

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: P308910

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-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: P308910
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: 22FCZ2-20HE-UNV-L82765-S-CP250-W2A-U-4500K
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: 1934.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

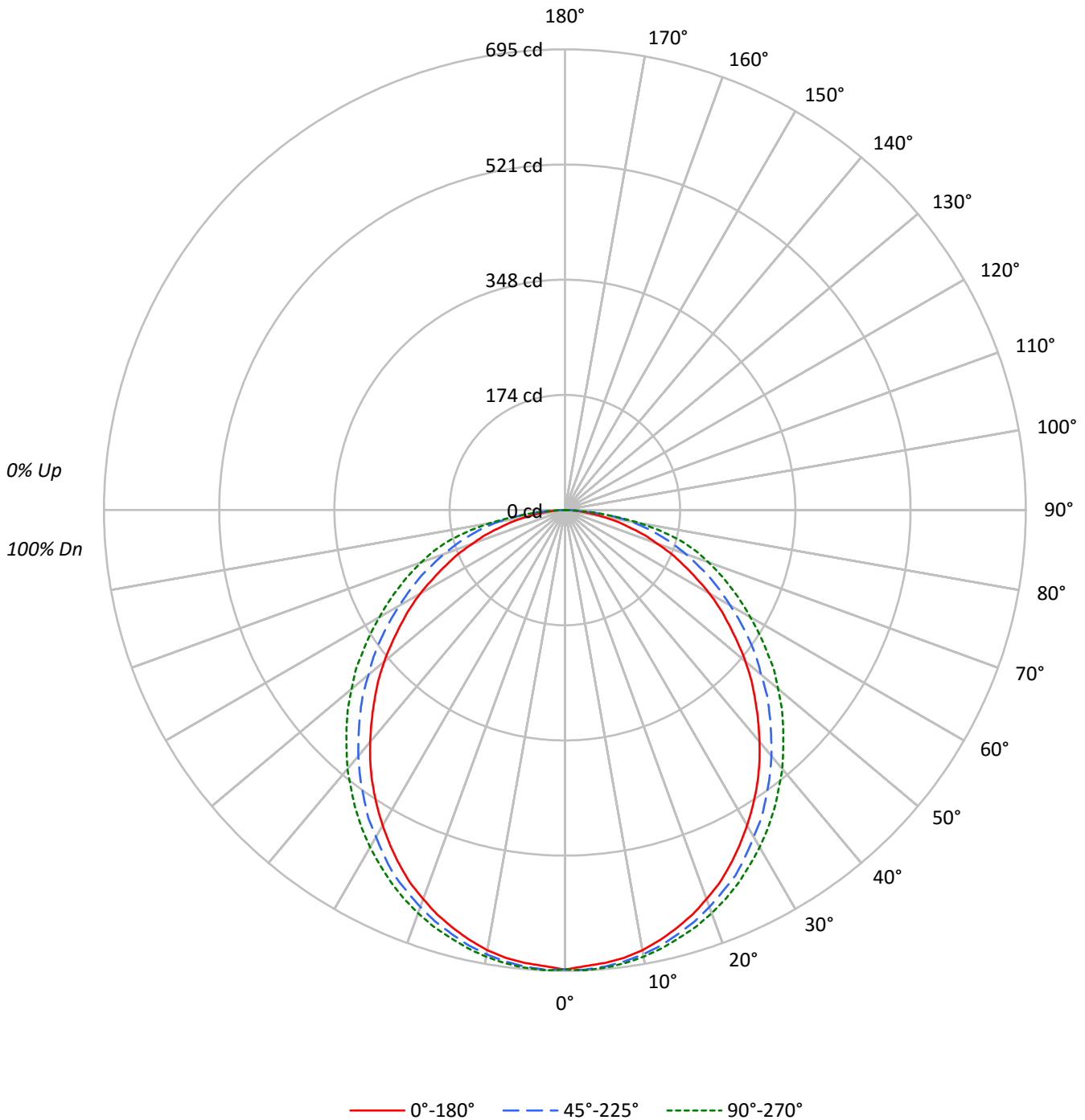
Input Watts (W): 17
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1865	1865	1865
5°	1853	1867	1872
10°	1842	1859	1869
15°	1818	1843	1860
20°	1788	1824	1853
25°	1752	1806	1841
30°	1707	1769	1825
35°	1660	1737	1808
40°	1604	1702	1791
45°	1545	1662	1772
50°	1488	1617	1757
55°	1418	1588	1744
60°	1355	1549	1738
65°	1264	1540	1758
70°	1164	1526	1810
75°	1051	1548	1905
80°	910	1595	1790
85°	753	1337	1337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.5	3.4
10°-20°	186.5	9.6
20°-30°	279.1	14.4
30°-40°	330.5	17.1
40°-50°	336.8	17.4
50°-60°	301.9	15.6
60°-70°	236.3	12.2
70°-80°	152.4	7.9
80°-90°	45.0	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°	531.1	27.5
0°-40°	861.6	44.5
0°-60°	1500.2	77.6
0°-90°	1934.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1934.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	686	688	691	692	693	65
15°	652	656	661	667	668	184
25°	590	596	608	616	620	272
35°	505	512	529	545	550	316
45°	406	415	437	459	466	314
55°	302	312	338	362	372	271
65°	198	210	242	265	276	197
75°	101	116	149	174	183	108
85°	24	33	43	43	43	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	693.0	693.0	693.0	693.0	693.0
2.5°	688.5	690.3	693.9	694.8	694.8
5°	685.8	687.6	691.2	692.1	693.0
7.5°	681.3	682.2	686.7	688.5	689.4
10°	674.1	675.9	680.4	683.1	684.0
12.5°	664.1	666.8	672.3	675.9	676.8
15°	652.4	656.0	661.4	666.8	667.7
17.5°	639.8	643.4	650.6	656.9	658.7
20°	624.4	628.9	637.1	644.3	647.0
22.5°	609.1	612.7	622.6	631.7	634.4
25°	590.1	595.6	608.2	616.3	619.9
27.5°	570.3	576.6	589.2	600.1	603.7
30°	549.5	555.9	569.4	582.9	587.4
32.5°	527.9	535.1	551.3	564.9	569.4
35°	505.3	511.6	528.8	545.0	550.4
37.5°	481.9	487.3	507.1	524.3	529.7
40°	456.6	463.8	484.6	504.4	509.8
42.5°	431.3	439.4	460.2	481.9	487.3
45°	406.1	415.1	436.7	459.3	465.6
47.5°	381.7	388.9	413.3	434.9	444.0
50°	355.5	362.7	386.2	410.6	419.6
52.5°	328.5	338.4	363.7	387.1	397.9
55°	302.3	312.2	338.4	361.8	371.8
57.5°	277.9	286.0	313.1	337.5	347.4
60°	251.8	259.0	287.9	314.0	323.0
62.5°	223.8	234.6	264.4	288.8	299.6
65°	198.5	210.2	241.8	265.3	276.1
67.5°	175.1	185.9	216.6	241.8	253.6
70°	148.0	162.4	194.0	219.3	230.1
72.5°	126.3	139.0	171.4	196.7	208.4
75°	101.1	116.4	148.9	174.2	183.2
77.5°	80.3	95.7	126.3	146.2	150.7
80°	58.7	74.0	102.9	112.8	115.5
82.5°	39.7	54.1	74.0	76.7	77.6
85°	24.4	33.4	43.3	43.3	43.3
87.5°	11.7	13.5	15.3	14.4	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)