

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: P310140

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-3000K**

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: P310140
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: 24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 3000K 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: 2622.0 lumens
Efficiency: N/A
Efficacy: 70.3 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

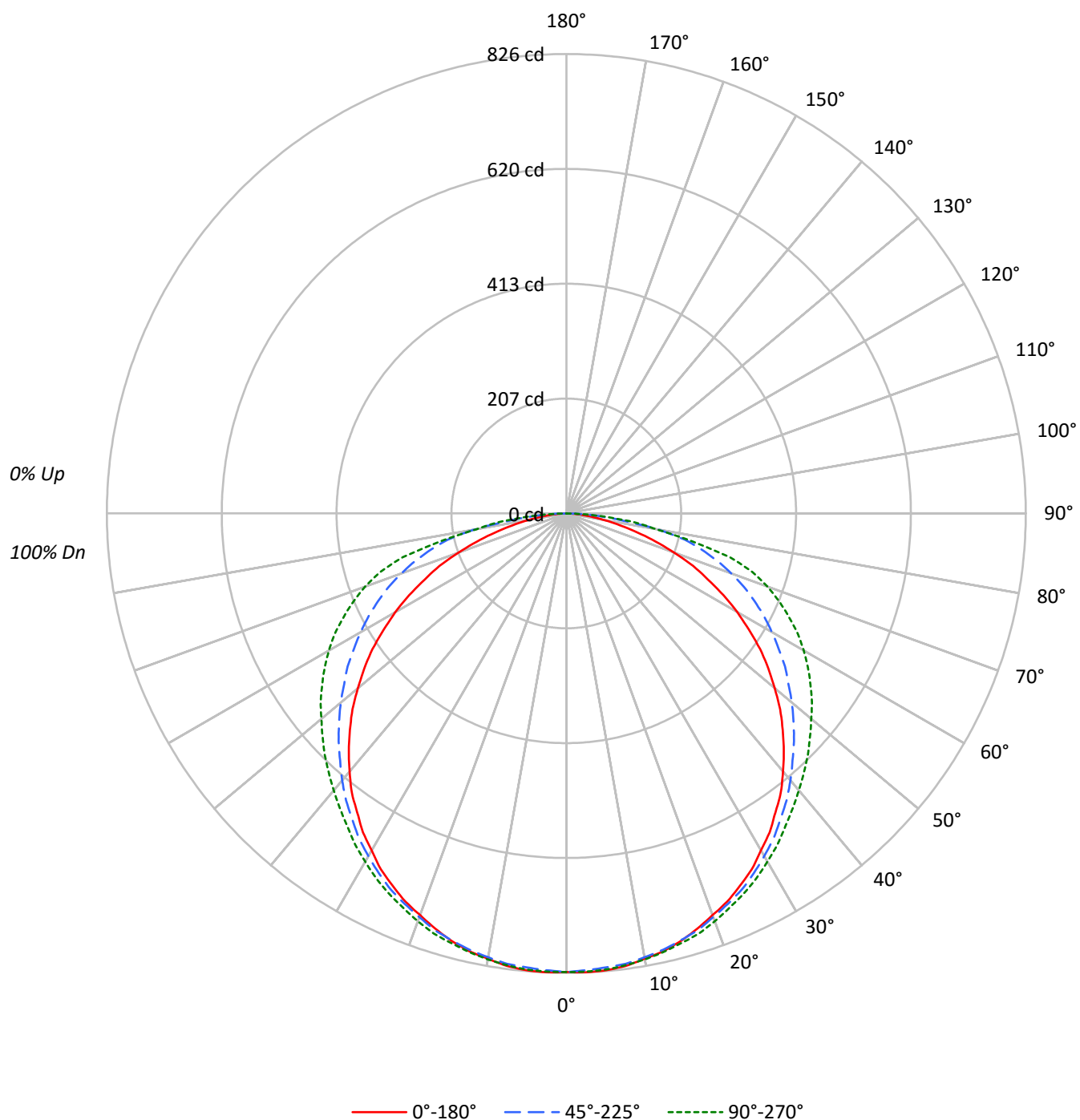
Input Watts (W): 37.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	67	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°	1109	1109	1109
5°	1114	1107	1112
10°	1110	1107	1112
15°	1109	1107	1114
20°	1101	1106	1117
25°	1097	1108	1120
30°	1087	1105	1123
35°	1077	1102	1128
40°	1065	1101	1142
45°	1047	1101	1168
50°	1024	1108	1203
55°	998	1126	1257
60°	955	1148	1326
65°	894	1188	1408
70°	814	1243	1515
75°	690	1312	1582
80°	544	1320	1280
85°	401	1003	1124



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.2	3.0
10°-20°	225.1	8.6
20°-30°	344.2	13.1
30°-40°	420.8	16.1
40°-50°	448.5	17.1
50°-60°	428.8	16.4
60°-70°	363.3	13.9
70°-80°	244.2	9.3
80°-90°	68.9	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°	647.5	24.7
0°-40°	1068.4	40.7
0°-60°	1945.7	74.2
0°-90°	2622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2622.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	824	823	819	823	823	78
15°	796	796	795	801	800	224
25°	739	741	746	753	754	340
35°	656	661	671	684	687	411
45°	550	559	579	604	614	424
55°	425	441	480	518	536	379
65°	281	310	373	423	442	279
75°	133	181	252	295	304	142
85°	26	53	65	70	73	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	824.5	824.5	824.5	824.5	824.5
2.5°	825.8	825.8	821.9	824.5	824.5
5°	824.5	823.2	819.3	823.2	823.2
7.5°	820.6	819.3	816.7	820.6	819.3
10°	812.8	812.8	810.2	814.1	814.1
12.5°	806.3	805.0	803.7	808.9	807.6
15°	795.9	795.9	794.6	801.1	799.8
17.5°	782.9	784.2	785.5	790.7	792.0
20°	768.6	771.2	772.5	780.3	780.3
22.5°	755.6	756.9	759.5	767.3	767.3
25°	738.7	741.3	746.5	753.0	754.3
27.5°	721.8	723.1	729.6	738.7	740.0
30°	699.7	703.6	711.4	721.8	723.1
32.5°	680.2	684.1	693.2	703.6	706.2
35°	655.5	660.7	671.1	684.1	686.7
37.5°	633.4	637.3	650.3	664.6	668.5
40°	606.1	613.9	626.9	643.8	650.3
42.5°	578.7	586.5	602.2	624.3	632.1
45°	550.1	559.2	578.7	603.5	613.9
47.5°	521.5	531.9	554.0	582.6	594.3
50°	489.0	502.0	529.3	561.8	574.8
52.5°	457.8	473.4	503.3	539.7	556.6
55°	425.3	440.9	479.9	517.6	535.8
57.5°	388.9	409.7	452.6	495.5	515.0
60°	355.0	374.6	426.6	473.4	492.9
62.5°	318.6	344.6	400.6	450.0	469.5
65°	280.9	309.5	373.3	422.7	442.2
67.5°	247.1	278.3	345.9	395.4	414.9
70°	206.8	245.8	316.0	365.5	385.0
72.5°	169.1	212.0	284.8	332.9	351.1
75°	132.7	180.8	252.3	295.2	304.3
77.5°	98.8	149.6	218.5	236.7	230.2
80°	70.2	119.6	170.4	161.3	165.2
82.5°	45.5	91.0	105.3	119.6	123.6
85°	26.0	53.3	65.0	70.2	72.8
87.5°	11.7	19.5	26.0	26.0	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)