

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: P307828

Luminaire Tested: **14FCZ2-20-UNV-L82765-S-CP250-W2A-U-3500K**

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: P307828
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L82765-S-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3500K 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: 1840.0 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

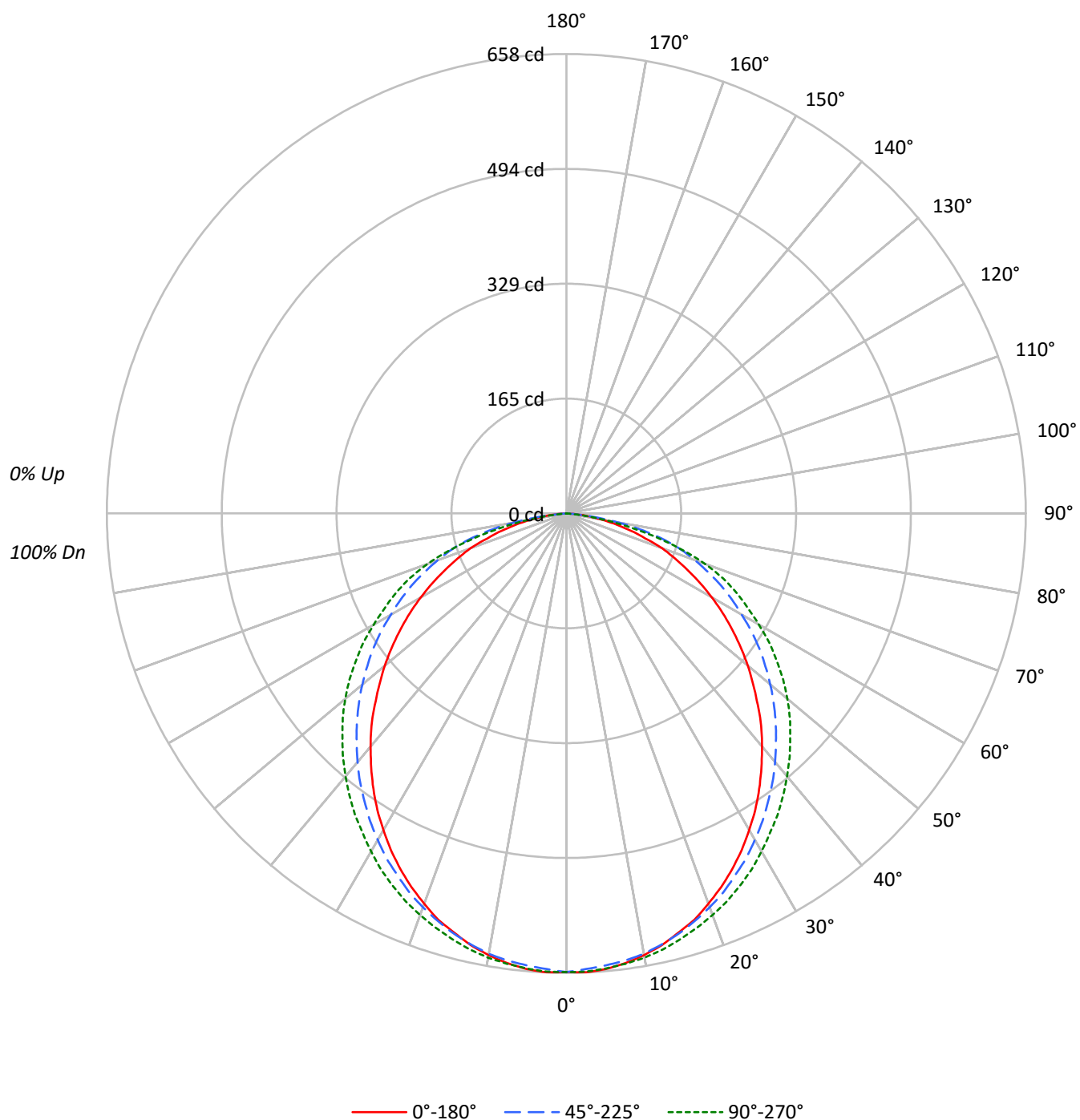
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	109	104	100	96	106	102	98	94	97	94	91		94	91	89		84
2	99	90	84	78	96	89	82	77	85	80	75		82	77	73		70
3	90	79	71	65	87	78	70	64	75	68	63		72	66	62		58
4	82	70	61	55	80	69	61	54	66	59	53		64	58	53		50
5	76	63	54	47	74	62	53	47	59	52	46		57	51	46		43
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		38
7	65	51	42	36	63	50	42	36	49	41	36		47	41	35		33
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		30
9	56	43	35	29	55	42	34	29	41	34	29		40	33	29		27
10	53	40	32	26	52	39	31	26	38	31	26		37	31	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1767	1767	1767
5°	1769	1755	1767
10°	1755	1750	1765
15°	1731	1736	1759
20°	1703	1719	1753
25°	1669	1698	1747
30°	1627	1678	1738
35°	1582	1654	1732
40°	1532	1635	1727
45°	1475	1614	1725
50°	1421	1596	1730
55°	1361	1583	1725
60°	1296	1561	1714
65°	1220	1557	1713
70°	1149	1543	1666
75°	996	1509	1422
80°	806	1216	947
85°	534	423	281



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	3.4
10°-20°	176.5	9.6
20°-30°	264.8	14.4
30°-40°	315.8	17.2
40°-50°	326.5	17.7
50°-60°	298.1	16.2
60°-70°	234.6	12.7
70°-80°	136.6	7.4
80°-90°	25.2	1.4
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°	503.3	27.4
0°-40°	819.1	44.5
0°-60°	1443.7	78.5
0°-90°	1840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1840.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	657	657	657	657	657	
5°	655	653	650	655	654	62
15°	621	622	623	631	631	175
25°	562	565	572	586	588	259
35°	482	488	504	523	527	301
45°	388	400	424	448	453	299
55°	290	306	338	362	368	259
65°	192	212	244	264	269	190
75°	96	119	145	142	137	102
85°	17	25	14	11	9	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	656.8	656.8	656.8	656.8	656.8
2.5°	657.8	655.9	653.2	657.8	656.8
5°	655.0	653.2	649.6	655.0	654.1
7.5°	649.6	647.7	645.9	651.4	650.5
10°	642.3	641.3	640.4	646.8	645.9
12.5°	633.1	633.1	632.2	639.5	639.5
15°	621.3	622.2	623.1	631.3	631.3
17.5°	610.3	609.4	612.1	621.3	622.2
20°	594.8	596.6	600.3	611.2	612.1
22.5°	579.3	581.1	587.5	598.5	601.2
25°	562.0	564.7	572.0	585.7	588.4
27.5°	543.7	547.4	557.4	572.0	574.7
30°	523.7	529.1	540.1	556.5	559.2
32.5°	503.6	509.1	522.7	539.2	542.8
35°	481.7	488.1	503.6	522.7	527.3
37.5°	458.9	467.1	485.3	504.5	510.0
40°	436.1	445.2	465.3	485.3	491.7
42.5°	413.3	422.4	444.3	467.1	473.5
45°	387.7	400.5	424.2	447.9	453.4
47.5°	363.1	376.8	403.2	427.0	434.3
50°	339.4	353.1	381.3	406.0	413.3
52.5°	314.7	329.3	359.4	385.0	391.4
55°	290.1	305.6	337.5	362.2	367.7
57.5°	265.5	281.9	314.7	338.5	344.8
60°	240.8	258.2	290.1	313.8	318.4
62.5°	216.2	234.5	267.3	288.3	292.8
65°	191.6	211.7	244.5	263.7	269.1
67.5°	167.9	187.9	219.9	238.1	242.7
70°	146.0	164.2	196.1	209.8	211.7
72.5°	118.6	141.4	172.4	179.7	175.2
75°	95.8	118.6	145.1	142.3	136.8
77.5°	73.0	95.8	113.1	104.0	96.7
80°	52.0	74.8	78.5	64.8	61.1
82.5°	33.8	52.0	43.8	33.8	27.4
85°	17.3	24.6	13.7	10.9	9.1
87.5°	5.5	3.6	1.8	1.8	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)