

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: P308608

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA08-W2A-U-6500K**

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: P308608
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA08-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 2034.0 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

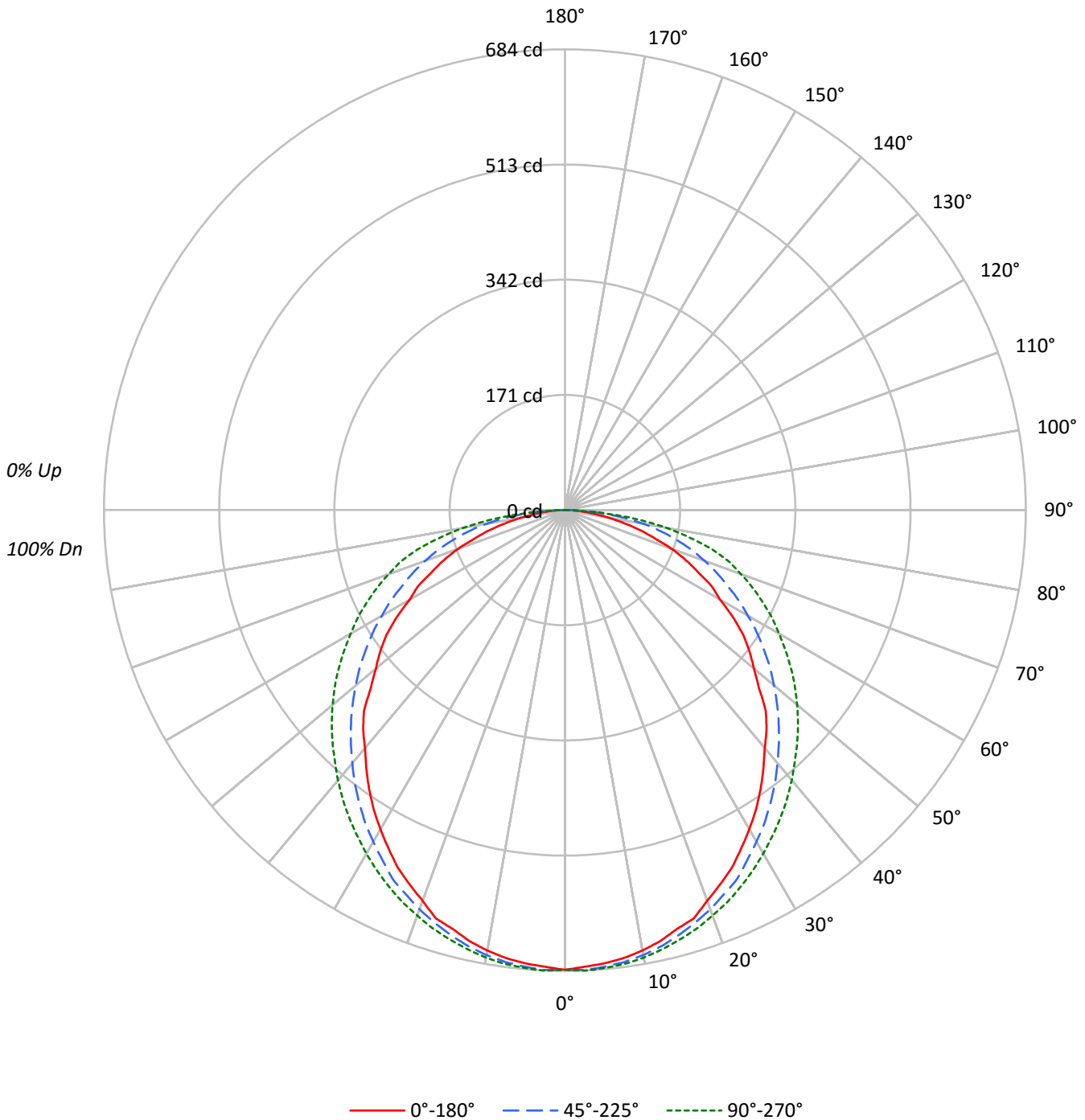
Input Watts (W): 17.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82				82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67				67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56				56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48				48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36				36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32				32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28				28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25				25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1836	1836	1836
5°	1825	1838	1843
10°	1814	1833	1843
15°	1793	1820	1839
20°	1767	1806	1834
25°	1740	1795	1833
30°	1700	1766	1830
35°	1663	1746	1832
40°	1621	1723	1840
45°	1604	1708	1856
50°	1532	1696	1883
55°	1516	1690	1923
60°	1431	1687	1975
65°	1389	1698	2064
70°	1333	1739	2190
75°	1214	1791	2358
80°	1041	1855	2383
85°	843	1772	2044



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.6	3.2
10°-20°	184.2	9.1
20°-30°	277.2	13.6
30°-40°	332.7	16.4
40°-50°	347.8	17.1
50°-60°	324.1	15.9
60°-70°	265.8	13.1
70°-80°	179.1	8.8
80°-90°	58.3	2.9
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°	526.0	25.9
0°-40°	858.8	42.2
0°-60°	1530.7	75.3
0°-90°	2034.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2034.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	682	682	682	682	682	
5°	676	678	680	682	682	64
15°	644	647	653	659	660	182
25°	586	590	604	613	617	269
35°	506	513	532	550	558	316
45°	422	424	449	476	488	322
55°	323	329	360	394	410	286
65°	218	228	267	306	324	217
75°	117	130	172	211	227	123
85°	27	39	57	67	66	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	682.4	682.4	682.4	682.4	682.4
2.5°	678.5	680.5	683.4	684.4	684.4
5°	675.6	677.6	680.5	681.5	682.4
7.5°	670.7	672.7	676.6	678.5	679.5
10°	663.9	665.9	670.7	673.7	674.6
12.5°	655.2	657.1	663.0	666.8	667.8
15°	643.5	647.4	653.2	659.1	660.0
17.5°	635.7	634.7	642.5	649.3	651.3
20°	617.2	622.1	630.8	638.6	640.6
22.5°	601.6	605.5	617.2	626.0	629.9
25°	586.0	589.9	604.5	613.3	617.2
27.5°	566.6	572.4	586.0	598.7	603.6
30°	547.1	552.9	568.5	583.1	589.0
32.5°	527.6	534.5	551.0	566.6	573.4
35°	506.2	513.0	531.5	550.0	557.8
37.5°	483.8	492.6	512.1	532.5	541.3
40°	461.4	470.2	490.6	514.0	523.7
42.5°	442.9	446.8	470.2	495.5	505.2
45°	421.5	424.4	448.8	476.0	487.7
47.5°	390.4	401.1	427.4	457.5	469.2
50°	366.0	377.7	405.0	437.1	449.8
52.5°	345.6	353.4	383.6	415.7	430.3
55°	323.2	329.0	360.2	394.3	409.8
57.5°	295.9	306.7	337.8	372.9	388.4
60°	265.8	279.4	313.5	351.4	367.0
62.5°	246.3	254.1	291.1	329.0	346.6
65°	218.1	227.8	266.7	305.7	324.2
67.5°	194.7	204.4	244.3	283.3	301.8
70°	169.4	179.1	221.0	259.9	278.4
72.5°	140.2	153.8	197.6	236.6	256.0
75°	116.8	129.5	172.3	211.2	226.8
77.5°	90.5	107.1	147.0	179.1	190.8
80°	67.2	83.7	119.7	143.1	153.8
82.5°	45.8	62.3	89.6	107.1	112.9
85°	27.3	38.9	57.4	67.2	66.2
87.5°	12.7	16.5	23.4	23.4	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)