

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: P308235

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-CP250-W2A-U-4500K**

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: P308235
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-4500K
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: 2266.0 lumens
Efficiency: N/A
Efficacy: 80.6 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

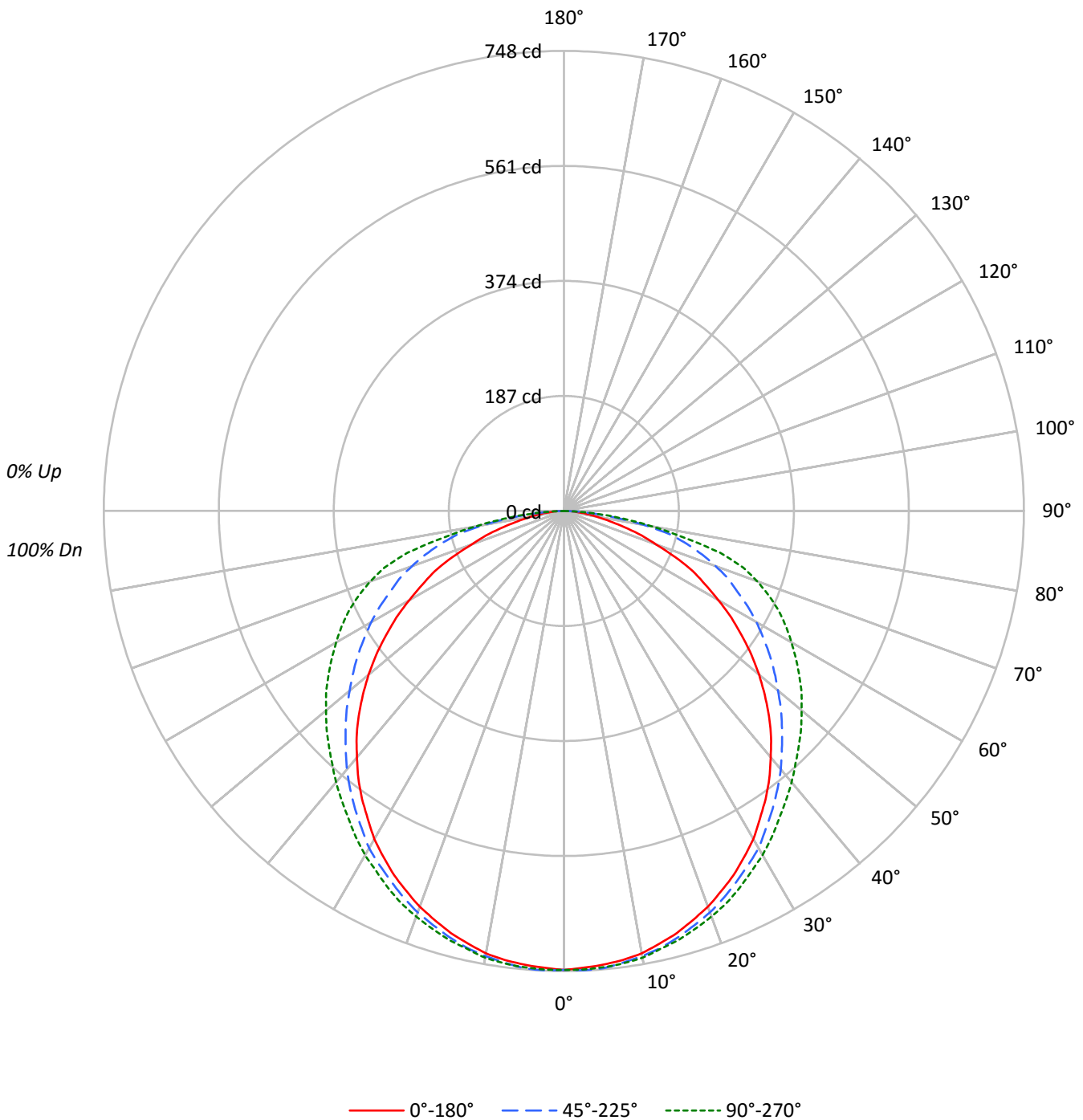
Input Watts (W): 28.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2008	2008	2008
5°	2000	2016	2012
10°	1996	2008	2015
15°	1979	1999	2011
20°	1961	1989	2010
25°	1940	1974	2007
30°	1914	1968	2008
35°	1878	1944	2005
40°	1838	1928	2024
45°	1795	1909	2056
50°	1735	1903	2112
55°	1657	1918	2193
60°	1562	1946	2300
65°	1475	1984	2457
70°	1260	2069	2632
75°	1055	2155	2734
80°	863	2083	2281
85°	750	1544	1677



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	3.1
10°-20°	202.3	8.9
20°-30°	306.6	13.5
30°-40°	370.2	16.3
40°-50°	389.0	17.2
50°-60°	366.0	16.2
60°-70°	305.2	13.5
70°-80°	202.2	8.9
80°-90°	53.9	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°	579.6	25.6
0°-40°	949.8	41.9
0°-60°	1704.8	75.2
0°-90°	2266.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2266.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	740	742	746	746	745	70
15°	710	713	718	720	722	200
25°	653	658	665	673	676	301
35°	572	578	592	605	610	358
45°	472	479	502	528	540	363
55°	353	369	409	450	467	316
65°	232	252	312	363	386	225
75°	102	142	207	250	263	110
85°	24	37	50	54	54	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	746.2	746.2	746.2	746.2	746.2
2.5°	743.3	744.7	747.6	747.6	746.2
5°	740.5	741.9	746.2	746.2	744.7
7.5°	736.2	737.6	740.5	743.3	741.9
10°	730.4	731.9	734.7	737.6	737.6
12.5°	720.4	721.9	727.6	729.0	729.0
15°	710.4	713.3	717.6	720.4	721.9
17.5°	697.6	700.4	706.1	711.9	711.9
20°	684.7	687.6	694.7	700.4	701.9
22.5°	669.0	673.3	680.4	687.6	690.4
25°	653.3	657.5	664.7	673.3	676.1
27.5°	634.7	639.0	649.0	659.0	660.4
30°	616.1	620.4	633.2	641.8	646.1
32.5°	593.2	598.9	611.8	624.7	629.0
35°	571.8	577.5	591.8	604.7	610.4
37.5°	548.9	554.6	570.3	586.1	593.2
40°	523.2	530.3	548.9	566.1	576.1
42.5°	498.9	506.0	524.6	547.5	557.5
45°	471.7	478.9	501.7	527.5	540.3
47.5°	443.1	451.7	478.9	510.3	523.2
50°	414.5	424.5	454.6	490.3	504.6
52.5°	384.5	397.4	431.7	470.3	487.4
55°	353.1	368.8	408.8	450.3	467.4
57.5°	323.1	337.3	384.5	428.8	447.4
60°	290.2	308.8	361.6	407.4	427.4
62.5°	258.7	278.7	337.3	385.9	407.4
65°	231.6	251.6	311.6	363.1	385.9
67.5°	195.8	223.0	290.2	338.8	361.6
70°	160.1	197.3	263.0	313.0	334.5
72.5°	132.9	168.7	235.9	285.9	305.9
75°	101.5	141.5	207.3	250.2	263.0
77.5°	75.8	117.2	177.3	198.7	200.1
80°	55.7	90.1	134.4	141.5	147.2
82.5°	38.6	62.9	87.2	95.8	98.6
85°	24.3	37.2	50.0	54.3	54.3
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)