

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: P314185

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CP250-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: P314185
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-L83050-S-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2587.0 lumens
Efficiency: N/A
Efficacy: 122.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

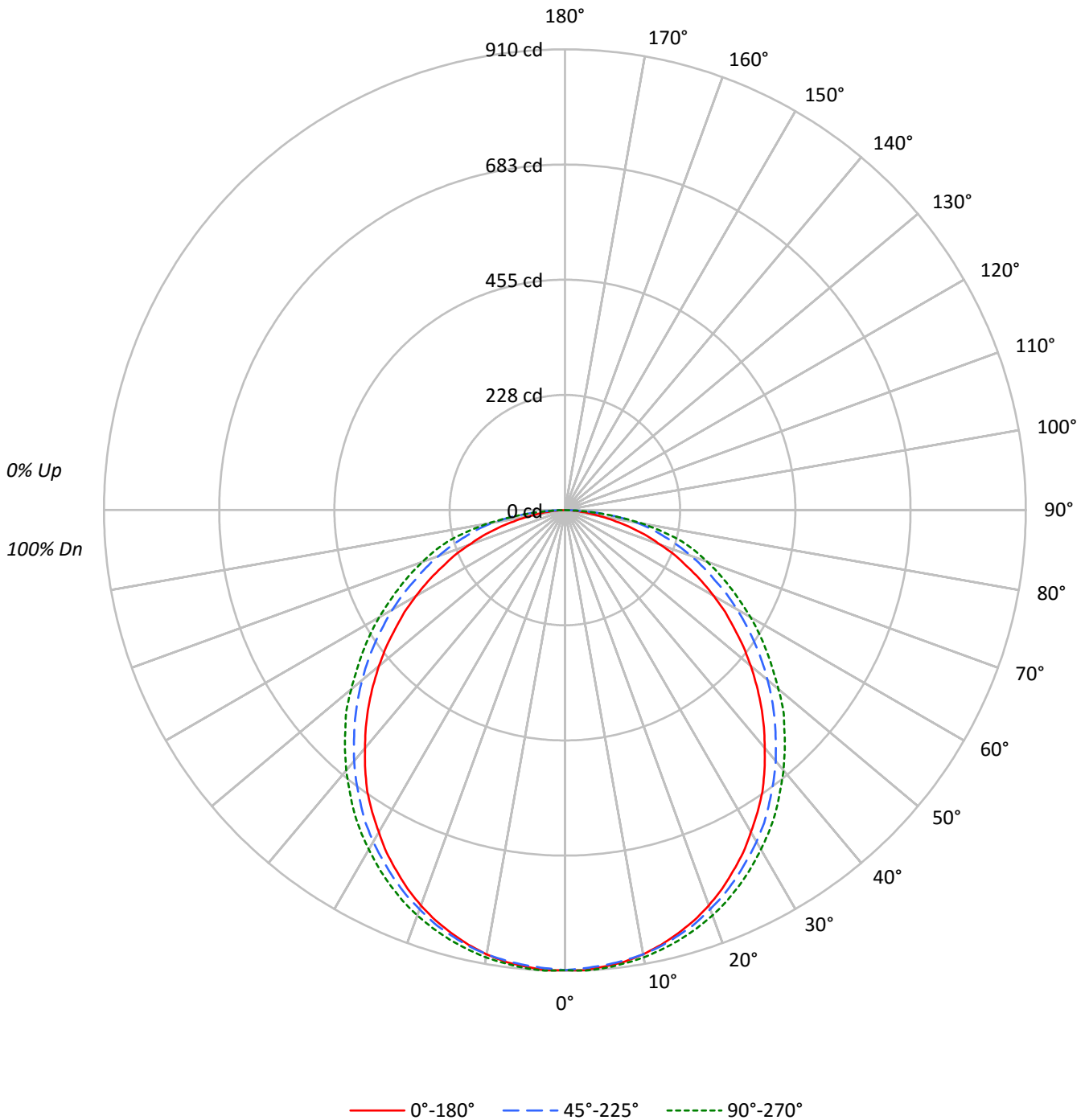
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L83050-S-CP250-W2A-U-3000K

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°	1223	1223	1223
5°	1222	1219	1226
10°	1217	1217	1226
15°	1205	1211	1224
20°	1190	1201	1220
25°	1167	1189	1213
30°	1141	1176	1203
35°	1116	1157	1193
40°	1078	1137	1179
45°	1043	1115	1166
50°	1003	1094	1153
55°	958	1074	1141
60°	913	1057	1139
65°	855	1039	1146
70°	792	1044	1177
75°	709	1064	1243
80°	573	1127	1216
85°	431	990	965



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.0	3.3
10°-20°	245.8	9.5
20°-30°	369.6	14.3
30°-40°	440.2	17.0
40°-50°	450.5	17.4
50°-60°	405.6	15.7
60°-70°	318.5	12.3
70°-80°	206.7	8.0
80°-90°	63.9	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°	701.5	27.1
0°-40°	1141.7	44.1
0°-60°	1997.8	77.2
0°-90°	2587.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2587.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	909	909	909	909	909	
5°	905	906	902	907	908	86
15°	865	868	869	877	878	244
25°	786	793	801	814	817	362
35°	680	688	704	722	726	424
45°	548	561	586	608	613	423
55°	408	426	458	482	486	366
65°	269	289	326	353	360	268
75°	136	163	205	232	239	144
85°	28	52	64	62	62	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	908.8	908.8	908.8	908.8	908.8
2.5°	909.7	909.7	905.5	909.7	910.5
5°	904.7	906.4	902.3	907.2	908.0
7.5°	899.8	899.8	897.3	902.3	903.1
10°	890.8	891.6	890.8	896.5	897.3
12.5°	879.2	880.9	881.7	887.5	888.3
15°	865.3	867.7	869.4	876.8	878.4
17.5°	849.7	852.1	856.2	864.5	866.1
20°	830.8	834.1	839.0	849.7	852.1
22.5°	810.2	813.5	821.7	831.6	835.7
25°	786.4	793.0	801.2	814.3	816.8
27.5°	762.6	768.3	779.0	793.0	796.3
30°	734.6	743.7	756.8	770.8	774.1
32.5°	707.5	716.5	732.2	746.9	751.1
35°	679.6	687.8	704.2	721.5	726.4
37.5°	647.5	658.2	676.3	693.5	698.5
40°	613.8	627.0	647.5	665.6	671.4
42.5°	581.8	595.8	616.3	636.0	642.6
45°	548.1	561.2	585.9	608.1	613.0
47.5°	513.6	528.4	554.7	576.9	585.1
50°	479.1	494.7	522.6	545.6	550.6
52.5°	444.6	461.0	490.6	515.2	517.7
55°	408.4	426.5	457.7	481.5	486.5
57.5°	375.5	391.1	424.8	449.5	455.2
60°	339.4	356.6	392.8	415.8	423.2
62.5°	304.9	322.9	360.7	383.7	390.3
65°	268.7	289.2	326.2	353.3	359.9
67.5°	237.5	257.2	296.6	322.9	329.5
70°	201.3	223.5	265.4	292.5	299.1
72.5°	170.1	193.1	235.0	261.3	271.2
75°	136.4	162.7	204.6	232.5	239.1
77.5°	103.5	133.9	176.7	198.0	198.0
80°	74.0	106.0	145.4	155.3	156.9
82.5°	48.5	79.7	107.6	106.8	106.8
85°	27.9	51.8	64.1	62.5	62.5
87.5°	10.7	21.4	23.0	23.0	22.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)