

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: P311204

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-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: P311204
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: 24FCZ2-30HE-UNV-L82765-S-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2732.0 lumens
Efficiency: N/A
Efficacy: 128.3 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

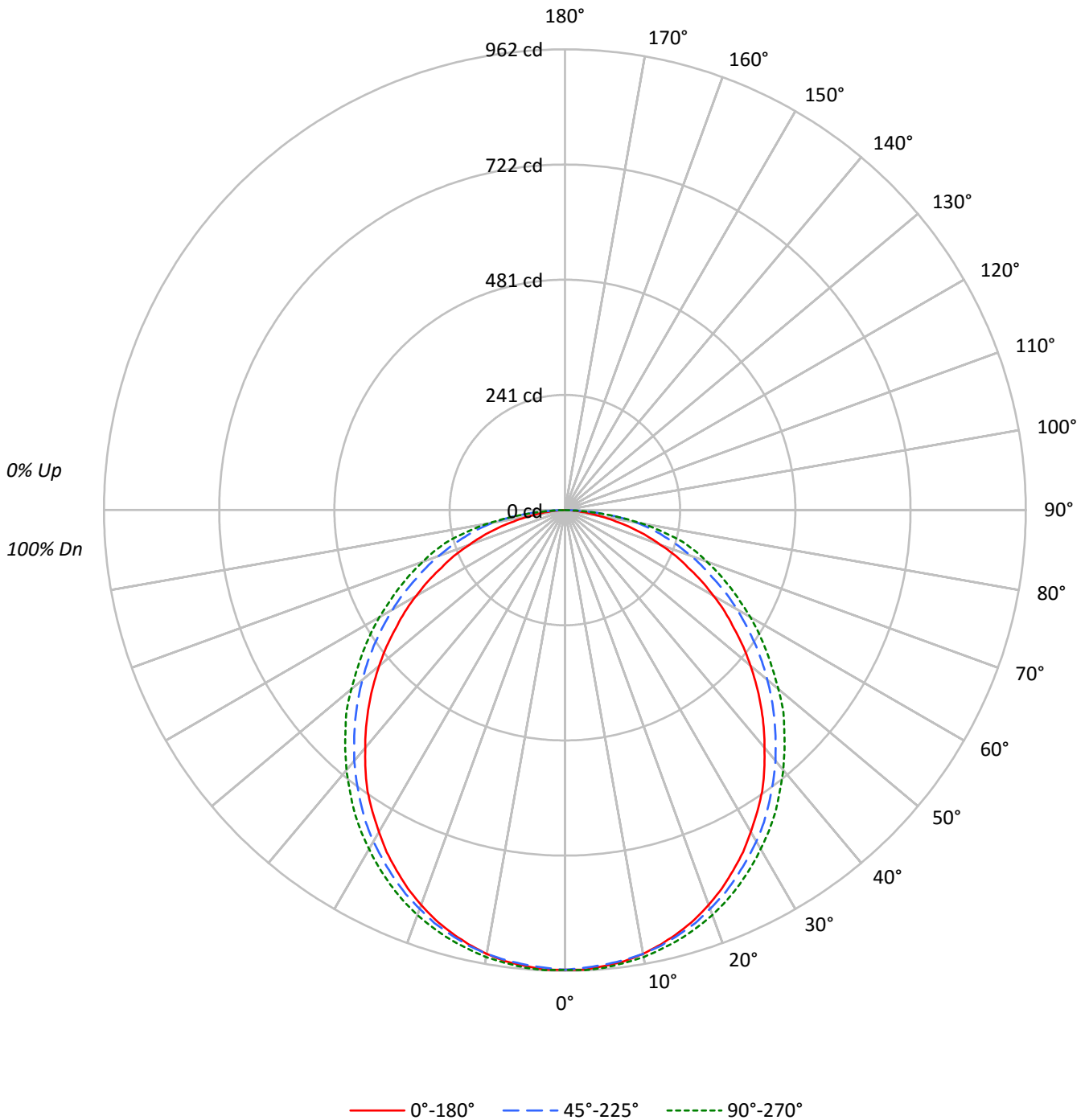
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311204

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP250-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P311204

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP250-W2A-U-4000K

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°	1291	1291	1291
5°	1290	1287	1295
10°	1285	1285	1295
15°	1273	1279	1292
20°	1256	1269	1289
25°	1233	1256	1281
30°	1205	1242	1270
35°	1179	1222	1260
40°	1139	1201	1245
45°	1101	1177	1232
50°	1059	1155	1217
55°	1012	1134	1205
60°	964	1116	1203
65°	904	1097	1210
70°	836	1103	1243
75°	749	1123	1313
80°	605	1190	1284
85°	455	1045	1019



TEST NUMBER: P311204

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP250-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	3.3
10°-20°	259.6	9.5
20°-30°	390.3	14.3
30°-40°	464.9	17.0
40°-50°	475.8	17.4
50°-60°	428.3	15.7
60°-70°	336.4	12.3
70°-80°	218.3	8.0
80°-90°	67.5	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°	740.8	27.1
0°-40°	1205.6	44.1
0°-60°	2109.8	77.2
0°-90°	2732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	960	960	960	960	960	
5°	955	957	953	958	959	91
15°	914	916	918	926	928	258
25°	830	837	846	860	863	383
35°	718	726	744	762	767	448
45°	579	593	619	642	647	446
55°	431	450	483	508	514	387
65°	284	306	344	373	380	282
75°	144	172	216	246	252	152
85°	30	55	68	66	66	36
90°	0	0	0	0	0	



TEST NUMBER: P311204

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP250-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	959.8	959.8	959.8	959.8	959.8
2.5°	960.6	960.6	956.3	960.6	961.5
5°	955.4	957.2	952.8	958.0	958.9
7.5°	950.2	950.2	947.6	952.8	953.7
10°	940.7	941.5	940.7	946.8	947.6
12.5°	928.5	930.3	931.1	937.2	938.1
15°	913.8	916.4	918.1	925.9	927.7
17.5°	897.3	899.9	904.2	912.9	914.6
20°	877.3	880.8	886.0	897.3	899.9
22.5°	855.6	859.1	867.8	878.2	882.5
25°	830.5	837.4	846.1	860.0	862.6
27.5°	805.3	811.4	822.7	837.4	840.9
30°	775.8	785.3	799.2	814.0	817.5
32.5°	747.2	756.7	773.2	788.8	793.2
35°	717.7	726.3	743.7	761.9	767.1
37.5°	683.8	695.1	714.2	732.4	737.6
40°	648.2	662.1	683.8	702.9	709.0
42.5°	614.4	629.1	650.8	671.7	678.6
45°	578.8	592.7	618.7	642.2	647.4
47.5°	542.4	558.0	585.8	609.2	617.9
50°	505.9	522.4	551.9	576.2	581.4
52.5°	469.5	486.8	518.1	544.1	546.7
55°	431.3	450.4	483.4	508.5	513.7
57.5°	396.6	413.1	448.6	474.7	480.8
60°	358.4	376.6	414.8	439.1	446.9
62.5°	321.9	341.0	381.0	405.3	412.2
65°	283.8	305.5	344.5	373.1	380.1
67.5°	250.8	271.6	313.3	341.0	348.0
70°	212.6	236.0	280.3	308.9	315.9
72.5°	179.6	203.9	248.2	276.0	286.4
75°	144.1	171.8	216.1	245.6	252.5
77.5°	109.3	141.4	186.6	209.1	209.1
80°	78.1	111.9	153.6	164.0	165.7
82.5°	51.2	84.2	113.7	112.8	112.8
85°	29.5	54.7	67.7	66.0	66.0
87.5°	11.3	22.6	24.3	24.3	23.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)