

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: P308607

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA08-W2A-U-5700K**

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: P308607
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-5700K
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: 2028.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

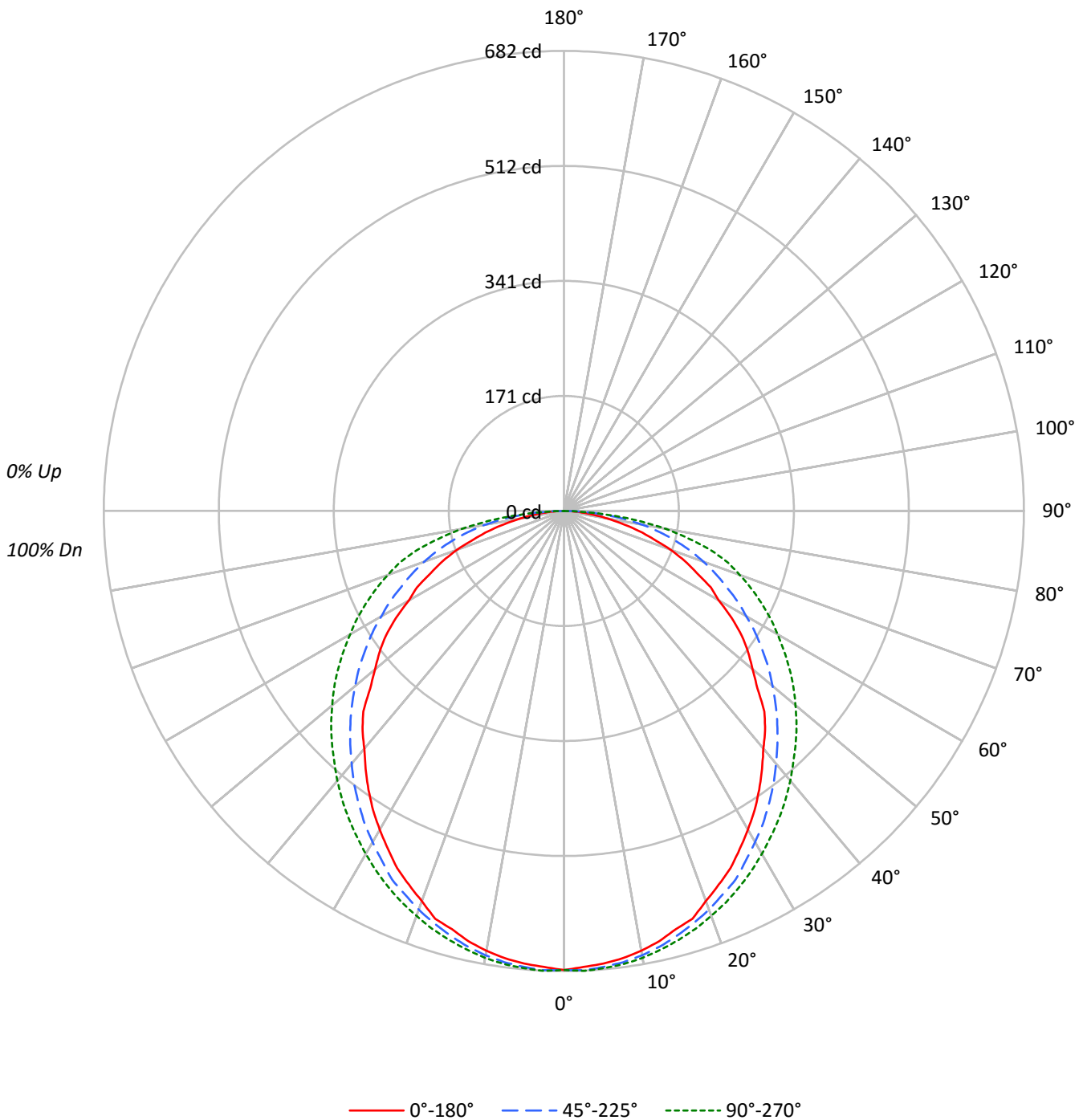
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1831	1831	1831
5°	1820	1833	1838
10°	1809	1827	1838
15°	1787	1814	1833
20°	1762	1801	1829
25°	1735	1790	1827
30°	1695	1761	1825
35°	1658	1741	1827
40°	1616	1718	1834
45°	1600	1703	1851
50°	1528	1690	1877
55°	1512	1685	1917
60°	1426	1682	1969
65°	1384	1694	2058
70°	1329	1733	2184
75°	1211	1786	2352
80°	1038	1850	2377
85°	840	1769	2038



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.4	3.2
10°-20°	183.7	9.1
20°-30°	276.4	13.6
30°-40°	331.8	16.4
40°-50°	346.8	17.1
50°-60°	323.2	15.9
60°-70°	265.0	13.1
70°-80°	178.6	8.8
80°-90°	58.2	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°	524.5	25.9
0°-40°	856.3	42.2
0°-60°	1526.2	75.3
0°-90°	2028.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2028.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	674	676	678	679	680	64
15°	642	646	651	657	658	181
25°	584	588	603	612	615	269
35°	505	512	530	548	556	316
45°	420	423	448	475	486	321
55°	322	328	359	393	409	286
65°	217	227	266	305	323	216
75°	116	129	172	211	226	122
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°	680.4	680.4	680.4	680.4	680.4
2.5°	676.5	678.5	681.4	682.4	682.4
5°	673.6	675.6	678.5	679.4	680.4
7.5°	668.8	670.7	674.6	676.5	677.5
10°	662.0	663.9	668.8	671.7	672.6
12.5°	653.2	655.2	661.0	664.9	665.9
15°	641.6	645.5	651.3	657.1	658.1
17.5°	633.8	632.9	640.6	647.4	649.4
20°	615.4	620.2	629.0	636.7	638.7
22.5°	599.8	603.7	615.4	624.1	628.0
25°	584.3	588.2	602.8	611.5	615.4
27.5°	564.9	570.7	584.3	596.9	601.8
30°	545.5	551.3	566.8	581.4	587.2
32.5°	526.1	532.9	549.4	564.9	571.7
35°	504.7	511.5	530.0	548.4	556.2
37.5°	482.4	491.1	510.6	530.9	539.7
40°	460.1	468.8	489.2	512.5	522.2
42.5°	441.6	445.5	468.8	494.1	503.8
45°	420.3	423.2	447.5	474.6	486.3
47.5°	389.2	399.9	426.1	456.2	467.8
50°	365.0	376.6	403.8	435.8	448.4
52.5°	344.6	352.3	382.4	414.5	429.0
55°	322.2	328.1	359.1	393.1	408.6
57.5°	295.1	305.7	336.8	371.8	387.3
60°	265.0	278.6	312.5	350.4	365.9
62.5°	245.6	253.3	290.2	328.1	345.5
65°	217.4	227.1	266.0	304.8	323.2
67.5°	194.1	203.8	243.6	282.5	300.9
70°	168.9	178.6	220.3	259.2	277.6
72.5°	139.8	153.4	197.0	235.9	255.3
75°	116.5	129.1	171.8	210.6	226.2
77.5°	90.3	106.8	146.6	178.6	190.2
80°	67.0	83.5	119.4	142.7	153.4
82.5°	45.6	62.1	89.3	106.8	112.6
85°	27.2	38.8	57.3	67.0	66.0
87.5°	12.6	16.5	23.3	23.3	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)