

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: P309177

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P309177
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-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3000K 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: 1865.0 lumens
Efficiency: N/A
Efficacy: 88.8 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

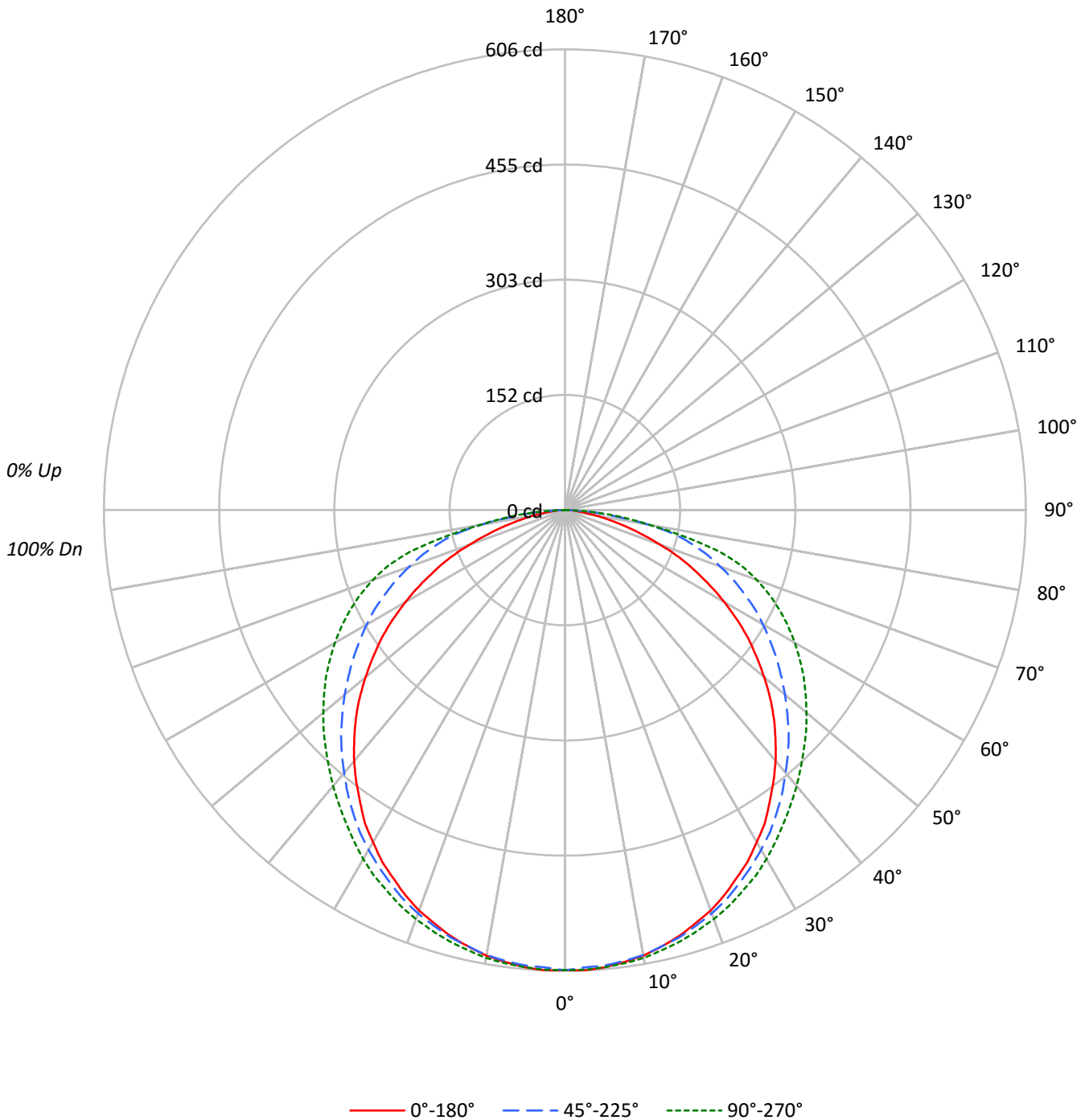
Input Watts (W): 21
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309177

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-HRP-CP250-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P309177

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-HRP-CP250-W2A-U-3000K

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°	814	814	814
5°	815	812	815
10°	813	812	817
15°	808	810	818
20°	803	808	819
25°	793	804	821
30°	784	802	824
35°	771	798	825
40°	757	793	832
45°	740	792	845
50°	716	791	868
55°	691	797	899
60°	651	809	939
65°	601	828	992
70°	525	857	1057
75°	426	901	1092
80°	315	883	883
85°	241	651	735



TEST NUMBER: P309177

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-HRP-CP250-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.3	3.1
10°-20°	164.6	8.8
20°-30°	250.6	13.4
30°-40°	304.3	16.3
40°-50°	321.5	17.2
50°-60°	303.3	16.3
60°-70°	252.2	13.5
70°-80°	165.9	8.9
80°-90°	45.2	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°	472.5	25.3
0°-40°	776.8	41.7
0°-60°	1401.6	75.2
0°-90°	1865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	605	605	605	605	605	
5°	604	604	601	604	604	57
15°	580	581	582	587	587	164
25°	534	537	542	551	553	246
35°	469	475	486	498	502	294
45°	389	397	416	436	444	299
55°	294	307	340	372	383	262
65°	189	211	260	298	312	187
75°	82	120	173	205	210	88
85°	16	34	42	47	48	19
90°	0	0	0	0	0	



TEST NUMBER: P309177

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-HRP-CP250-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	605.1	605.1	605.1	605.1	605.1
2.5°	605.9	605.1	602.0	605.1	605.1
5°	603.5	603.5	601.2	603.5	603.5
7.5°	599.6	599.6	598.1	601.2	601.2
10°	595.0	595.0	594.2	598.1	598.1
12.5°	587.9	588.7	587.9	592.6	592.6
15°	580.1	580.9	581.7	587.1	587.1
17.5°	570.0	571.5	573.1	579.3	580.1
20°	560.6	561.4	564.5	571.5	572.3
22.5°	548.1	550.4	554.4	561.4	563.7
25°	534.1	537.2	541.9	551.2	552.8
27.5°	520.8	523.1	529.4	539.5	542.6
30°	504.4	508.3	516.1	526.2	530.1
32.5°	488.8	492.7	502.0	513.0	516.1
35°	469.2	474.7	485.6	498.1	502.0
37.5°	450.5	456.0	469.2	483.3	488.0
40°	431.0	437.2	451.3	467.7	473.9
42.5°	409.9	418.5	434.1	452.1	459.1
45°	388.8	396.6	416.2	436.5	444.3
47.5°	366.2	375.6	396.6	420.8	430.2
50°	342.0	353.7	377.9	404.4	414.6
52.5°	317.8	331.0	358.4	388.0	399.0
55°	294.4	306.8	339.6	371.6	383.4
57.5°	268.6	284.2	320.1	354.5	366.2
60°	242.0	259.2	300.6	336.5	349.0
62.5°	215.5	235.0	281.9	317.8	331.0
65°	188.9	210.8	260.0	298.3	311.5
67.5°	163.2	187.4	239.7	278.0	291.2
70°	133.5	164.0	217.8	255.3	268.6
72.5°	106.2	141.3	196.8	231.9	243.6
75°	82.0	119.5	173.3	205.3	210.0
77.5°	60.1	97.6	149.1	160.1	160.8
80°	40.6	78.1	114.0	112.4	114.0
82.5°	26.5	58.6	71.8	80.4	81.2
85°	15.6	34.4	42.2	46.8	47.6
87.5°	7.8	11.7	14.8	15.6	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)