

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: P308957

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP250-W2A-U-5500K**

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: P308957
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L82765-S-CP250-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 2234.0 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

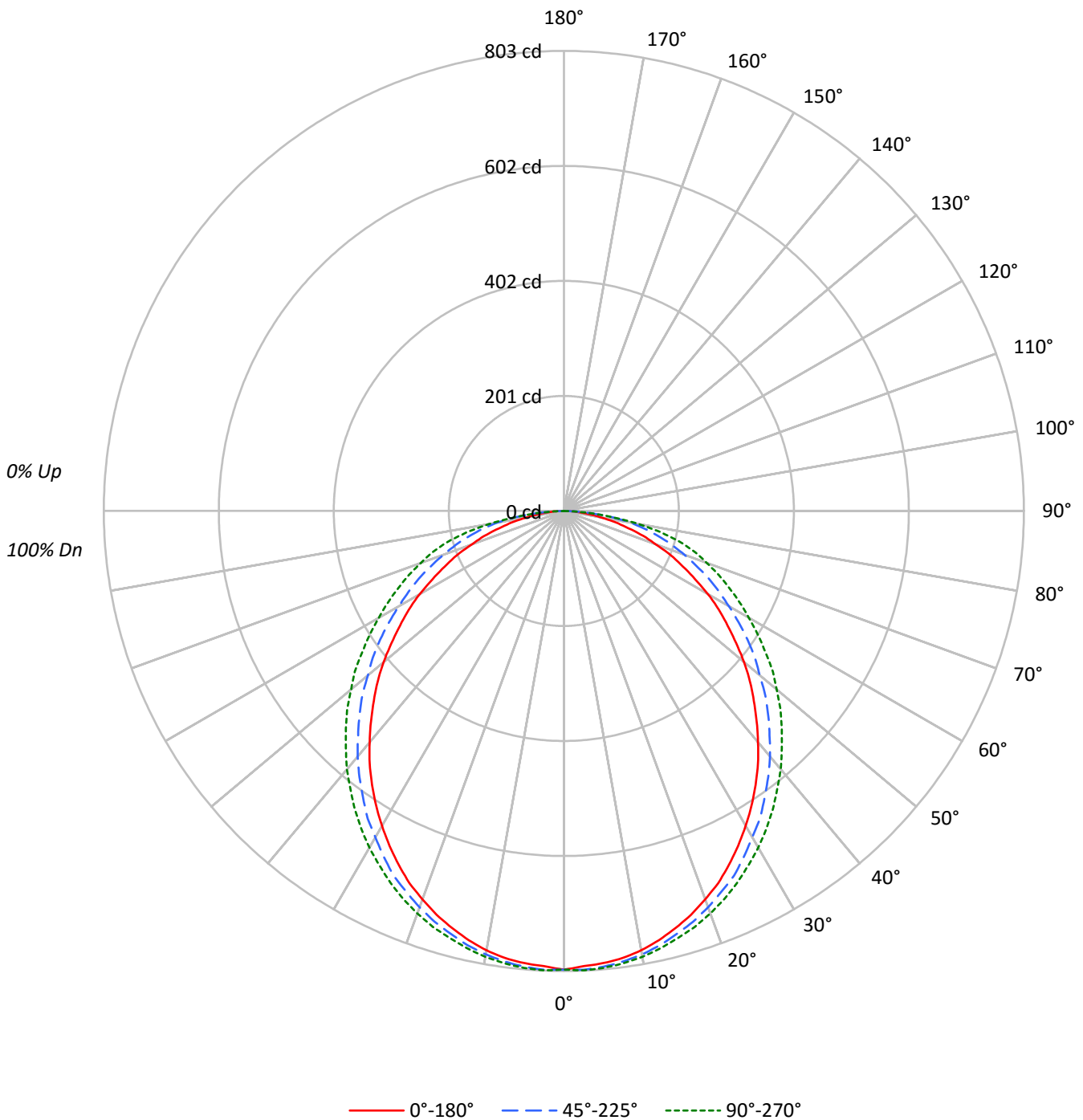
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2154	2154	2154
5°	2140	2157	2162
10°	2128	2147	2159
15°	2099	2128	2149
20°	2066	2107	2140
25°	2024	2086	2126
30°	1972	2044	2109
35°	1918	2007	2089
40°	1853	1966	2069
45°	1785	1920	2047
50°	1719	1868	2029
55°	1638	1834	2015
60°	1565	1790	2009
65°	1460	1778	2031
70°	1345	1763	2091
75°	1213	1788	2200
80°	1051	1841	2067
85°	868	1544	1544



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.7	3.4
10°-20°	215.4	9.6
20°-30°	322.3	14.4
30°-40°	381.7	17.1
40°-50°	389.0	17.4
50°-60°	348.7	15.6
60°-70°	273.0	12.2
70°-80°	176.0	7.9
80°-90°	52.0	2.3
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°	613.5	27.5
0°-40°	995.2	44.5
0°-60°	1733.0	77.6
0°-90°	2234.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2234.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	800	800	800	800	800	
5°	792	794	798	800	800	75
15°	754	758	764	770	771	212
25°	682	688	702	712	716	314
35°	584	591	611	630	636	365
45°	469	480	504	530	538	362
55°	349	361	391	418	429	313
65°	229	243	279	306	319	228
75°	117	134	172	201	212	125
85°	28	39	50	50	50	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	800.5	800.5	800.5	800.5	800.5
2.5°	795.3	797.4	801.6	802.6	802.6
5°	792.2	794.3	798.4	799.5	800.5
7.5°	787.0	788.0	793.2	795.3	796.3
10°	778.6	780.7	785.9	789.0	790.1
12.5°	767.2	770.3	776.5	780.7	781.7
15°	753.6	757.8	764.0	770.3	771.3
17.5°	739.0	743.2	751.5	758.8	760.9
20°	721.3	726.5	735.9	744.2	747.4
22.5°	703.6	707.7	719.2	729.6	732.8
25°	681.7	687.9	702.5	711.9	716.1
27.5°	658.8	666.1	680.6	693.2	697.3
30°	634.8	642.1	657.7	673.3	678.6
32.5°	609.8	618.1	636.9	652.5	657.7
35°	583.7	591.0	610.8	629.6	635.8
37.5°	556.6	562.9	585.8	605.6	611.8
40°	527.4	535.8	559.7	582.7	588.9
42.5°	498.2	507.6	531.6	556.6	562.9
45°	469.0	479.5	504.5	530.5	537.8
47.5°	440.9	449.2	477.4	502.4	512.8
50°	410.7	419.0	446.1	474.3	484.7
52.5°	379.4	390.9	420.1	447.2	459.7
55°	349.2	360.6	390.9	418.0	429.4
57.5°	321.0	330.4	361.7	389.8	401.3
60°	290.8	299.1	332.5	362.7	373.2
62.5°	258.5	271.0	305.4	333.5	346.1
65°	229.3	242.9	279.3	306.4	319.0
67.5°	202.2	214.7	250.2	279.3	292.9
70°	170.9	187.6	224.1	253.3	265.8
72.5°	145.9	160.5	198.0	227.2	240.8
75°	116.7	134.5	172.0	201.2	211.6
77.5°	92.8	110.5	145.9	168.9	174.1
80°	67.8	85.5	118.8	130.3	133.4
82.5°	45.9	62.5	85.5	88.6	89.6
85°	28.1	38.6	50.0	50.0	50.0
87.5°	13.6	15.6	17.7	16.7	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)