

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: P311250

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP250-W2A-U-4500K**

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: P311250
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L82765-S-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4500K 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: 2747.0 lumens
Efficiency: N/A
Efficacy: 115.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

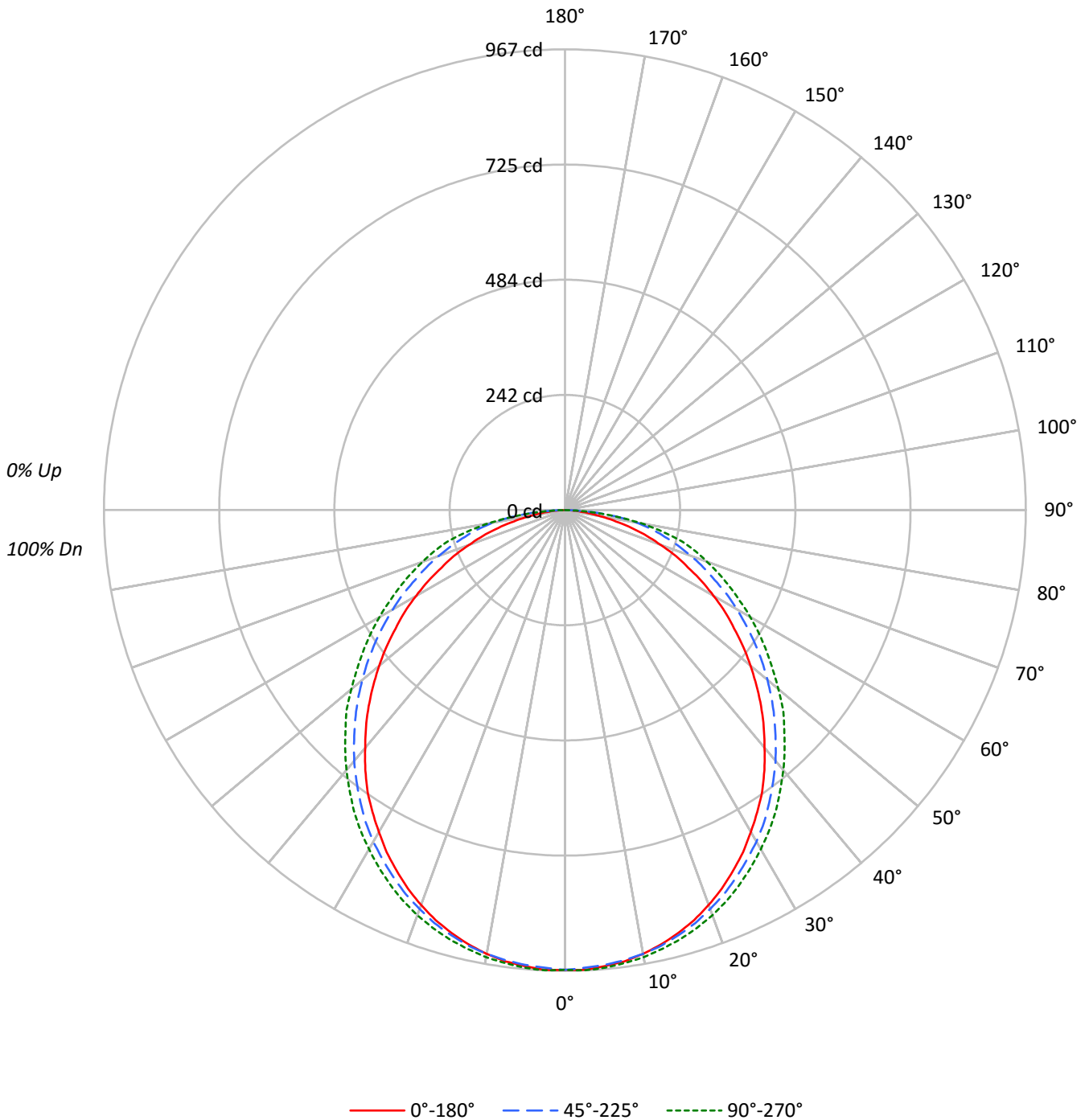
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311250

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-S-CP250-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P311250

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-S-CP250-W2A-U-4500K

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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1298	1298	1298
5°	1298	1294	1302
10°	1292	1292	1302
15°	1280	1286	1299
20°	1263	1276	1296
25°	1240	1263	1288
30°	1212	1249	1277
35°	1185	1228	1267
40°	1145	1208	1252
45°	1107	1184	1239
50°	1065	1162	1224
55°	1017	1140	1212
60°	970	1122	1209
65°	908	1103	1217
70°	841	1109	1249
75°	753	1130	1320
80°	608	1196	1292
85°	459	1051	1024



TEST NUMBER: P311250

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-S-CP250-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	3.3
10°-20°	261.0	9.5
20°-30°	392.4	14.3
30°-40°	467.4	17.0
40°-50°	478.4	17.4
50°-60°	430.7	15.7
60°-70°	338.2	12.3
70°-80°	219.5	8.0
80°-90°	67.9	2.5
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°	744.8	27.1
0°-40°	1212.3	44.1
0°-60°	2121.4	77.2
0°-90°	2747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2747.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	961	962	958	963	964	91
15°	919	921	923	931	933	259
25°	835	842	851	865	867	385
35°	722	730	748	766	771	450
45°	582	596	622	646	651	449
55°	434	453	486	511	516	389
65°	285	307	346	375	382	284
75°	145	173	217	247	254	153
85°	30	55	68	66	66	36
90°	0	0	0	0	0	



TEST NUMBER: P311250

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-S-CP250-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	965.0	965.0	965.0	965.0	965.0
2.5°	965.9	965.9	961.5	965.9	966.8
5°	960.7	962.4	958.1	963.3	964.2
7.5°	955.4	955.4	952.8	958.1	958.9
10°	945.8	946.7	945.8	952.0	952.8
12.5°	933.6	935.4	936.2	942.4	943.2
15°	918.8	921.4	923.2	931.0	932.8
17.5°	902.2	904.8	909.2	917.9	919.7
20°	882.1	885.6	890.9	902.2	904.8
22.5°	860.3	863.8	872.5	883.0	887.4
25°	835.0	842.0	850.7	864.7	867.3
27.5°	809.7	815.8	827.2	842.0	845.5
30°	780.1	789.7	803.6	818.5	821.9
32.5°	751.3	760.9	777.4	793.1	797.5
35°	721.6	730.3	747.8	766.1	771.3
37.5°	687.6	698.9	718.1	736.4	741.7
40°	651.8	665.8	687.6	706.8	712.9
42.5°	617.8	632.6	654.4	675.4	682.3
45°	582.0	596.0	622.1	645.7	650.9
47.5°	545.3	561.0	589.0	612.5	621.3
50°	508.7	525.3	554.9	579.4	584.6
52.5°	472.0	489.5	520.9	547.1	549.7
55°	433.7	452.9	486.0	511.3	516.5
57.5°	398.8	415.3	451.1	477.3	483.4
60°	360.4	378.7	417.1	441.5	449.4
62.5°	323.7	342.9	383.0	407.5	414.5
65°	285.3	307.1	346.4	375.2	382.2
67.5°	252.2	273.1	315.0	342.9	349.9
70°	213.8	237.3	281.8	310.6	317.6
72.5°	180.6	205.0	249.5	277.5	287.9
75°	144.8	172.8	217.3	246.9	253.9
77.5°	109.9	142.2	187.6	210.3	210.3
80°	78.5	112.6	154.4	164.9	166.7
82.5°	51.5	84.6	114.3	113.4	113.4
85°	29.7	55.0	68.1	66.3	66.3
87.5°	11.3	22.7	24.4	24.4	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)