

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: P311185

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-3500K**

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: P311185
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-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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: 2814.0 lumens
Efficiency: N/A
Efficacy: 132.7 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

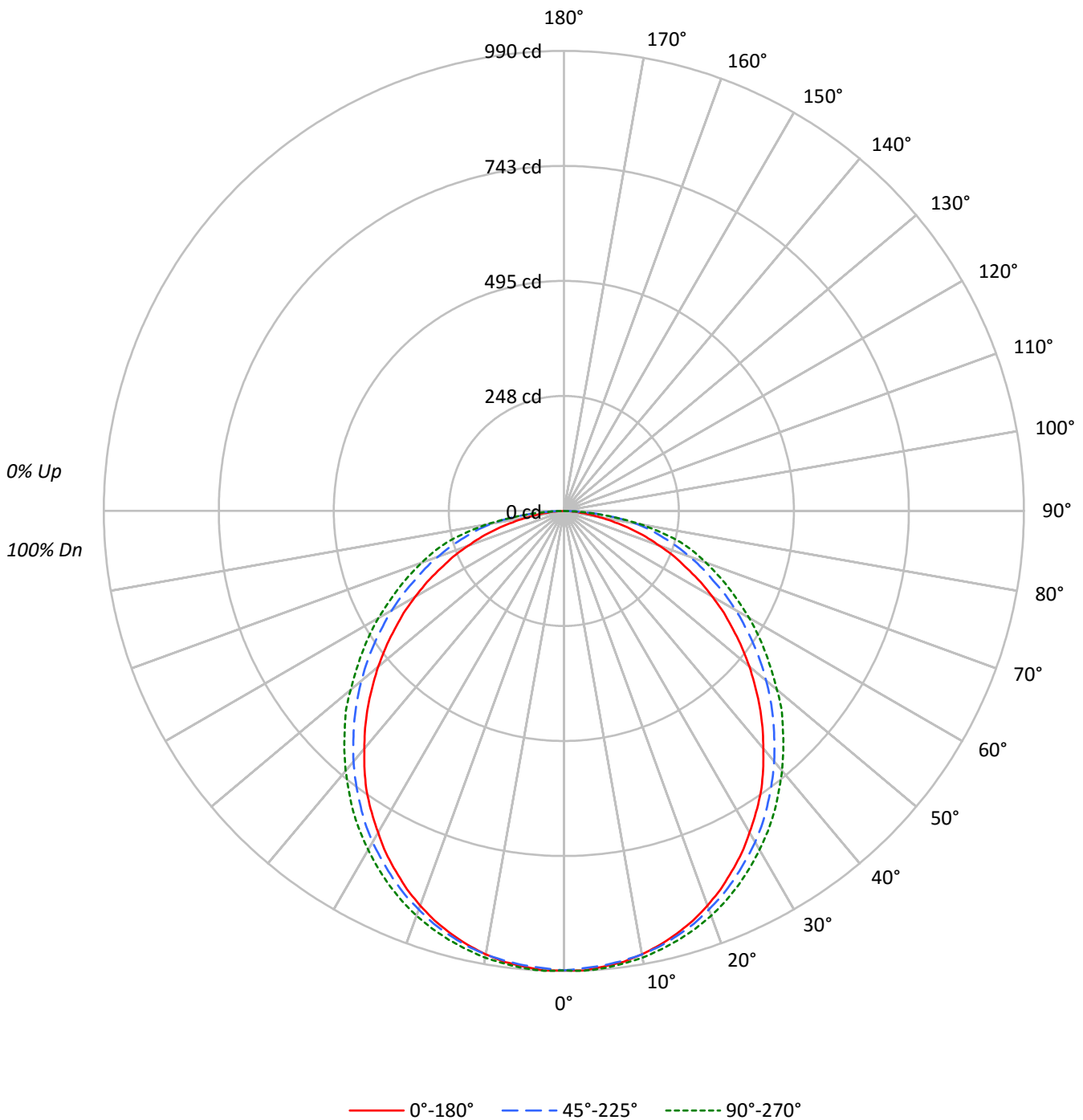
Input Watts (W): 21.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311185

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P311185

CATALOG NUMBER: 24FC22-30HE-UNV-L82765-S-CP125-W2A-U-3500K

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°	1330	1330	1330
5°	1329	1326	1334
10°	1324	1324	1334
15°	1311	1317	1331
20°	1294	1307	1327
25°	1270	1294	1319
30°	1242	1279	1308
35°	1214	1258	1298
40°	1173	1237	1283
45°	1134	1213	1269
50°	1091	1190	1254
55°	1042	1168	1241
60°	994	1150	1239
65°	931	1130	1246
70°	862	1136	1280
75°	771	1157	1352
80°	623	1226	1323
85°	469	1076	1048



TEST NUMBER: P311185

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.6	3.3
10°-20°	267.4	9.5
20°-30°	402.0	14.3
30°-40°	478.8	17.0
40°-50°	490.1	17.4
50°-60°	441.2	15.7
60°-70°	346.5	12.3
70°-80°	224.9	8.0
80°-90°	69.5	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°	763.0	27.1
0°-40°	1241.8	44.1
0°-60°	2173.1	77.2
0°-90°	2814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	989	989	989	989	989	
5°	984	986	981	987	988	94
15°	941	944	946	954	956	265
25°	855	862	872	886	888	394
35°	739	748	766	785	790	461
45°	596	610	637	661	667	460
55°	444	464	498	524	529	398
65°	292	315	355	384	392	291
75°	148	177	223	253	260	157
85°	30	56	70	68	68	37
90°	0	0	0	0	0	



TEST NUMBER: P311185

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	988.6	988.6	988.6	988.6	988.6
2.5°	989.5	989.5	985.0	989.5	990.4
5°	984.1	985.9	981.4	986.8	987.7
7.5°	978.7	978.7	976.1	981.4	982.3
10°	968.9	969.8	968.9	975.2	976.1
12.5°	956.4	958.2	959.1	965.3	966.2
15°	941.2	943.9	945.7	953.7	955.5
17.5°	924.2	926.9	931.4	940.3	942.1
20°	903.7	907.2	912.6	924.2	926.9
22.5°	881.3	884.9	893.8	904.6	909.0
25°	855.4	862.5	871.5	885.8	888.5
27.5°	829.5	835.7	847.4	862.5	866.1
30°	799.1	808.9	823.2	838.4	842.0
32.5°	769.6	779.4	796.4	812.5	817.0
35°	739.2	748.1	766.0	784.8	790.1
37.5°	704.3	716.0	735.6	754.4	759.8
40°	667.7	682.0	704.3	724.0	730.3
42.5°	632.8	648.0	670.4	691.8	699.0
45°	596.2	610.5	637.3	661.4	666.8
47.5°	558.6	574.7	603.3	627.5	636.4
50°	521.1	538.1	568.5	593.5	598.9
52.5°	483.6	501.4	533.6	560.4	563.1
55°	444.2	463.9	497.9	523.8	529.1
57.5°	408.5	425.5	462.1	488.9	495.2
60°	369.2	387.9	427.3	452.3	460.3
62.5°	331.6	351.3	392.4	417.4	424.6
65°	292.3	314.6	354.9	384.3	391.5
67.5°	258.3	279.8	322.7	351.3	358.4
70°	219.0	243.1	288.7	318.2	325.4
72.5°	185.0	210.1	255.6	284.2	295.0
75°	148.4	177.0	222.6	253.0	260.1
77.5°	112.6	145.7	192.2	215.4	215.4
80°	80.4	115.3	158.2	168.9	170.7
82.5°	52.7	86.7	117.1	116.2	116.2
85°	30.4	56.3	69.7	67.9	67.9
87.5°	11.6	23.2	25.0	25.0	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)