

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: P310169

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CP250-W2A-U-4000K**

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: P310169
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-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 4000K 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: 2582.0 lumens
Efficiency: N/A
Efficacy: 67.9 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

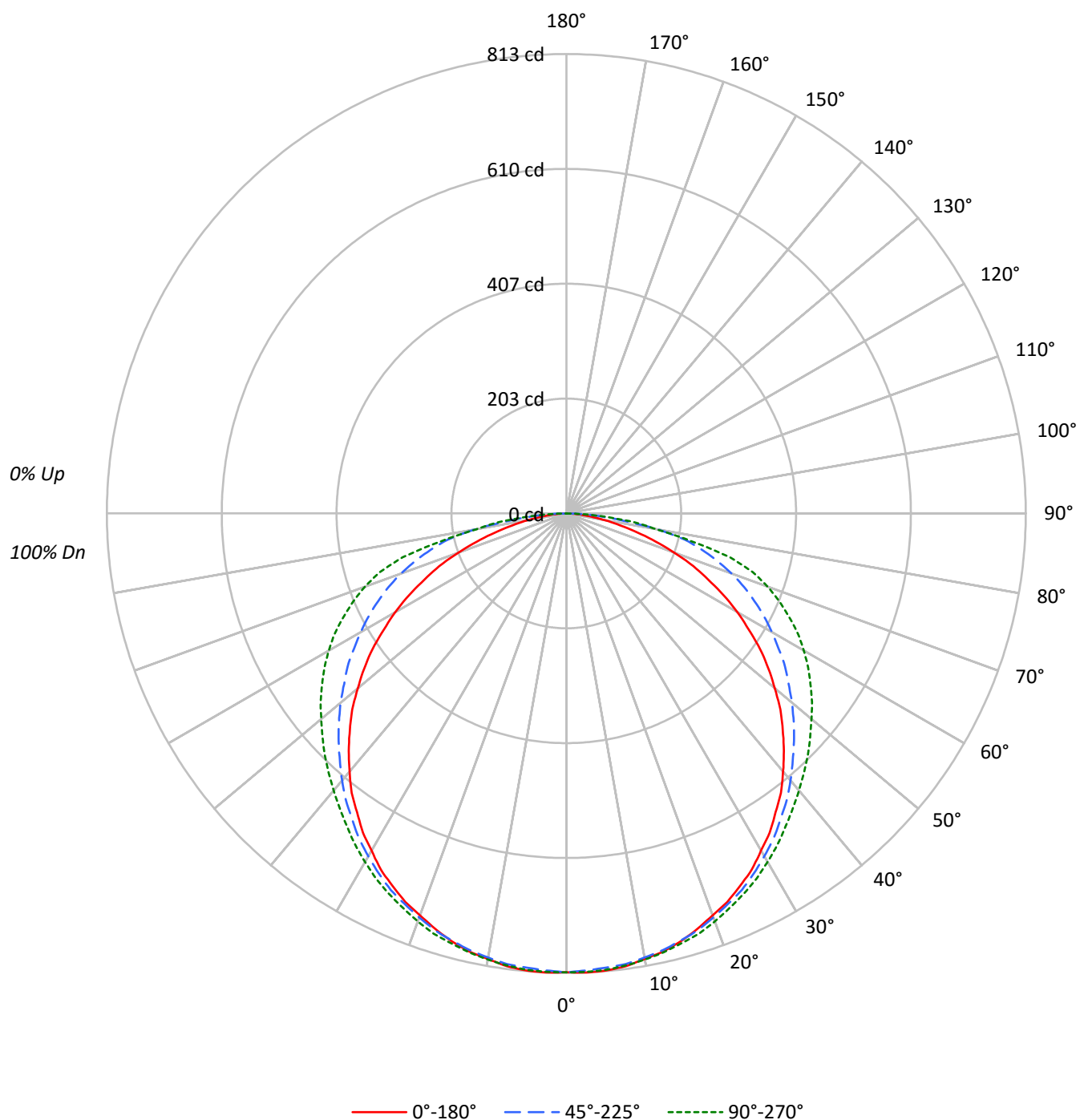
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1093	1093	1093
5°	1097	1090	1095
10°	1094	1090	1095
15°	1092	1090	1097
20°	1084	1089	1100
25°	1080	1091	1103
30°	1070	1088	1106
35°	1060	1085	1111
40°	1048	1084	1125
45°	1031	1084	1150
50°	1008	1091	1185
55°	982	1109	1238
60°	941	1130	1306
65°	881	1170	1386
70°	801	1224	1491
75°	679	1292	1558
80°	536	1300	1260
85°	395	988	1107



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.0	3.0
10°-20°	221.7	8.6
20°-30°	339.0	13.1
30°-40°	414.4	16.0
40°-50°	441.7	17.1
50°-60°	422.3	16.4
60°-70°	357.7	13.9
70°-80°	240.4	9.3
80°-90°	67.8	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°	637.7	24.7
0°-40°	1052.1	40.7
0°-60°	1916.0	74.2
0°-90°	2582.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2582.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	812	812	812	812	812	
5°	812	811	807	811	811	77
15°	784	784	782	789	788	221
25°	727	730	735	742	743	335
35°	646	651	661	674	676	404
45°	542	551	570	594	604	418
55°	419	434	473	510	528	373
65°	277	305	368	416	435	275
75°	131	178	248	291	300	140
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°	812.0	812.0	812.0	812.0	812.0
2.5°	813.2	813.2	809.4	812.0	812.0
5°	812.0	810.7	806.8	810.7	810.7
7.5°	808.1	806.8	804.3	808.1	806.8
10°	800.4	800.4	797.9	801.7	801.7
12.5°	794.0	792.8	791.5	796.6	795.3
15°	783.8	783.8	782.5	788.9	787.6
17.5°	771.0	772.3	773.5	778.7	779.9
20°	756.9	759.5	760.7	768.4	768.4
22.5°	744.1	745.4	747.9	755.6	755.6
25°	727.4	730.0	735.1	741.5	742.8
27.5°	710.8	712.1	718.5	727.4	728.7
30°	689.0	692.9	700.5	710.8	712.1
32.5°	669.8	673.6	682.6	692.9	695.4
35°	645.5	650.6	660.8	673.6	676.2
37.5°	623.7	627.5	640.4	654.4	658.3
40°	596.8	604.5	617.3	633.9	640.4
42.5°	569.9	577.6	593.0	614.7	622.4
45°	541.7	550.7	569.9	594.2	604.5
47.5°	513.6	523.8	545.6	573.8	585.3
50°	481.5	494.4	521.2	553.3	566.1
52.5°	450.8	466.2	495.6	531.5	548.1
55°	418.8	434.2	472.6	509.7	527.6
57.5°	382.9	403.4	445.7	487.9	507.2
60°	349.6	368.8	420.1	466.2	485.4
62.5°	313.8	339.4	394.5	443.1	462.3
65°	276.6	304.8	367.6	416.2	435.4
67.5°	243.3	274.1	340.7	389.3	408.5
70°	203.6	242.1	311.2	359.9	379.1
72.5°	166.5	208.8	280.5	327.9	345.8
75°	130.6	178.0	248.5	290.7	299.7
77.5°	97.3	147.3	215.2	233.1	226.7
80°	69.2	117.8	167.8	158.8	162.6
82.5°	44.8	89.6	103.7	117.8	121.7
85°	25.6	52.5	64.0	69.2	71.7
87.5°	11.5	19.2	25.6	25.6	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)