

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: P308195

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-CA08-W2A-U-2700K**

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: P308195
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-2700K
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: 2206.0 lumens
Efficiency: N/A
Efficacy: 79.9 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

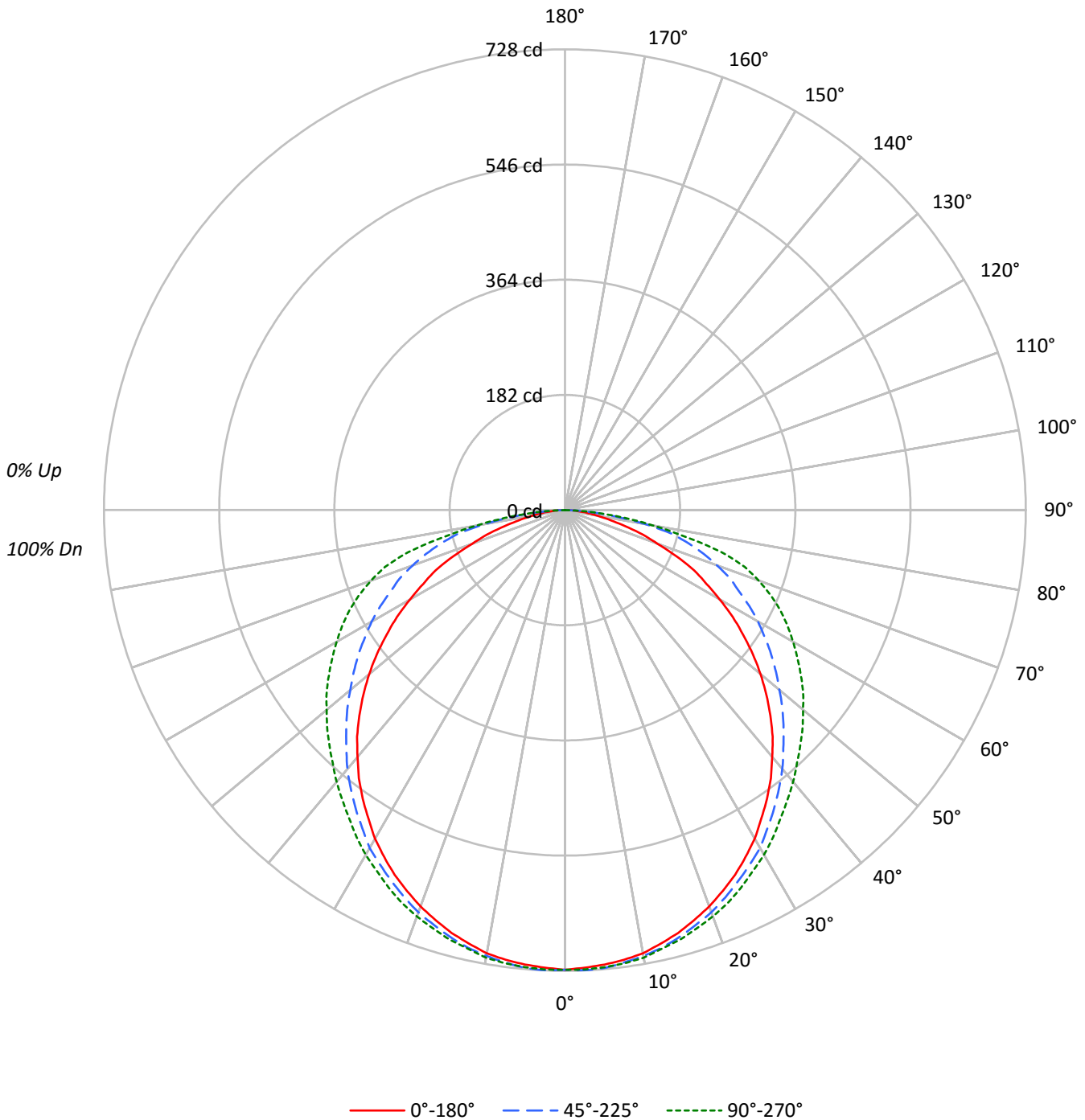
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	1955	1955	1955
5°	1947	1962	1958
10°	1943	1955	1962
15°	1927	1946	1958
20°	1909	1937	1957
25°	1888	1921	1954
30°	1864	1916	1954
35°	1828	1893	1952
40°	1789	1877	1970
45°	1748	1859	2002
50°	1690	1852	2056
55°	1612	1867	2135
60°	1520	1895	2239
65°	1435	1932	2392
70°	1227	2015	2562
75°	1027	2098	2663
80°	841	2027	2221
85°	732	1504	1633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	3.1
10°-20°	196.9	8.9
20°-30°	298.5	13.5
30°-40°	360.4	16.3
40°-50°	378.7	17.2
50°-60°	356.3	16.2
60°-70°	297.1	13.5
70°-80°	196.8	8.9
80°-90°	52.5	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°	564.2	25.6
0°-40°	924.6	41.9
0°-60°	1659.6	75.2
0°-90°	2206.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2206.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	726	726	726	726	726	
5°	721	722	726	726	725	69
15°	692	694	699	701	703	195
25°	636	640	647	655	658	293
35°	557	562	576	589	594	348
45°	459	466	488	514	526	354
55°	344	359	398	438	455	307
65°	225	245	303	354	376	219
75°	99	138	202	244	256	107
85°	24	36	49	53	53	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	726.4	726.4	726.4	726.4	726.4
2.5°	723.6	725.0	727.8	727.8	726.4
5°	720.8	722.2	726.4	726.4	725.0
7.5°	716.7	718.1	720.8	723.6	722.2
10°	711.1	712.5	715.3	718.1	718.1
12.5°	701.4	702.8	708.3	709.7	709.7
15°	691.6	694.4	698.6	701.4	702.8
17.5°	679.1	681.9	687.4	693.0	693.0
20°	666.6	669.4	676.3	681.9	683.3
22.5°	651.3	655.4	662.4	669.4	672.1
25°	636.0	640.1	647.1	655.4	658.2
27.5°	617.9	622.0	631.8	641.5	642.9
30°	599.8	604.0	616.5	624.8	629.0
32.5°	577.5	583.1	595.6	608.1	612.3
35°	556.6	562.2	576.1	588.6	594.2
37.5°	534.4	539.9	555.2	570.6	577.5
40°	509.3	516.3	534.4	551.1	560.8
42.5°	485.7	492.6	510.7	533.0	542.7
45°	459.2	466.2	488.4	513.5	526.0
47.5°	431.4	439.7	466.2	496.8	509.3
50°	403.6	413.3	442.5	477.3	491.2
52.5°	374.3	386.9	420.3	457.8	474.5
55°	343.7	359.0	398.0	438.4	455.1
57.5°	314.5	328.4	374.3	417.5	435.6
60°	282.5	300.6	352.1	396.6	416.1
62.5°	251.9	271.4	328.4	375.7	396.6
65°	225.4	244.9	303.4	353.5	375.7
67.5°	190.6	217.1	282.5	329.8	352.1
70°	155.9	192.0	256.1	304.8	325.6
72.5°	129.4	164.2	229.6	278.3	297.8
75°	98.8	137.8	201.8	243.5	256.1
77.5°	73.8	114.1	172.6	193.4	194.8
80°	54.3	87.7	130.8	137.8	143.3
82.5°	37.6	61.2	84.9	93.2	96.0
85°	23.7	36.2	48.7	52.9	52.9
87.5°	12.5	13.9	16.7	16.7	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)