

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: P309161

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CP125-W2A-U-4000K**

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: P309161  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
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-HRP-CP125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4000K 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**

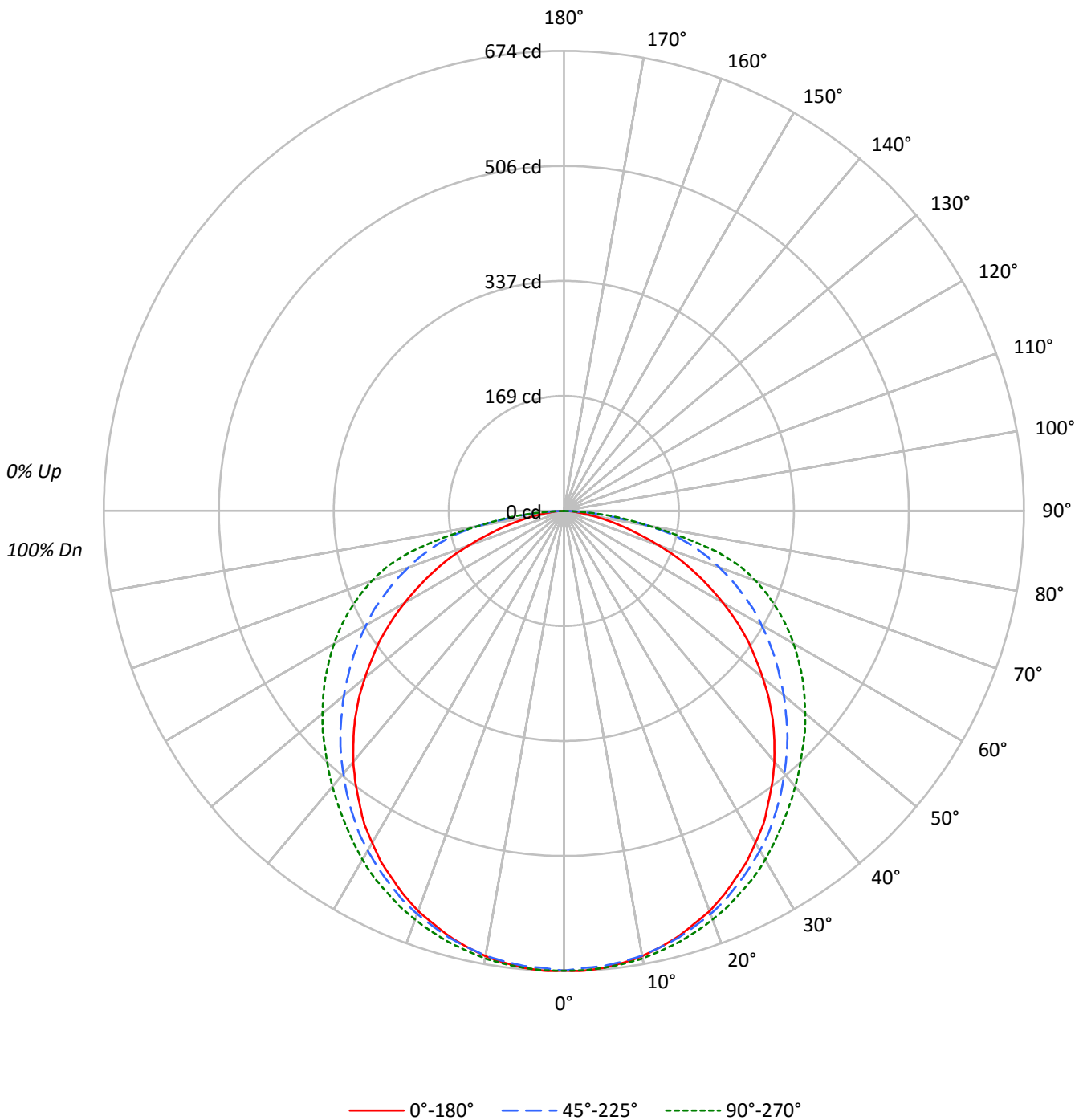
Lumens per Lamp: N/A  
Luminaire Lumens: 2076.0 lumens  
Efficiency: N/A  
Efficacy: 97.5 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: P309161

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-HRP-CP125-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P309161

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-HRP-CP125-W2A-U-4000K

**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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	906	906	906
5°	907	904	907
10°	905	904	910
15°	899	902	910
20°	893	900	912
25°	883	896	913
30°	872	893	917
35°	858	888	918
40°	843	882	927
45°	824	881	941
50°	797	880	966
55°	769	887	1001
60°	725	900	1045
65°	670	921	1104
70°	585	954	1176
75°	475	1003	1215
80°	350	983	983
85°	269	724	818



TEST NUMBER: P309161

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-HRP-CP125-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.8	3.1
10°-20°	183.2	8.8
20°-30°	278.9	13.4
30°-40°	338.7	16.3
40°-50°	357.8	17.2
50°-60°	337.7	16.3
60°-70°	280.7	13.5
70°-80°	184.7	8.9
80°-90°	50.3	2.4
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°	526.0	25.3
0°-40°	864.7	41.7
0°-60°	1560.2	75.2
0°-90°	2076.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2076.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	674	674	674	674	674	
5°	672	672	669	672	672	64
15°	646	647	648	654	654	182
25°	594	598	603	614	615	274
35°	522	528	541	554	559	327
45°	433	442	463	486	494	333
55°	328	342	378	414	427	292
65°	210	235	289	332	347	208
75°	91	133	193	229	234	98
85°	17	38	47	52	53	21
90°	0	0	0	0	0	



TEST NUMBER: P309161

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-HRP-CP125-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	673.6	673.6	673.6	673.6	673.6
2.5°	674.4	673.6	670.1	673.6	673.6
5°	671.8	671.8	669.2	671.8	671.8
7.5°	667.5	667.5	665.7	669.2	669.2
10°	662.3	662.3	661.4	665.7	665.7
12.5°	654.4	655.3	654.4	659.7	659.7
15°	645.7	646.6	647.5	653.6	653.6
17.5°	634.4	636.2	637.9	644.9	645.7
20°	624.0	624.9	628.4	636.2	637.1
22.5°	610.1	612.7	617.1	624.9	627.5
25°	594.5	597.9	603.2	613.6	615.3
27.5°	579.7	582.3	589.3	600.6	604.0
30°	561.4	565.8	574.5	585.8	590.1
32.5°	544.1	548.4	558.8	571.0	574.5
35°	522.3	528.4	540.6	554.5	558.8
37.5°	501.5	507.6	522.3	538.0	543.2
40°	479.7	486.7	502.3	520.6	527.5
42.5°	456.3	465.8	483.2	503.2	511.0
45°	432.8	441.5	463.2	485.8	494.5
47.5°	407.6	418.0	441.5	468.4	478.9
50°	380.7	393.7	420.6	450.2	461.5
52.5°	353.7	368.5	398.9	431.9	444.1
55°	327.7	341.6	378.1	413.7	426.7
57.5°	299.0	316.4	356.3	394.6	407.6
60°	269.4	288.5	334.6	374.6	388.5
62.5°	239.9	261.6	313.7	353.7	368.5
65°	210.3	234.7	289.4	332.0	346.8
67.5°	181.6	208.6	266.8	309.4	324.2
70°	148.6	182.5	242.5	284.2	299.0
72.5°	118.2	157.3	219.0	258.1	271.2
75°	91.3	133.0	192.9	228.6	233.8
77.5°	66.9	108.6	166.0	178.2	179.0
80°	45.2	86.9	126.9	125.2	126.9
82.5°	29.5	65.2	80.0	89.5	90.4
85°	17.4	38.2	46.9	52.1	53.0
87.5°	8.7	13.0	16.5	17.4	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)