

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: P313600

Luminaire Tested: **24FCZ2-45-UNV-L83050-RDP-CP125-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: P313600
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-L83050-RDP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 2573.0 lumens
Efficiency: N/A
Efficacy: 68.6 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

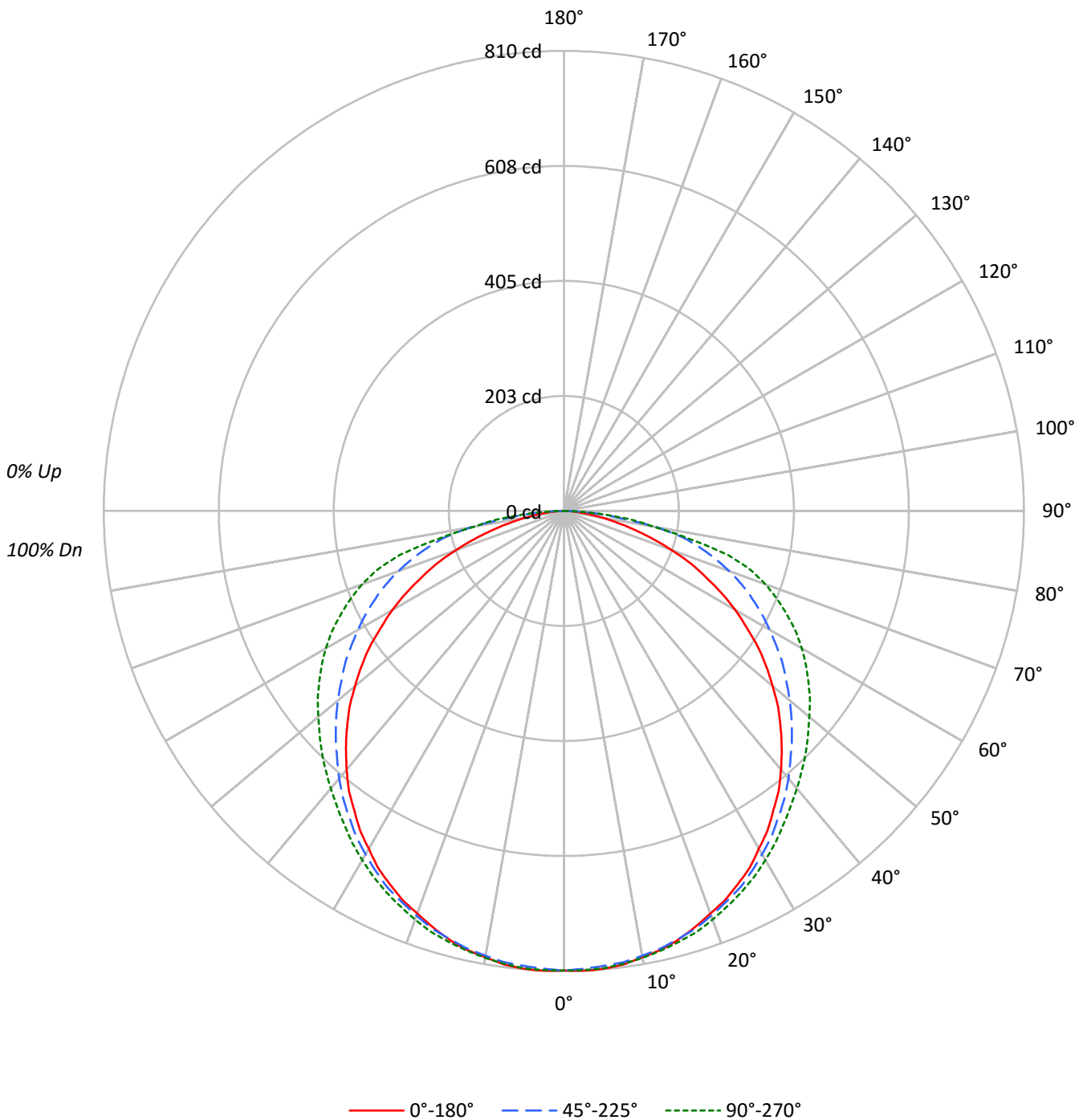
Input Watts (W): 37.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1089	1089	1089
5°	1093	1086	1091
10°	1090	1086	1091
15°	1088	1086	1093
20°	1080	1085	1096
25°	1076	1088	1099
30°	1067	1085	1102
35°	1056	1082	1107
40°	1045	1080	1121
45°	1027	1081	1146
50°	1005	1087	1181
55°	979	1105	1233
60°	938	1126	1302
65°	878	1166	1381
70°	798	1220	1486
75°	677	1287	1552
80°	534	1296	1256
85°	394	985	1104



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.8	3.0
10°-20°	220.9	8.6
20°-30°	337.8	13.1
30°-40°	412.9	16.0
40°-50°	440.1	17.1
50°-60°	420.8	16.4
60°-70°	356.5	13.9
70°-80°	239.6	9.3
80°-90°	67.6	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°	635.5	24.7
0°-40°	1048.4	40.7
0°-60°	1909.3	74.2
0°-90°	2573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2573.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	809	809	809	809	809	
5°	809	808	804	808	808	77
15°	781	781	780	786	785	220
25°	725	728	733	739	740	334
35°	643	648	658	671	674	403
45°	540	549	568	592	602	416
55°	417	433	471	508	526	372
65°	276	304	366	415	434	274
75°	130	177	248	290	299	139
85°	26	52	64	69	72	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	809.1	809.1	809.1	809.1	809.1
2.5°	810.4	810.4	806.6	809.1	809.1
5°	809.1	807.9	804.0	807.9	807.9
7.5°	805.3	804.0	801.5	805.3	804.0
10°	797.6	797.6	795.1	798.9	798.9
12.5°	791.3	790.0	788.7	793.8	792.5
15°	781.1	781.1	779.8	786.2	784.9
17.5°	768.3	769.6	770.8	776.0	777.2
20°	754.3	756.8	758.1	765.7	765.7
22.5°	741.5	742.8	745.3	753.0	753.0
25°	724.9	727.5	732.6	738.9	740.2
27.5°	708.3	709.6	716.0	724.9	726.2
30°	686.6	690.4	698.1	708.3	709.6
32.5°	667.5	671.3	680.2	690.4	693.0
35°	643.2	648.3	658.5	671.3	673.9
37.5°	621.5	625.4	638.1	652.2	656.0
40°	594.7	602.4	615.1	631.7	638.1
42.5°	567.9	575.6	590.9	612.6	620.3
45°	539.8	548.8	567.9	592.2	602.4
47.5°	511.8	522.0	543.7	571.8	583.2
50°	479.9	492.6	519.4	551.3	564.1
52.5°	449.2	464.6	493.9	529.6	546.2
55°	417.3	432.6	470.9	507.9	525.8
57.5°	381.6	402.0	444.1	486.2	505.4
60°	348.4	367.6	418.6	464.6	483.7
62.5°	312.7	338.2	393.1	441.6	460.7
65°	275.7	303.7	366.3	414.8	433.9
67.5°	242.5	273.1	339.5	388.0	407.1
70°	202.9	241.2	310.1	358.6	377.8
72.5°	165.9	208.0	279.5	326.7	344.6
75°	130.2	177.4	247.6	289.7	298.6
77.5°	97.0	146.8	214.4	232.3	225.9
80°	68.9	117.4	167.2	158.3	162.1
82.5°	44.7	89.3	103.4	117.4	121.2
85°	25.5	52.3	63.8	68.9	71.5
87.5°	11.5	19.1	25.5	25.5	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)