

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: P311183

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-2700K**

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: P311183
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-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 2700K 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: 2644.0 lumens
Efficiency: N/A
Efficacy: 125.3 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

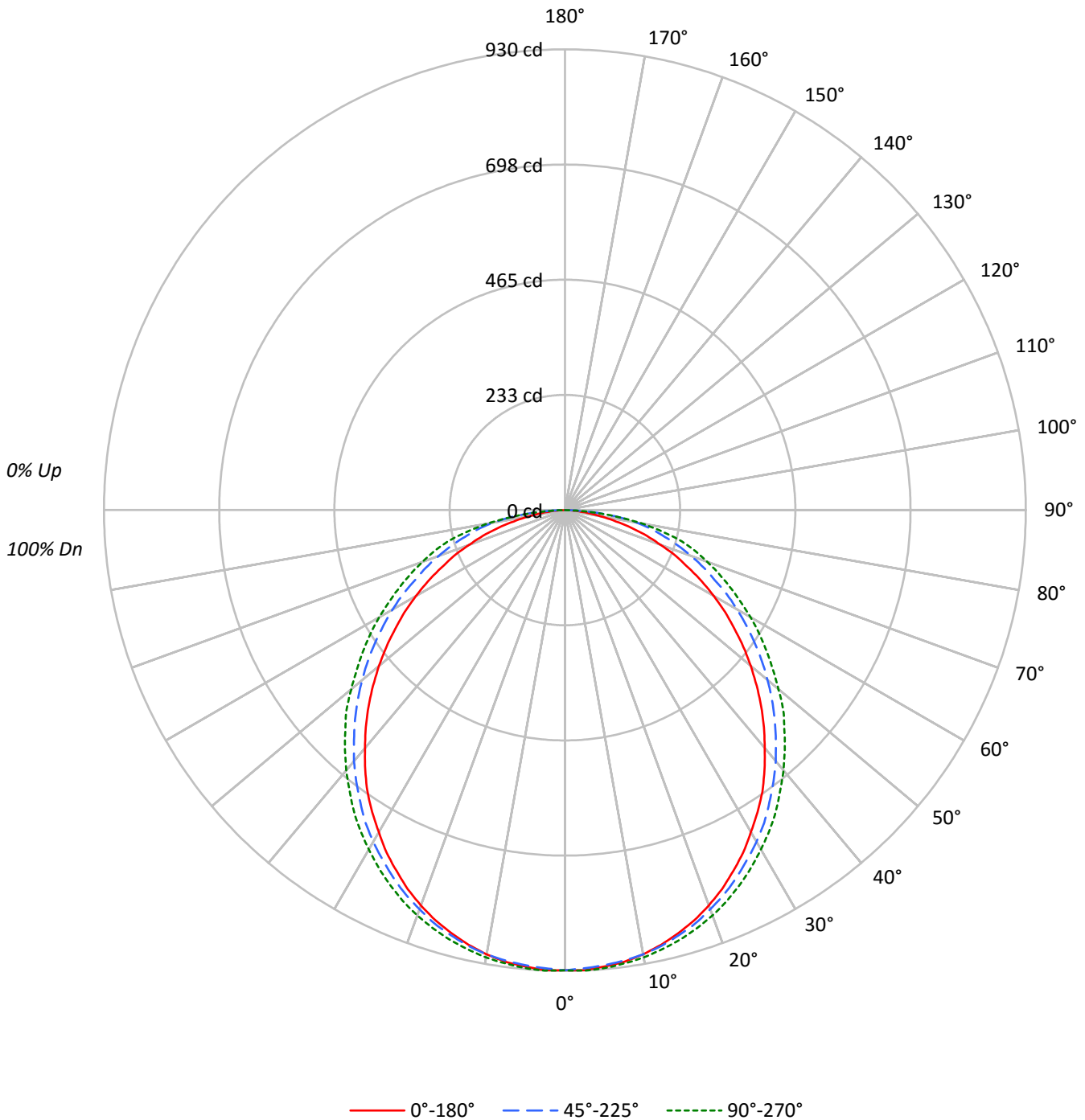
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L82765-S-CP125-W2A-U-2700K

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°	1250	1250	1250
5°	1249	1245	1253
10°	1244	1244	1253
15°	1232	1238	1251
20°	1216	1228	1247
25°	1193	1216	1239
30°	1166	1202	1229
35°	1141	1182	1219
40°	1102	1162	1205
45°	1066	1139	1192
50°	1025	1118	1178
55°	979	1097	1166
60°	934	1080	1164
65°	874	1061	1171
70°	810	1067	1203
75°	725	1087	1271
80°	586	1152	1243
85°	442	1011	985



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.9	3.3
10°-20°	251.3	9.5
20°-30°	377.7	14.3
30°-40°	449.9	17.0
40°-50°	460.5	17.4
50°-60°	414.5	15.7
60°-70°	325.6	12.3
70°-80°	211.3	8.0
80°-90°	65.3	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°	716.9	27.1
0°-40°	1166.8	44.1
0°-60°	2041.8	77.2
0°-90°	2644.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2644.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	929	929	929	929	929	
5°	925	926	922	927	928	88
15°	884	887	888	896	898	249
25°	804	810	819	832	835	370
35°	694	703	720	737	742	433
45°	560	574	599	622	626	432
55°	417	436	468	492	497	374
65°	275	296	333	361	368	273
75°	139	166	209	238	244	148
85°	29	53	66	64	64	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	928.9	928.9	928.9	928.9	928.9
2.5°	929.7	929.7	925.5	929.7	930.5
5°	924.7	926.3	922.1	927.2	928.0
7.5°	919.6	919.6	917.1	922.1	923.0
10°	910.4	911.2	910.4	916.3	917.1
12.5°	898.6	900.3	901.1	907.0	907.9
15°	884.3	886.9	888.5	896.1	897.8
17.5°	868.4	870.9	875.1	883.5	885.2
20°	849.1	852.4	857.5	868.4	870.9
22.5°	828.1	831.4	839.8	849.9	854.1
25°	803.7	810.4	818.8	832.3	834.8
27.5°	779.4	785.2	796.2	810.4	813.8
30°	750.8	760.0	773.5	787.8	791.1
32.5°	723.1	732.3	748.3	763.4	767.6
35°	694.5	702.9	719.7	737.4	742.4
37.5°	661.8	672.7	691.2	708.8	713.9
40°	627.4	640.8	661.8	680.3	686.1
42.5°	594.6	608.9	629.9	650.0	656.7
45°	560.2	573.6	598.8	621.5	626.5
47.5°	524.9	540.0	566.9	589.6	598.0
50°	489.6	505.6	534.1	557.6	562.7
52.5°	454.3	471.1	501.4	526.6	529.1
55°	417.4	435.9	467.8	492.1	497.2
57.5°	383.8	399.8	434.2	459.4	465.3
60°	346.9	364.5	401.4	425.0	432.5
62.5°	311.6	330.1	368.7	392.2	398.9
65°	274.6	295.6	333.4	361.1	367.8
67.5°	242.7	262.9	303.2	330.1	336.8
70°	205.8	228.4	271.3	299.0	305.7
72.5°	173.8	197.4	240.2	267.1	277.1
75°	139.4	166.3	209.1	237.7	244.4
77.5°	105.8	136.9	180.6	202.4	202.4
80°	75.6	108.3	148.7	158.7	160.4
82.5°	49.6	81.5	110.0	109.2	109.2
85°	28.6	52.9	65.5	63.8	63.8
87.5°	10.9	21.8	23.5	23.5	22.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)