

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: P310146

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-5700K**

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: P310146
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 5700K 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: 2895.0 lumens
Efficiency: N/A
Efficacy: 74.8 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

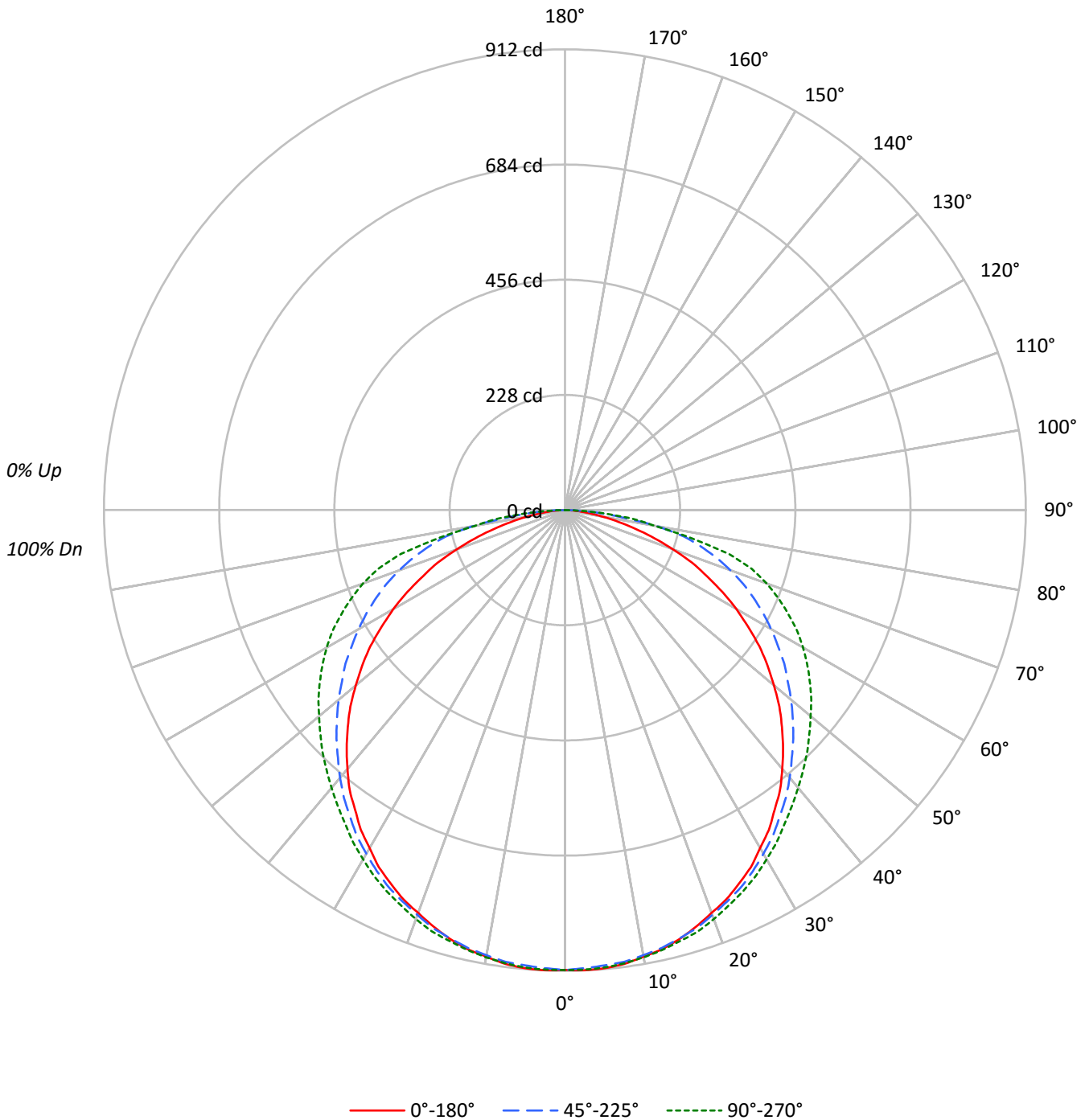
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1225	1225	1225
5°	1230	1222	1228
10°	1226	1222	1228
15°	1224	1222	1230
20°	1215	1221	1234
25°	1211	1224	1237
30°	1200	1220	1240
35°	1189	1217	1245
40°	1175	1216	1261
45°	1156	1216	1290
50°	1130	1223	1329
55°	1102	1243	1388
60°	1055	1267	1464
65°	988	1312	1554
70°	898	1373	1672
75°	762	1448	1747
80°	600	1457	1413
85°	443	1108	1241



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.4	3.0
10°-20°	248.5	8.6
20°-30°	380.1	13.1
30°-40°	464.6	16.0
40°-50°	495.2	17.1
50°-60°	473.5	16.4
60°-70°	401.1	13.9
70°-80°	269.6	9.3
80°-90°	76.0	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°	715.0	24.7
0°-40°	1179.6	40.7
0°-60°	2148.3	74.2
0°-90°	2895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	910	909	905	909	909	86
15°	879	879	877	884	883	248
25°	816	818	824	831	833	376
35°	724	730	741	755	758	453
45°	607	618	639	666	678	468
55°	470	487	530	572	592	418
65°	310	342	412	467	488	308
75°	146	200	279	326	336	157
85°	29	59	72	78	80	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	910.4	910.4	910.4	910.4	910.4
2.5°	911.8	911.8	907.5	910.4	910.4
5°	910.4	909.0	904.7	909.0	909.0
7.5°	906.1	904.7	901.8	906.1	904.7
10°	897.5	897.5	894.6	898.9	898.9
12.5°	890.3	888.9	887.4	893.2	891.7
15°	878.8	878.8	877.4	884.5	883.1
17.5°	864.4	865.9	867.3	873.1	874.5
20°	848.6	851.5	853.0	861.6	861.6
22.5°	834.3	835.7	838.6	847.2	847.2
25°	815.6	818.5	824.2	831.4	832.9
27.5°	797.0	798.4	805.6	815.6	817.1
30°	772.5	776.9	785.5	797.0	798.4
32.5°	751.0	755.3	765.4	776.9	779.7
35°	723.7	729.5	741.0	755.3	758.2
37.5°	699.3	703.6	718.0	733.8	738.1
40°	669.2	677.8	692.1	710.8	718.0
42.5°	639.0	647.6	664.8	689.3	697.9
45°	607.4	617.5	639.0	666.3	677.8
47.5°	575.8	587.3	611.7	643.3	656.2
50°	539.9	554.3	584.4	620.3	634.7
52.5°	505.5	522.7	555.7	595.9	614.6
55°	469.6	486.8	529.9	571.5	591.6
57.5°	429.4	452.3	499.7	547.1	568.6
60°	392.0	413.6	471.0	522.7	544.2
62.5°	351.8	380.5	442.3	496.8	518.4
65°	310.2	341.8	412.1	466.7	488.2
67.5°	272.8	307.3	382.0	436.5	458.1
70°	228.3	271.4	348.9	403.5	425.0
72.5°	186.7	234.1	314.5	367.6	387.7
75°	146.5	199.6	278.6	326.0	336.0
77.5°	109.1	165.1	241.2	261.3	254.2
80°	77.5	132.1	188.1	178.1	182.4
82.5°	50.3	100.5	116.3	132.1	136.4
85°	28.7	58.9	71.8	77.5	80.4
87.5°	12.9	21.5	28.7	28.7	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)