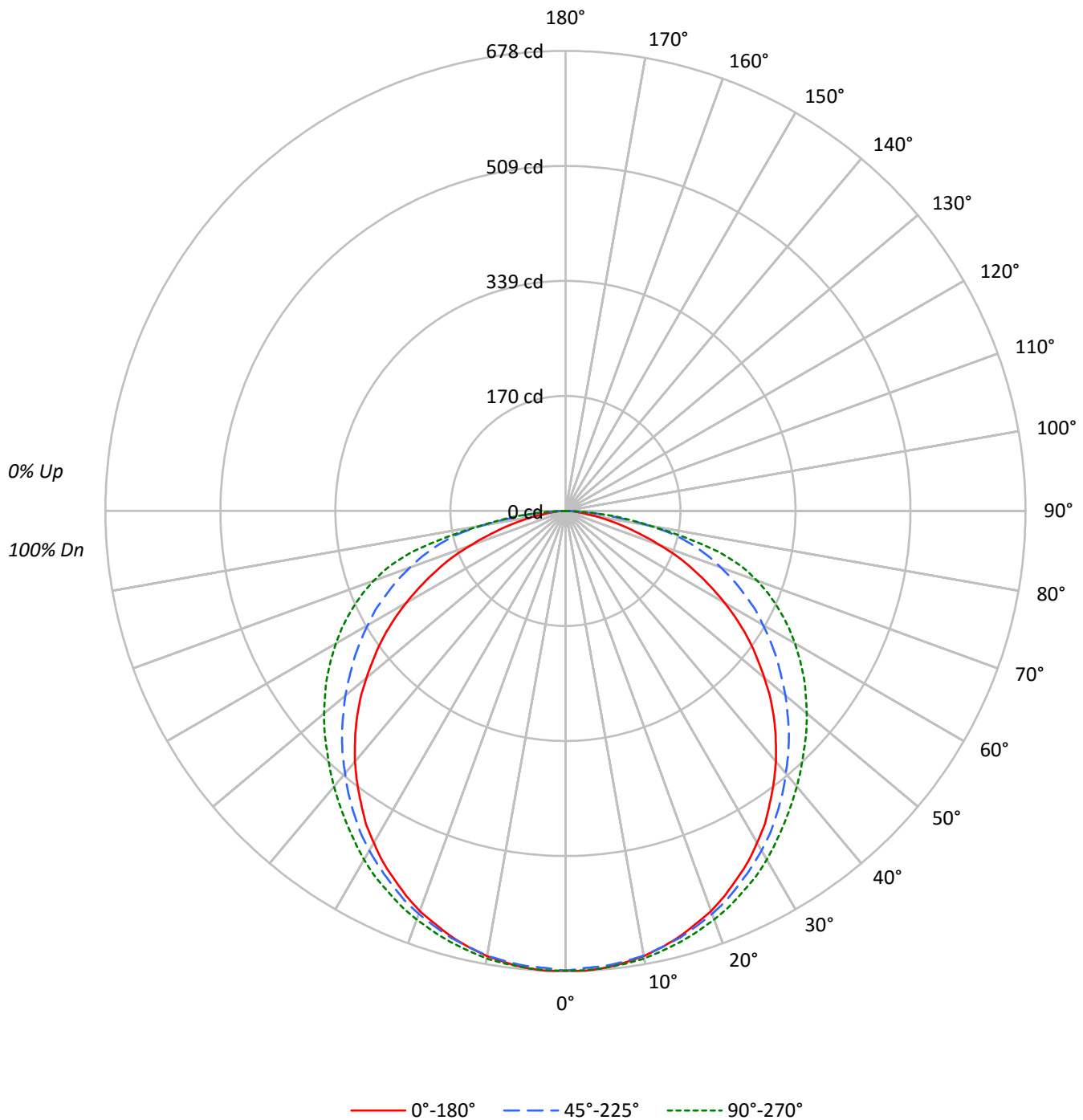
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	912	912	912
5°	913	909	913
10°	910	909	915
15°	905	907	916
20°	899	905	917
25°	888	901	919
30°	877	898	922
35°	863	893	923
40°	847	887	932
45°	828	887	946
50°	801	886	972
55°	773	892	1007
60°	729	906	1051
65°	673	927	1110
70°	588	959	1183
75°	477	1009	1222
80°	353	989	989
85°	270	729	823



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.2	3.1
10°-20°	184.3	8.8
20°-30°	280.6	13.4
30°-40°	340.7	16.3
40°-50°	359.9	17.2
50°-60°	339.6	16.3
60°-70°	282.4	13.5
70°-80°	185.8	8.9
80°-90°	50.6	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°	529.0	25.3
0°-40°	869.7	41.7
0°-60°	1569.2	75.2
0°-90°	2088.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2088.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	678	678	678	678	678	
5°	676	676	673	676	676	64
15°	650	650	651	657	657	183
25°	598	601	607	617	619	276
35°	525	532	544	558	562	329
45°	435	444	466	489	497	335
55°	330	344	380	416	429	294
65°	212	236	291	334	349	209
75°	92	134	194	230	235	99
85°	18	38	47	52	53	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	677.5	677.5	677.5	677.5	677.5
2.5°	678.3	677.5	674.0	677.5	677.5
5°	675.7	675.7	673.1	675.7	675.7
7.5°	671.3	671.3	669.6	673.1	673.1
10°	666.1	666.1	665.2	669.6	669.6
12.5°	658.2	659.1	658.2	663.5	663.5
15°	649.5	650.4	651.2	657.3	657.3
17.5°	638.1	639.9	641.6	648.6	649.5
20°	627.6	628.5	632.0	639.9	640.7
22.5°	613.6	616.3	620.6	628.5	631.1
25°	597.9	601.4	606.6	617.1	618.9
27.5°	583.0	585.7	592.7	604.0	607.5
30°	564.7	569.1	577.8	589.2	593.5
32.5°	547.2	551.6	562.1	574.3	577.8
35°	525.4	531.5	543.7	557.7	562.1
37.5°	504.4	510.5	525.4	541.1	546.3
40°	482.5	489.5	505.2	523.6	530.6
42.5°	458.9	468.5	486.0	506.1	514.0
45°	435.3	444.1	465.9	488.6	497.4
47.5°	410.0	420.5	444.1	471.2	481.6
50°	382.9	396.0	423.1	452.8	464.2
52.5°	355.8	370.6	401.2	434.4	446.7
55°	329.5	343.5	380.2	416.1	429.2
57.5°	300.7	318.2	358.4	396.9	410.0
60°	271.0	290.2	336.5	376.8	390.7
62.5°	241.3	263.1	315.6	355.8	370.6
65°	211.5	236.0	291.1	333.9	348.8
67.5°	182.7	209.8	268.4	311.2	326.1
70°	149.5	183.6	243.9	285.8	300.7
72.5°	118.9	158.2	220.3	259.6	272.7
75°	91.8	133.7	194.1	229.9	235.1
77.5°	67.3	109.3	167.0	179.2	180.1
80°	45.5	87.4	127.6	125.9	127.6
82.5°	29.7	65.6	80.4	90.0	90.9
85°	17.5	38.5	47.2	52.4	53.3
87.5°	8.7	13.1	16.6	17.5	19.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)