

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: P308196

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-CA08-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: P308196
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L82765-HRP-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 2270.0 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

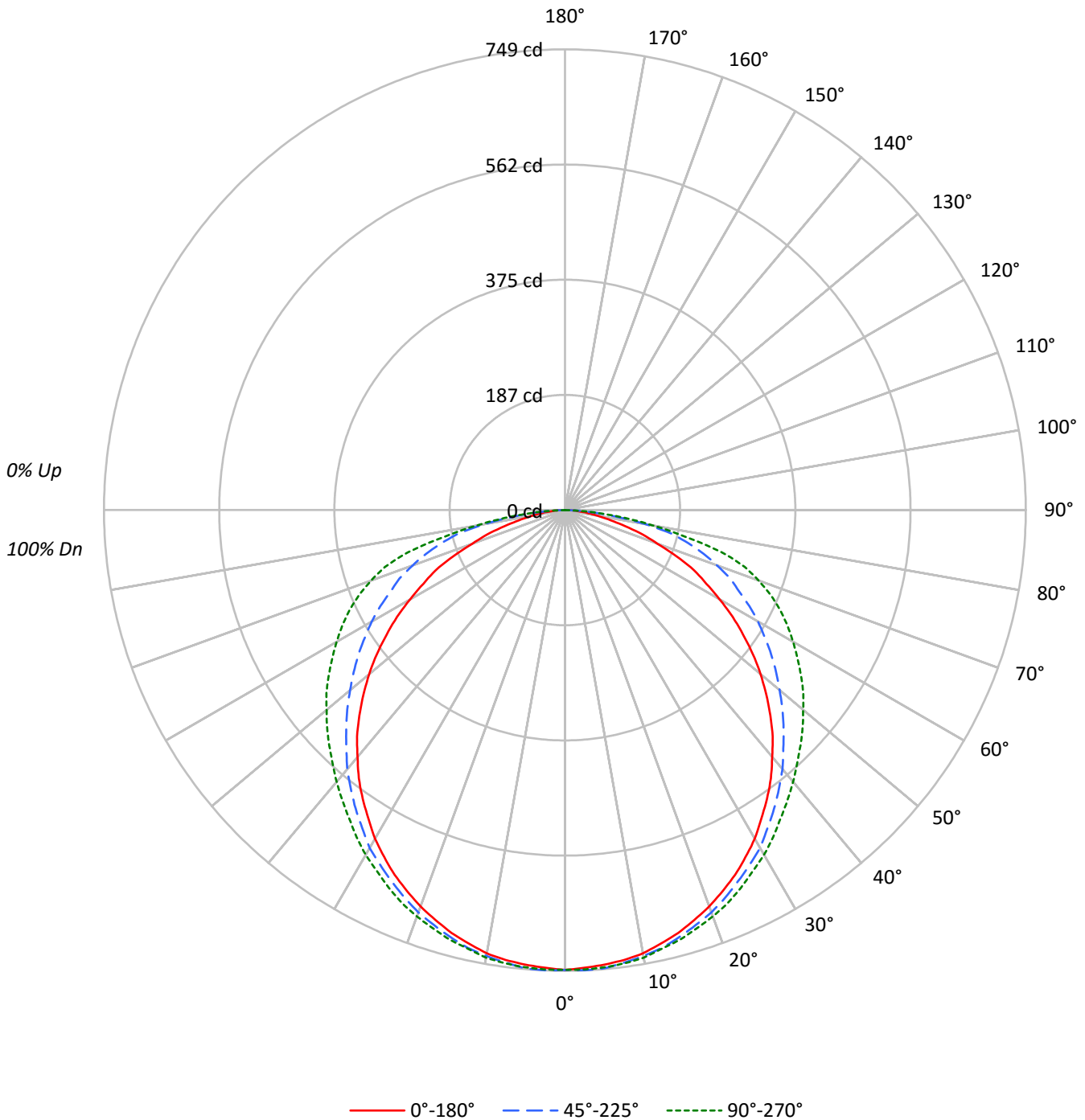
Input Watts (W): 27.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308196

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-HRP-CA08-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P308196

CATALOG NUMBER: 22FC22-34HE-UNV-L82765-HRP-CA08-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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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°	2012	2012	2012
5°	2004	2019	2015
10°	1999	2011	2019
15°	1983	2003	2014
20°	1964	1993	2013
25°	1943	1977	2011
30°	1918	1971	2011
35°	1882	1947	2008
40°	1841	1932	2027
45°	1798	1913	2060
50°	1739	1906	2116
55°	1659	1921	2197
60°	1565	1950	2305
65°	1477	1988	2462
70°	1262	2073	2637
75°	1057	2158	2740
80°	865	2086	2286
85°	750	1547	1680



TEST NUMBER: P308196

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-HRP-CA08-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.8	3.1
10°-20°	202.6	8.9
20°-30°	307.1	13.5
30°-40°	370.8	16.3
40°-50°	389.7	17.2
50°-60°	366.6	16.2
60°-70°	305.7	13.5
70°-80°	202.6	8.9
80°-90°	54.0	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°	580.6	25.6
0°-40°	951.5	41.9
0°-60°	1707.8	75.2
0°-90°	2270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2270.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	742	743	748	748	746	70
15°	712	715	719	722	723	201
25°	654	659	666	674	677	301
35°	573	578	593	606	611	358
45°	472	480	503	528	541	364
55°	354	369	410	451	468	316
65°	232	252	312	364	387	226
75°	102	142	208	251	264	110
85°	24	37	50	54	54	28
90°	0	0	0	0	0	



TEST NUMBER: P308196

CATALOG NUMBER: 22FC22-34HE-UNV-L82765-HRP-CA08-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	747.5	747.5	747.5	747.5	747.5
2.5°	744.6	746.1	748.9	748.9	747.5
5°	741.8	743.2	747.5	747.5	746.1
7.5°	737.5	738.9	741.8	744.6	743.2
10°	731.7	733.2	736.0	738.9	738.9
12.5°	721.7	723.1	728.9	730.3	730.3
15°	711.7	714.6	718.8	721.7	723.1
17.5°	698.8	701.7	707.4	713.1	713.1
20°	685.9	688.8	695.9	701.7	703.1
22.5°	670.2	674.5	681.6	688.8	691.6
25°	654.4	658.7	665.9	674.5	677.3
27.5°	635.8	640.1	650.1	660.1	661.6
30°	617.2	621.5	634.4	643.0	647.2
32.5°	594.3	600.0	612.9	625.8	630.1
35°	572.8	578.5	592.8	605.7	611.4
37.5°	549.9	555.6	571.4	587.1	594.3
40°	524.1	531.3	549.9	567.1	577.1
42.5°	499.8	506.9	525.5	548.4	558.5
45°	472.5	479.7	502.6	528.4	541.3
47.5°	443.9	452.5	479.7	511.2	524.1
50°	415.3	425.3	455.4	491.2	505.5
52.5°	385.2	398.1	432.5	471.1	488.3
55°	353.7	369.4	409.5	451.1	468.3
57.5°	323.6	337.9	385.2	429.6	448.2
60°	290.7	309.3	362.3	408.1	428.2
62.5°	259.2	279.2	337.9	386.6	408.1
65°	232.0	252.0	312.2	363.7	386.6
67.5°	196.2	223.4	290.7	339.4	362.3
70°	160.4	197.6	263.5	313.6	335.1
72.5°	133.2	169.0	236.3	286.4	306.4
75°	101.7	141.8	207.6	250.6	263.5
77.5°	75.9	117.4	177.6	199.0	200.5
80°	55.8	90.2	134.6	141.8	147.5
82.5°	38.7	63.0	87.3	95.9	98.8
85°	24.3	37.2	50.1	54.4	54.4
87.5°	12.9	14.3	17.2	17.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)