

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: P310530

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CP250-W2A-U-4500K**

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: P310530
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 4500K 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: 2646.0 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

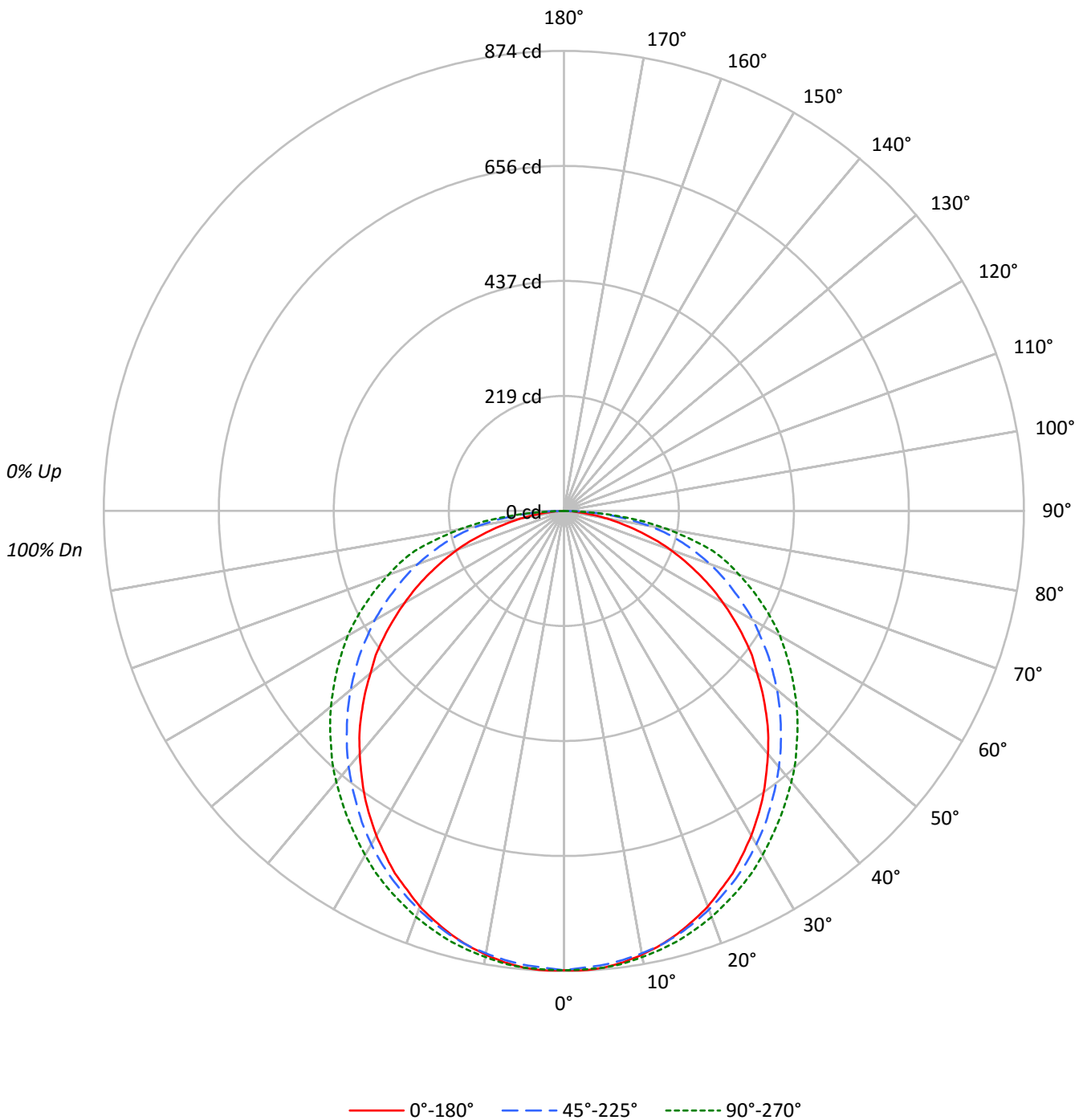
Input Watts (W): 21.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310530

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-CP250-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P310530

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-CP250-W2A-U-4500K

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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1174	1174	1174
5°	1176	1169	1176
10°	1169	1166	1175
15°	1159	1162	1176
20°	1145	1154	1175
25°	1127	1146	1174
30°	1106	1136	1173
35°	1084	1125	1174
40°	1059	1116	1181
45°	1034	1109	1191
50°	1003	1106	1209
55°	978	1108	1234
60°	940	1117	1276
65°	897	1129	1322
70°	850	1164	1395
75°	757	1214	1524
80°	646	1285	1557
85°	460	1274	1491



TEST NUMBER: P310530

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-CP250-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.6	3.1
10°-20°	236.1	8.9
20°-30°	356.7	13.5
30°-40°	429.9	16.2
40°-50°	451.3	17.1
50°-60°	422.2	16.0
60°-70°	348.7	13.2
70°-80°	237.6	9.0
80°-90°	81.0	3.1
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°	675.4	25.5
0°-40°	1105.3	41.8
0°-60°	1978.7	74.8
0°-90°	2646.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2646.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	873	873	873	873	873	
5°	871	870	866	871	871	83
15°	832	833	834	843	844	235
25°	759	763	772	787	791	349
35°	660	667	685	708	715	413
45°	543	555	583	614	626	419
55°	417	434	472	511	526	372
65°	282	306	355	399	415	280
75°	146	179	234	277	293	155
85°	30	59	82	93	97	37
90°	0	0	0	0	0	



TEST NUMBER: P310530

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-CP250-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	872.6	872.6	872.6	872.6	872.6
2.5°	873.5	872.6	868.2	872.6	871.7
5°	870.9	870.0	865.6	870.9	870.9
7.5°	864.7	864.7	860.3	866.5	867.4
10°	855.9	855.9	853.3	860.3	860.3
12.5°	845.4	845.4	845.4	852.4	853.3
15°	832.2	833.1	834.0	842.8	844.5
17.5°	816.4	818.2	820.8	831.4	833.1
20°	799.8	801.5	805.9	818.2	820.8
22.5°	778.7	783.1	789.2	803.3	805.9
25°	759.4	762.9	771.7	786.6	791.0
27.5°	735.7	740.9	752.4	768.2	774.3
30°	712.0	717.2	731.3	749.7	755.0
32.5°	686.5	694.4	709.3	728.7	734.8
35°	660.2	667.2	684.8	707.6	714.6
37.5°	631.2	640.9	660.2	684.8	693.5
40°	603.1	613.6	635.6	661.9	672.5
42.5°	575.0	585.6	610.1	640.0	650.5
45°	543.4	554.8	582.9	614.5	625.9
47.5°	511.8	525.9	556.6	589.9	602.2
50°	479.3	495.1	528.5	563.6	577.7
52.5°	450.4	465.3	500.4	538.1	551.3
55°	417.0	433.7	472.3	510.9	525.9
57.5°	382.8	401.2	442.5	484.6	499.5
60°	349.4	369.6	415.2	457.4	474.1
62.5°	316.9	337.1	384.5	428.4	445.1
65°	281.8	305.5	354.7	399.4	415.2
67.5°	248.4	273.9	325.7	369.6	385.4
70°	216.0	240.5	295.9	338.9	354.7
72.5°	180.8	208.9	264.2	309.0	325.7
75°	145.7	179.1	233.5	277.4	293.2
77.5°	113.2	147.5	201.9	237.9	245.8
80°	83.4	118.5	165.9	191.4	201.0
82.5°	53.6	88.7	126.4	144.9	152.8
85°	29.8	58.8	82.5	93.1	96.6
87.5°	12.3	25.5	33.4	37.7	37.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)