

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: P311191

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-6500K**

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: P311191  
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-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 6500K 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**

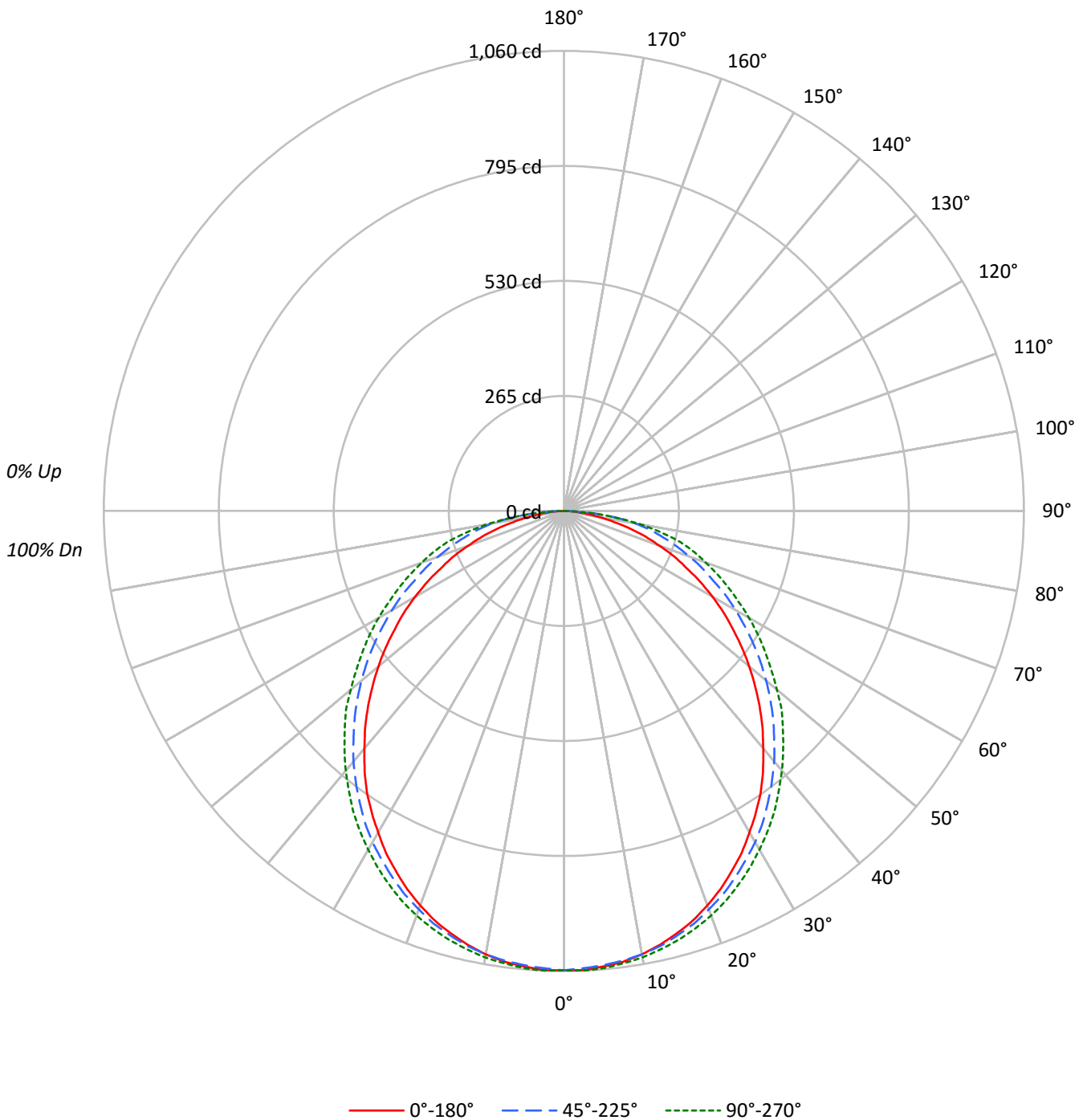
Lumens per Lamp: N/A  
Luminaire Lumens: 3012.0 lumens  
Efficiency: N/A  
Efficacy: 136.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P311191

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-6500K

### Luminous Intensity Polar Plot





TEST NUMBER: P311191

CATALOG NUMBER: 24FC22-30HE-UNV-L82765-S-CP125-W2A-U-6500K

**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°	1424	1424	1424
5°	1423	1419	1428
10°	1417	1417	1427
15°	1403	1410	1425
20°	1385	1399	1421
25°	1359	1385	1412
30°	1329	1369	1400
35°	1300	1347	1389
40°	1255	1324	1373
45°	1214	1298	1358
50°	1168	1274	1342
55°	1115	1250	1329
60°	1063	1231	1326
65°	996	1209	1334
70°	922	1216	1370
75°	826	1238	1447
80°	667	1312	1416
85°	502	1152	1122



TEST NUMBER: P311191

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-6500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.2	3.3
10°-20°	286.2	9.5
20°-30°	430.3	14.3
30°-40°	512.5	17.0
40°-50°	524.5	17.4
50°-60°	472.2	15.7
60°-70°	370.9	12.3
70°-80°	240.7	8.0
80°-90°	74.4	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°	816.7	27.1
0°-40°	1329.2	44.1
0°-60°	2326.0	77.2
0°-90°	3012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3012.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1058	1058	1058	1058	1058	
5°	1053	1055	1050	1056	1057	100
15°	1007	1010	1012	1021	1023	284
25°	916	923	933	948	951	422
35°	791	801	820	840	846	494
45°	638	653	682	708	714	492
55°	476	496	533	561	566	426
65°	313	337	380	411	419	311
75°	159	189	238	271	278	168
85°	32	60	75	73	73	39
90°	0	0	0	0	0	



TEST NUMBER: P311191

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-6500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1058.1	1058.1	1058.1	1058.1	1058.1
2.5°	1059.1	1059.1	1054.3	1059.1	1060.0
5°	1053.4	1055.3	1050.5	1056.2	1057.2
7.5°	1047.6	1047.6	1044.7	1050.5	1051.4
10°	1037.1	1038.0	1037.1	1043.8	1044.7
12.5°	1023.7	1025.6	1026.6	1033.3	1034.2
15°	1007.4	1010.3	1012.2	1020.8	1022.7
17.5°	989.3	992.1	996.9	1006.5	1008.4
20°	967.2	971.1	976.8	989.3	992.1
22.5°	943.3	947.2	956.7	968.2	973.0
25°	915.6	923.2	932.8	948.1	951.0
27.5°	887.8	894.5	907.0	923.2	927.1
30°	855.3	865.8	881.1	897.4	901.2
32.5°	823.7	834.3	852.4	869.7	874.4
35°	791.2	800.8	819.9	840.0	845.7
37.5°	753.9	766.3	787.4	807.5	813.2
40°	714.7	730.0	753.9	774.9	781.6
42.5°	677.4	693.6	717.5	740.5	748.2
45°	638.1	653.4	682.1	708.0	713.7
47.5°	598.0	615.2	645.8	671.6	681.2
50°	557.8	575.9	608.5	635.3	641.0
52.5°	517.6	536.7	571.2	599.9	602.7
55°	475.5	496.5	532.9	560.6	566.4
57.5°	437.2	455.4	494.6	523.3	530.0
60°	395.1	415.2	457.3	484.1	492.7
62.5°	354.9	376.0	420.0	446.8	454.4
65°	312.8	336.8	379.8	411.4	419.0
67.5°	276.5	299.5	345.4	376.0	383.6
70°	234.4	260.2	309.0	340.6	348.2
72.5°	198.0	224.8	273.6	304.2	315.7
75°	158.8	189.4	238.2	270.8	278.4
77.5°	120.5	155.9	205.7	230.6	230.6
80°	86.1	123.4	169.3	180.8	182.7
82.5°	56.4	92.8	125.3	124.4	124.4
85°	32.5	60.3	74.6	72.7	72.7
87.5°	12.4	24.9	26.8	26.8	25.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)