

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: P310103

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-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: P310103
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: 24FCZ2-45HE-UNV-L82765-RDP-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 2472.0 lumens
Efficiency: N/A
Efficacy: 73.1 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

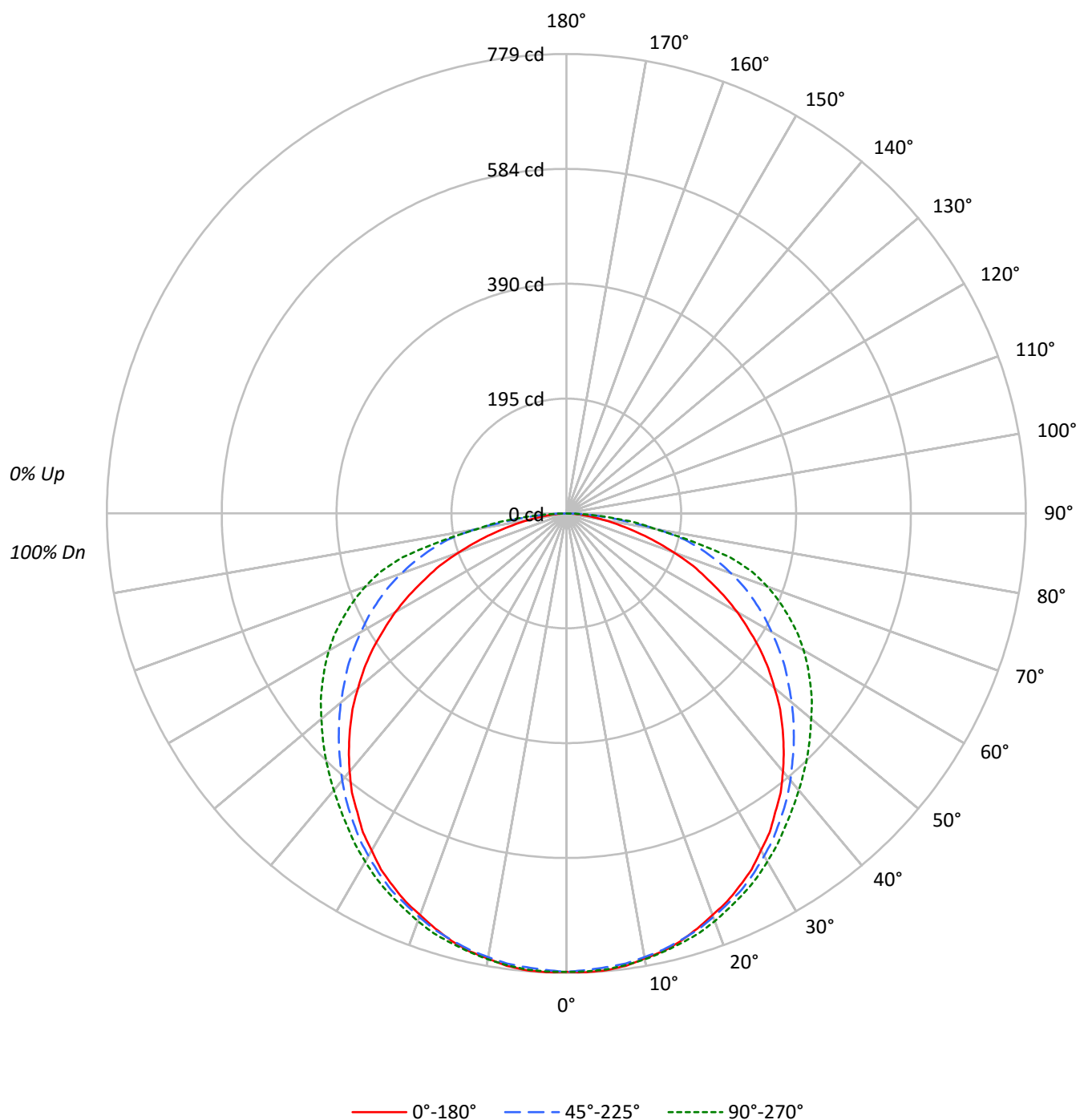
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1046	1046	1046
5°	1050	1043	1048
10°	1047	1044	1049
15°	1045	1044	1050
20°	1038	1043	1053
25°	1034	1045	1056
30°	1025	1042	1059
35°	1015	1039	1063
40°	1004	1038	1077
45°	987	1038	1101
50°	965	1045	1135
55°	940	1061	1185
60°	901	1082	1250
65°	843	1120	1327
70°	767	1172	1428
75°	650	1237	1491
80°	513	1244	1206
85°	378	946	1061



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	3.0
10°-20°	212.2	8.6
20°-30°	324.5	13.1
30°-40°	396.7	16.0
40°-50°	422.8	17.1
50°-60°	404.3	16.4
60°-70°	342.5	13.9
70°-80°	230.2	9.3
80°-90°	64.9	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°	610.5	24.7
0°-40°	1007.3	40.7
0°-60°	1834.4	74.2
0°-90°	2472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2472.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	777	777	777	777	777	
5°	777	776	772	776	776	74
15°	750	750	749	755	754	212
25°	696	699	704	710	711	321
35°	618	623	633	645	647	387
45°	519	527	546	569	579	400
55°	401	416	452	488	505	357
65°	265	292	352	398	417	263
75°	125	170	238	278	287	134
85°	24	50	61	66	69	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	777.4	777.4	777.4	777.4	777.4
2.5°	778.6	778.6	774.9	777.4	777.4
5°	777.4	776.1	772.5	776.1	776.1
7.5°	773.7	772.5	770.0	773.7	772.5
10°	766.3	766.3	763.9	767.6	767.6
12.5°	760.2	759.0	757.8	762.7	761.4
15°	750.4	750.4	749.2	755.3	754.1
17.5°	738.1	739.4	740.6	745.5	746.7
20°	724.6	727.1	728.3	735.7	735.7
22.5°	712.4	713.6	716.1	723.4	723.4
25°	696.4	698.9	703.8	709.9	711.2
27.5°	680.5	681.7	687.9	696.4	697.7
30°	659.7	663.3	670.7	680.5	681.7
32.5°	641.3	645.0	653.5	663.3	665.8
35°	618.0	622.9	632.7	645.0	647.4
37.5°	597.1	600.8	613.1	626.6	630.2
40°	571.4	578.7	591.0	606.9	613.1
42.5°	545.6	553.0	567.7	588.5	595.9
45°	518.7	527.2	545.6	568.9	578.7
47.5°	491.7	501.5	522.3	549.3	560.3
50°	461.0	473.3	499.0	529.7	542.0
52.5°	431.6	446.3	474.5	508.8	524.8
55°	400.9	415.7	452.4	488.0	505.2
57.5°	366.6	386.2	426.7	467.2	485.6
60°	334.7	353.1	402.2	446.3	464.7
62.5°	300.4	324.9	377.7	424.2	442.6
65°	264.8	291.8	351.9	398.5	416.9
67.5°	233.0	262.4	326.2	372.7	391.1
70°	195.0	231.7	298.0	344.5	362.9
72.5°	159.4	199.9	268.5	313.9	331.1
75°	125.1	170.4	237.9	278.3	286.9
77.5°	93.2	141.0	206.0	223.2	217.0
80°	66.2	112.8	160.6	152.0	155.7
82.5°	42.9	85.8	99.3	112.8	116.5
85°	24.5	50.3	61.3	66.2	68.7
87.5°	11.0	18.4	24.5	24.5	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)