

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: P312747

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-CA125-W2A-U-4000K**

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: P312747
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-L83050-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2036.0 lumens
Efficiency: N/A
Efficacy: 119.1 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

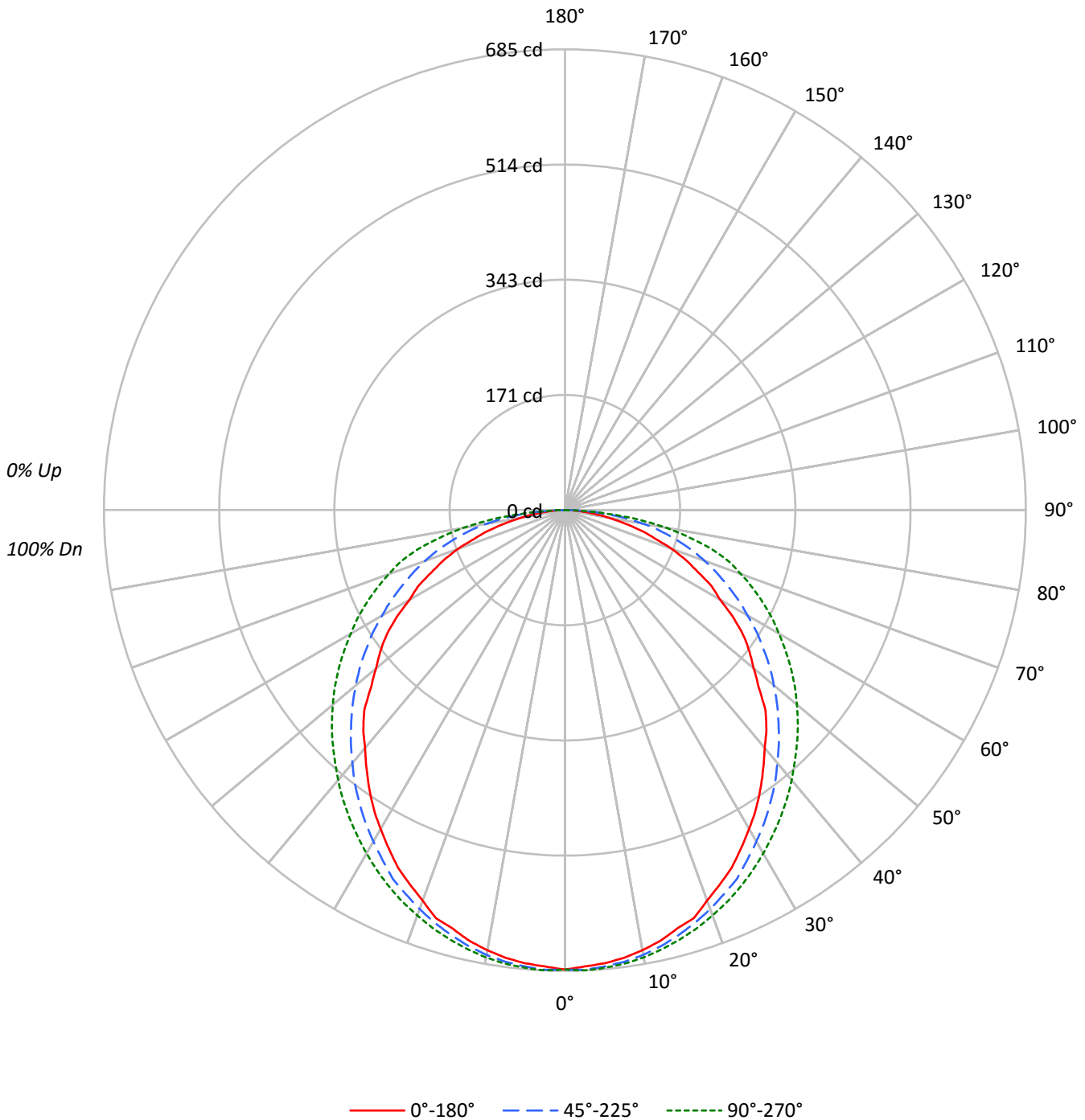
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1838	1838	1838
5°	1827	1840	1845
10°	1816	1835	1845
15°	1794	1822	1841
20°	1769	1808	1836
25°	1742	1797	1834
30°	1702	1768	1832
35°	1665	1748	1834
40°	1623	1725	1842
45°	1606	1709	1858
50°	1534	1697	1885
55°	1518	1691	1924
60°	1432	1689	1977
65°	1390	1700	2066
70°	1334	1740	2193
75°	1215	1794	2360
80°	1041	1858	2386
85°	843	1775	2047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.6	3.2
10°-20°	184.4	9.1
20°-30°	277.5	13.6
30°-40°	333.1	16.4
40°-50°	348.1	17.1
50°-60°	324.4	15.9
60°-70°	266.1	13.1
70°-80°	179.3	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°	526.5	25.9
0°-40°	859.6	42.2
0°-60°	1532.2	75.3
0°-90°	2036.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2036.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	683	683	683	683	683	
5°	676	678	681	682	683	64
15°	644	648	654	660	661	182
25°	587	590	605	614	618	270
35°	507	514	532	551	558	317
45°	422	425	449	476	488	322
55°	324	329	360	395	410	287
65°	218	228	267	306	324	217
75°	117	130	172	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°	683.1	683.1	683.1	683.1	683.1
2.5°	679.2	681.1	684.1	685.0	685.0
5°	676.3	678.2	681.1	682.1	683.1
7.5°	671.4	673.4	677.2	679.2	680.2
10°	664.6	666.5	671.4	674.3	675.3
12.5°	655.8	657.8	663.6	667.5	668.5
15°	644.1	648.0	653.9	659.7	660.7
17.5°	636.3	635.3	643.1	650.0	651.9
20°	617.8	622.7	631.4	639.2	641.2
22.5°	602.2	606.1	617.8	626.6	630.5
25°	586.6	590.5	605.1	613.9	617.8
27.5°	567.1	573.0	586.6	599.3	604.2
30°	547.6	553.5	569.1	583.7	589.5
32.5°	528.2	535.0	551.5	567.1	574.0
35°	506.7	513.5	532.1	550.6	558.4
37.5°	484.3	493.1	512.6	533.0	541.8
40°	461.9	470.7	491.1	514.5	524.3
42.5°	443.4	447.3	470.7	496.0	505.7
45°	421.9	424.9	449.2	476.5	488.2
47.5°	390.8	401.5	427.8	458.0	469.7
50°	366.4	378.1	405.4	437.5	450.2
52.5°	345.9	353.7	383.9	416.1	430.7
55°	323.5	329.4	360.5	394.7	410.2
57.5°	296.2	307.0	338.1	373.2	388.8
60°	266.0	279.7	313.8	351.8	367.4
62.5°	246.5	254.3	291.4	329.4	346.9
65°	218.3	228.0	267.0	306.0	324.5
67.5°	194.9	204.6	244.6	283.6	302.1
70°	169.6	179.3	221.2	260.2	278.7
72.5°	140.3	154.0	197.8	236.8	256.3
75°	116.9	129.6	172.5	211.5	227.0
77.5°	90.6	107.2	147.1	179.3	191.0
80°	67.2	83.8	119.9	143.2	154.0
82.5°	45.8	62.4	89.7	107.2	113.0
85°	27.3	39.0	57.5	67.2	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)