

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: P312786

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-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: P312786
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: 22FCZ2-24HE-UNV-L83050-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 2037.0 lumens
Efficiency: N/A
Efficacy: 107.8 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

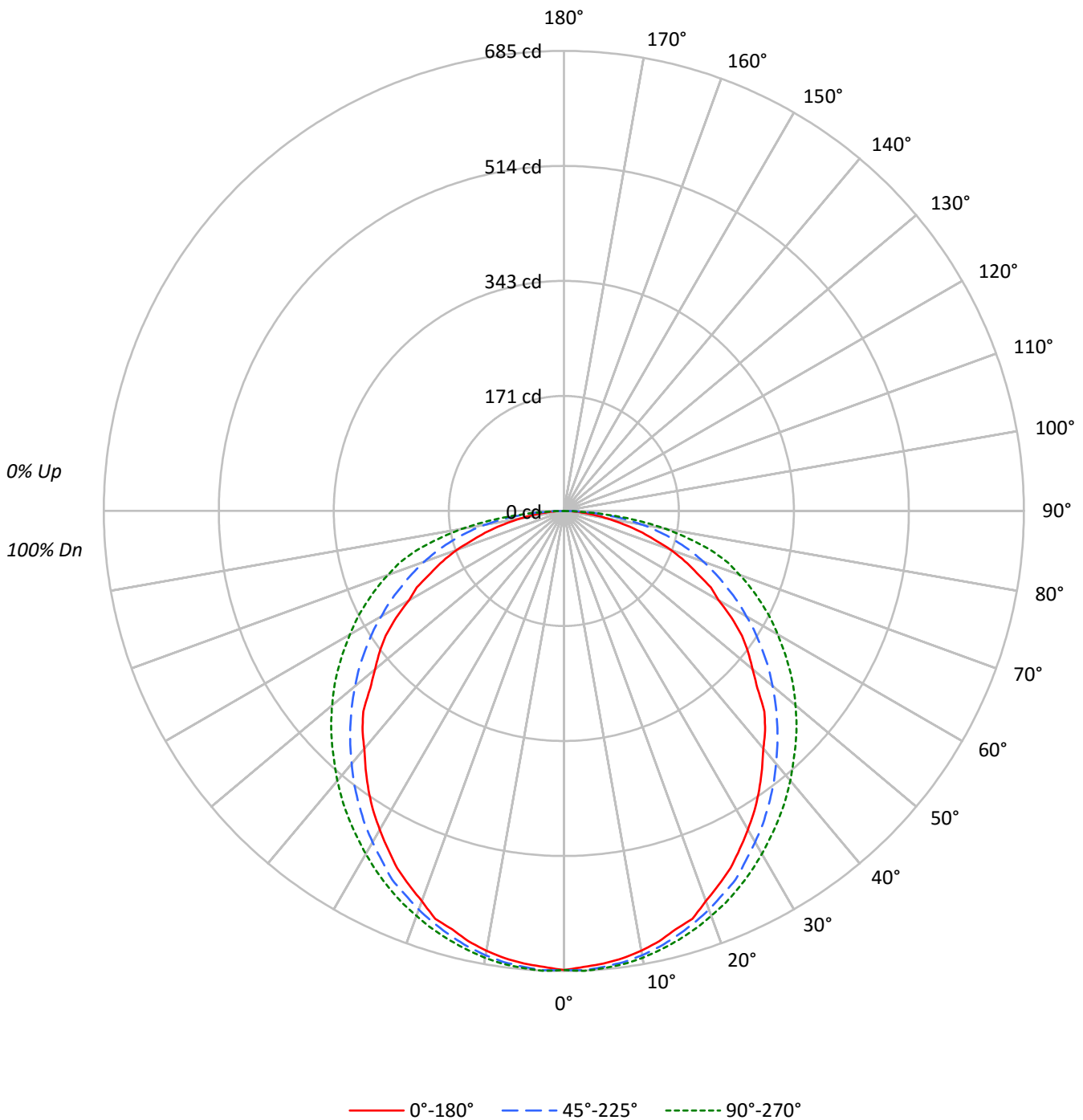
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1839	1839	1839
5°	1828	1841	1846
10°	1817	1835	1846
15°	1795	1823	1841
20°	1770	1809	1837
25°	1743	1798	1835
30°	1702	1769	1833
35°	1666	1749	1835
40°	1623	1726	1842
45°	1606	1710	1859
50°	1535	1698	1886
55°	1519	1692	1925
60°	1433	1689	1978
65°	1391	1701	2067
70°	1334	1741	2194
75°	1216	1795	2362
80°	1043	1858	2386
85°	843	1775	2047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	3.2
10°-20°	184.5	9.1
20°-30°	277.7	13.6
30°-40°	333.2	16.4
40°-50°	348.3	17.1
50°-60°	324.6	15.9
60°-70°	266.2	13.1
70°-80°	179.4	8.8
80°-90°	58.4	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°	526.8	25.9
0°-40°	860.1	42.2
0°-60°	1532.9	75.3
0°-90°	2037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	683	683	683	683	683	
5°	677	679	682	682	683	64
15°	644	648	654	660	661	182
25°	587	591	605	614	618	270
35°	507	514	532	551	559	317
45°	422	425	449	477	488	322
55°	324	330	361	395	410	287
65°	218	228	267	306	325	217
75°	117	130	173	212	227	123
85°	27	39	58	67	66	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	683.4	683.4	683.4	683.4	683.4
2.5°	679.5	681.5	684.4	685.4	685.4
5°	676.6	678.6	681.5	682.5	683.4
7.5°	671.7	673.7	677.6	679.5	680.5
10°	664.9	666.9	671.7	674.7	675.6
12.5°	656.1	658.1	663.9	667.8	668.8
15°	644.4	648.3	654.2	660.0	661.0
17.5°	636.6	635.7	643.5	650.3	652.2
20°	618.1	623.0	631.8	639.6	641.5
22.5°	602.5	606.4	618.1	626.9	630.8
25°	586.9	590.8	605.4	614.2	618.1
27.5°	567.4	573.3	586.9	599.6	604.5
30°	547.9	553.8	569.4	584.0	589.8
32.5°	528.4	535.2	551.8	567.4	574.2
35°	507.0	513.8	532.3	550.8	558.6
37.5°	484.5	493.3	512.8	533.3	542.1
40°	462.1	470.9	491.4	514.8	524.5
42.5°	443.6	447.5	470.9	496.2	506.0
45°	422.1	425.1	449.4	476.7	488.4
47.5°	390.9	401.7	428.0	458.2	469.9
50°	366.6	378.3	405.6	437.7	450.4
52.5°	346.1	353.9	384.1	416.3	430.9
55°	323.7	329.5	360.7	394.8	410.4
57.5°	296.4	307.1	338.3	373.4	389.0
60°	266.2	279.8	313.9	352.0	367.6
62.5°	246.7	254.5	291.5	329.5	347.1
65°	218.4	228.1	267.1	306.1	324.7
67.5°	195.0	204.7	244.7	283.7	302.2
70°	169.6	179.4	221.3	260.3	278.8
72.5°	140.4	154.0	197.9	236.9	256.4
75°	117.0	129.7	172.6	211.6	227.2
77.5°	90.7	107.2	147.2	179.4	191.1
80°	67.3	83.8	119.9	143.3	154.0
82.5°	45.8	62.4	89.7	107.2	113.1
85°	27.3	39.0	57.5	67.3	66.3
87.5°	12.7	16.6	23.4	23.4	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)