

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: P310149

Luminaire Tested: **24FCZ2-45-UNV-L82765-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: P310149
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-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: 2571.0 lumens
Efficiency: N/A
Efficacy: 68.9 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

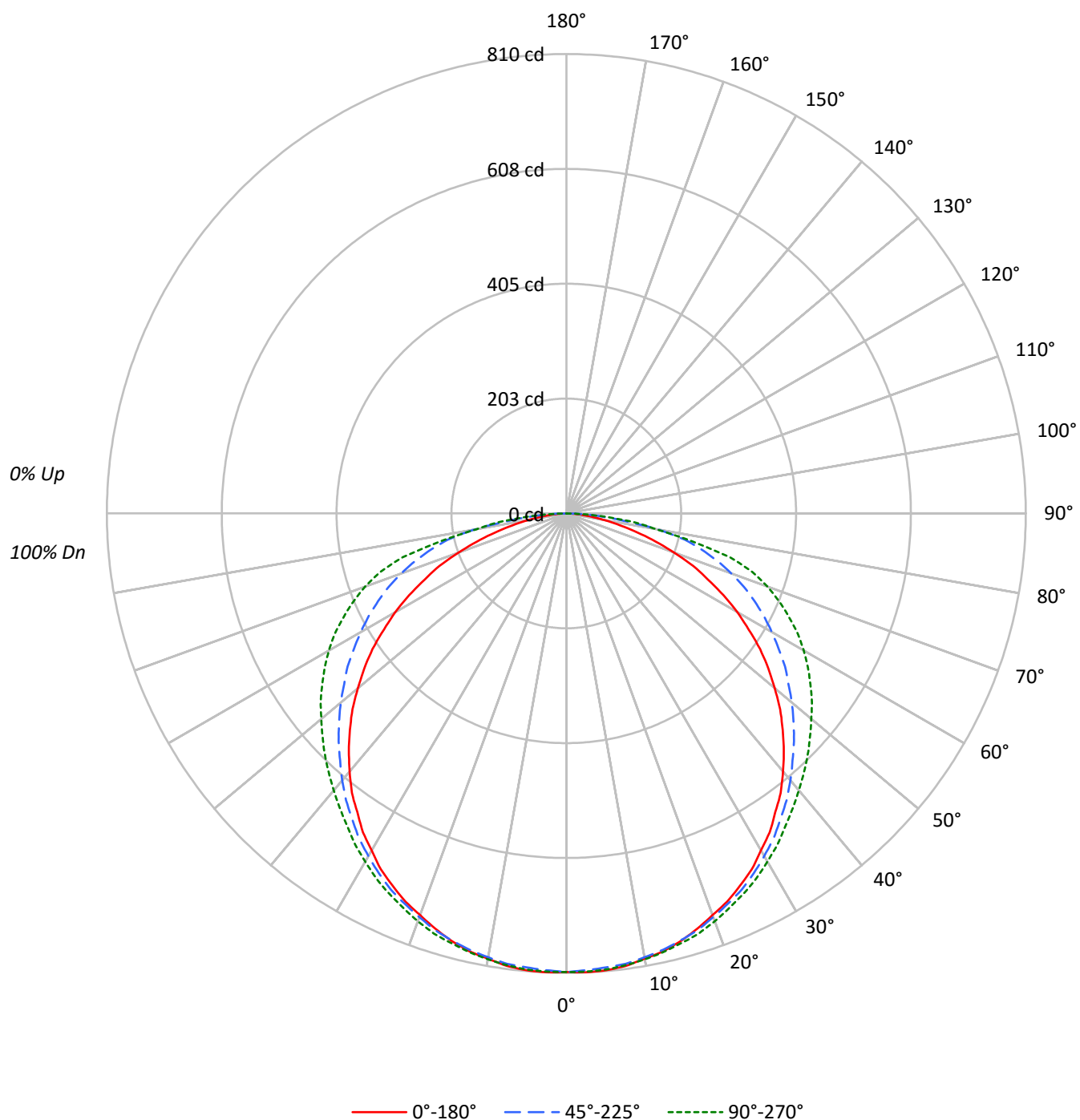
Input Watts (W): 37.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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	67	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°	1088	1088	1088
5°	1092	1085	1090
10°	1089	1085	1091
15°	1087	1085	1092
20°	1079	1085	1096
25°	1075	1087	1098
30°	1066	1084	1102
35°	1056	1081	1106
40°	1044	1080	1120
45°	1026	1080	1145
50°	1004	1086	1180
55°	978	1104	1232
60°	937	1126	1301
65°	877	1165	1380
70°	798	1219	1485
75°	676	1286	1551
80°	534	1295	1255
85°	394	985	1102



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	3.0
10°-20°	220.7	8.6
20°-30°	337.5	13.1
30°-40°	412.6	16.0
40°-50°	439.8	17.1
50°-60°	420.5	16.4
60°-70°	356.2	13.9
70°-80°	239.4	9.3
80°-90°	67.5	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°	635.0	24.7
0°-40°	1047.6	40.7
0°-60°	1907.9	74.2
0°-90°	2571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2571.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	808	808	808	808	808	
5°	808	807	803	807	807	77
15°	780	780	779	786	784	220
25°	724	727	732	738	740	334
35°	643	648	658	671	673	403
45°	539	548	568	592	602	416
55°	417	432	471	508	525	371
65°	276	304	366	414	434	273
75°	130	177	247	290	298	139
85°	26	52	64	69	71	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	808.5	808.5	808.5	808.5	808.5
2.5°	809.8	809.8	806.0	808.5	808.5
5°	808.5	807.2	803.4	807.2	807.2
7.5°	804.7	803.4	800.9	804.7	803.4
10°	797.0	797.0	794.5	798.3	798.3
12.5°	790.7	789.4	788.1	793.2	791.9
15°	780.5	780.5	779.2	785.6	784.3
17.5°	767.7	769.0	770.2	775.3	776.6
20°	753.7	756.2	757.5	765.1	765.1
22.5°	740.9	742.2	744.7	752.4	752.4
25°	724.3	726.9	732.0	738.4	739.6
27.5°	707.8	709.0	715.4	724.3	725.6
30°	686.1	689.9	697.6	707.8	709.0
32.5°	667.0	670.8	679.7	689.9	692.5
35°	642.7	647.8	658.0	670.8	673.3
37.5°	621.0	624.9	637.6	651.7	655.5
40°	594.3	601.9	614.7	631.2	637.6
42.5°	567.5	575.1	590.4	612.1	619.8
45°	539.4	548.4	567.5	591.7	601.9
47.5°	511.4	521.6	543.3	571.3	582.8
50°	479.5	492.2	519.0	550.9	563.7
52.5°	448.9	464.2	493.5	529.2	545.8
55°	417.0	432.3	470.6	507.5	525.4
57.5°	381.3	401.7	443.8	485.9	505.0
60°	348.1	367.3	418.3	464.2	483.3
62.5°	312.4	337.9	392.8	441.2	460.4
65°	275.5	303.5	366.0	414.5	433.6
67.5°	242.3	272.9	339.2	387.7	406.8
70°	202.8	241.0	309.9	358.3	377.5
72.5°	165.8	207.9	279.3	326.5	344.3
75°	130.1	177.3	247.4	289.5	298.4
77.5°	96.9	146.7	214.2	232.1	225.7
80°	68.9	117.3	167.1	158.1	162.0
82.5°	44.6	89.3	103.3	117.3	121.1
85°	25.5	52.3	63.8	68.9	71.4
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)