

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: P308234

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-CP250-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: P308234
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 2227.0 lumens
Efficiency: N/A
Efficacy: 79.8 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

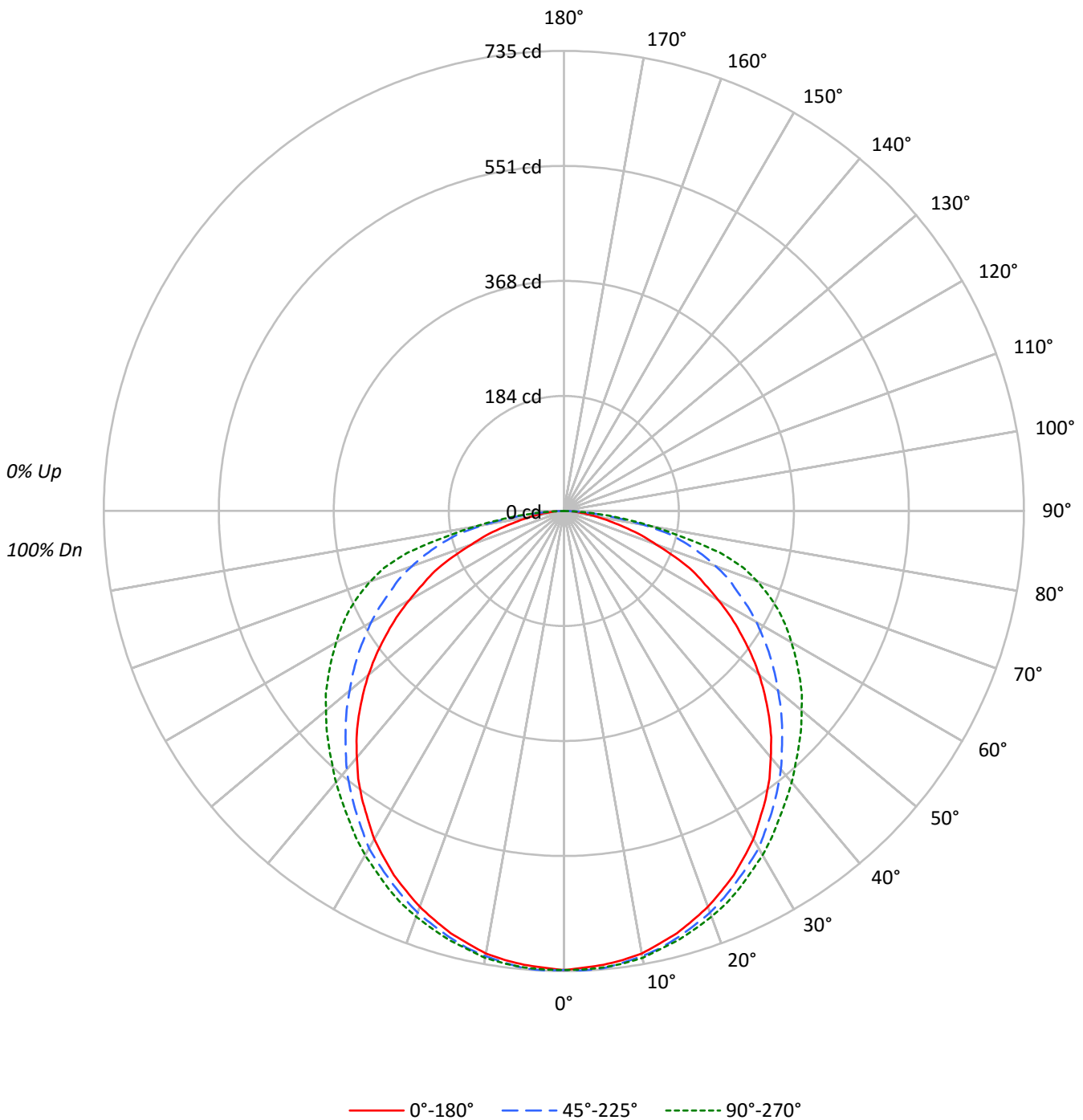
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1973	1973	1973
5°	1966	1981	1977
10°	1962	1973	1981
15°	1945	1965	1976
20°	1927	1955	1975
25°	1906	1940	1973
30°	1881	1934	1973
35°	1846	1911	1971
40°	1806	1895	1989
45°	1764	1877	2021
50°	1706	1870	2076
55°	1628	1885	2155
60°	1535	1913	2260
65°	1449	1950	2415
70°	1238	2034	2586
75°	1037	2118	2688
80°	849	2047	2242
85°	738	1519	1649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.5	3.1
10°-20°	198.8	8.9
20°-30°	301.3	13.5
30°-40°	363.8	16.3
40°-50°	382.3	17.2
50°-60°	359.7	16.2
60°-70°	299.9	13.5
70°-80°	198.7	8.9
80°-90°	53.0	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°	569.6	25.6
0°-40°	933.4	41.9
0°-60°	1675.4	75.2
0°-90°	2227.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2227.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	733	733	733	733	733	
5°	728	729	733	733	732	69
15°	698	701	705	708	709	197
25°	642	646	653	662	664	296
35°	562	568	582	594	600	351
45°	464	471	493	518	531	357
55°	347	362	402	442	459	310
65°	228	247	306	357	379	221
75°	100	139	204	246	258	108
85°	24	36	49	53	53	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	733.3	733.3	733.3	733.3	733.3
2.5°	730.5	731.9	734.7	734.7	733.3
5°	727.7	729.1	733.3	733.3	731.9
7.5°	723.5	724.9	727.7	730.5	729.1
10°	717.9	719.3	722.1	724.9	724.9
12.5°	708.0	709.4	715.1	716.5	716.5
15°	698.2	701.0	705.2	708.0	709.4
17.5°	685.6	688.4	694.0	699.6	699.6
20°	672.9	675.7	682.8	688.4	689.8
22.5°	657.5	661.7	668.7	675.7	678.5
25°	642.0	646.2	653.3	661.7	664.5
27.5°	623.7	628.0	637.8	647.6	649.0
30°	605.5	609.7	622.3	630.8	635.0
32.5°	583.0	588.6	601.3	613.9	618.1
35°	561.9	567.6	581.6	594.2	599.9
37.5°	539.5	545.1	560.5	576.0	583.0
40°	514.2	521.2	539.5	556.3	566.2
42.5°	490.3	497.3	515.6	538.1	547.9
45°	463.6	470.6	493.1	518.4	531.0
47.5°	435.5	443.9	470.6	501.5	514.2
50°	407.4	417.2	446.7	481.9	495.9
52.5°	377.9	390.5	424.3	462.2	479.1
55°	347.0	362.4	401.8	442.5	459.4
57.5°	317.5	331.5	377.9	421.5	439.7
60°	285.2	303.4	355.4	400.4	420.0
62.5°	254.3	273.9	331.5	379.3	400.4
65°	227.6	247.3	306.3	356.8	379.3
67.5°	192.5	219.2	285.2	332.9	355.4
70°	157.3	193.9	258.5	307.7	328.7
72.5°	130.7	165.8	231.8	281.0	300.6
75°	99.7	139.1	203.7	245.8	258.5
77.5°	74.5	115.2	174.2	195.3	196.7
80°	54.8	88.5	132.1	139.1	144.7
82.5°	37.9	61.8	85.7	94.1	96.9
85°	23.9	36.5	49.2	53.4	53.4
87.5°	12.6	14.0	16.9	16.9	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)