

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: P312797

Luminaire Tested: **22FCZ2-29HE-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: P312797
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: 22FCZ2-29HE-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: 2686.0 lumens
Efficiency: N/A
Efficacy: 117.3 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

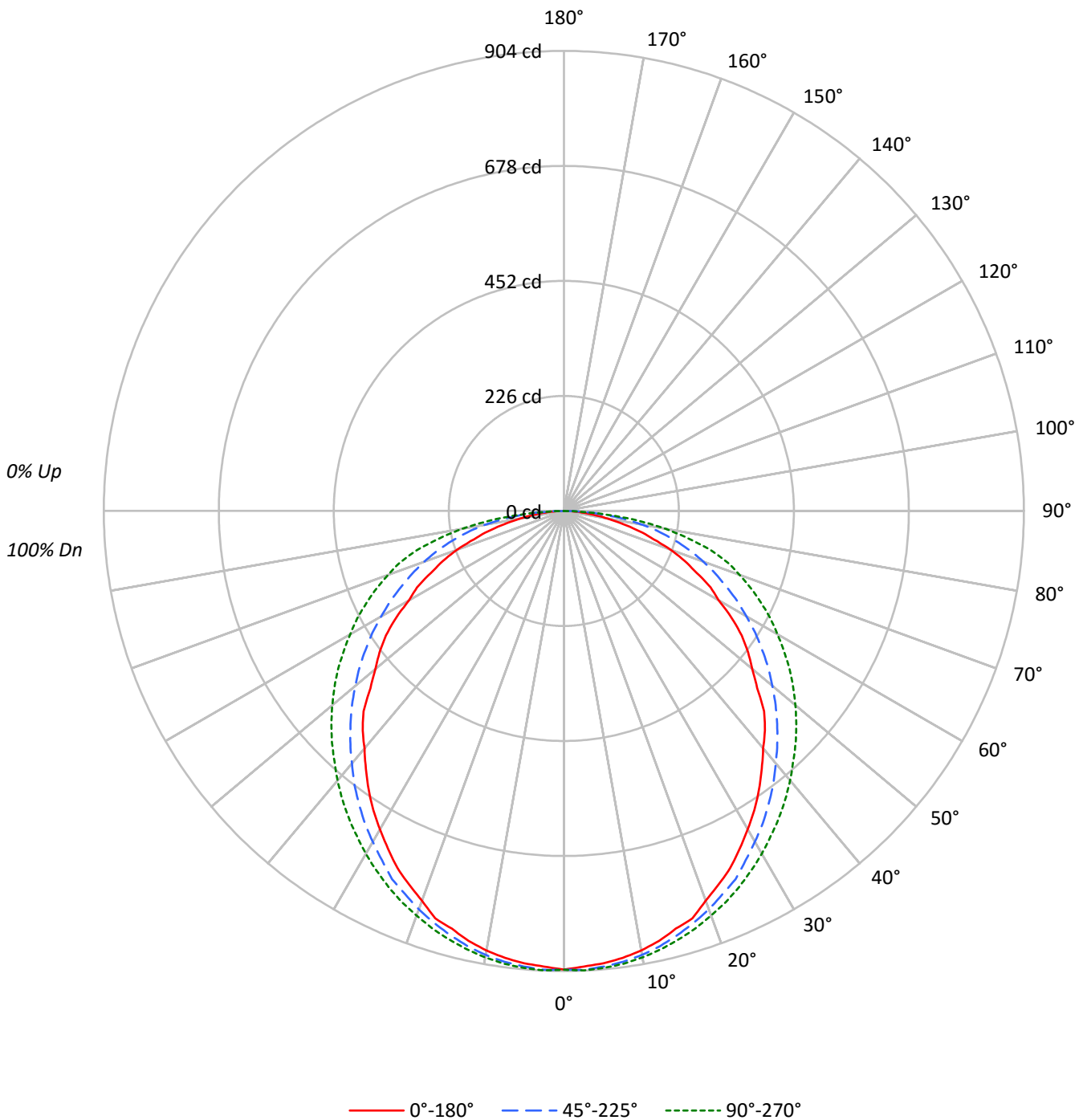
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2425	2425	2425
5°	2410	2427	2434
10°	2396	2420	2434
15°	2367	2403	2428
20°	2334	2385	2422
25°	2298	2370	2420
30°	2245	2333	2417
35°	2196	2306	2420
40°	2141	2276	2429
45°	2118	2255	2451
50°	2024	2239	2486
55°	2002	2232	2539
60°	1889	2228	2609
65°	1834	2243	2726
70°	1760	2296	2893
75°	1604	2365	3114
80°	1375	2450	3147
85°	1112	2340	2699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.3	3.2
10°-20°	243.3	9.1
20°-30°	366.1	13.6
30°-40°	439.4	16.4
40°-50°	459.3	17.1
50°-60°	428.0	15.9
60°-70°	351.0	13.1
70°-80°	236.5	8.8
80°-90°	77.1	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°	694.7	25.9
0°-40°	1134.1	42.2
0°-60°	2021.4	75.3
0°-90°	2686.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2686.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	901	901	901	901	901	
5°	892	895	899	900	901	85
15°	850	855	863	870	872	240
25°	774	779	798	810	815	356
35°	668	678	702	726	737	418
45°	557	560	593	629	644	425
55°	427	434	476	521	541	378
65°	288	301	352	404	428	286
75°	154	171	228	279	300	162
85°	36	51	76	89	87	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	901.2	901.2	901.2	901.2	901.2
2.5°	896.0	898.6	902.5	903.7	903.7
5°	892.2	894.7	898.6	899.9	901.2
7.5°	885.7	888.3	893.5	896.0	897.3
10°	876.8	879.3	885.7	889.6	890.9
12.5°	865.2	867.8	875.5	880.6	881.9
15°	849.8	854.9	862.6	870.3	871.6
17.5°	839.5	838.2	848.5	857.5	860.0
20°	815.0	821.5	833.0	843.3	845.9
22.5°	794.5	799.6	815.0	826.6	831.8
25°	773.9	779.0	798.3	809.9	815.0
27.5°	748.2	755.9	773.9	790.6	797.0
30°	722.5	730.2	750.8	770.0	777.8
32.5°	696.8	705.8	727.6	748.2	757.2
35°	668.5	677.5	701.9	726.3	736.6
37.5°	638.9	650.5	676.2	703.2	714.8
40°	609.4	620.9	647.9	678.8	691.6
42.5°	584.9	590.1	620.9	654.3	667.2
45°	556.6	560.5	592.6	628.6	644.1
47.5°	515.5	529.6	564.4	604.2	619.6
50°	483.4	498.8	534.8	577.2	593.9
52.5°	456.4	466.7	506.5	548.9	568.2
55°	426.8	434.5	475.7	520.7	541.2
57.5°	390.8	405.0	446.1	492.4	512.9
60°	351.0	369.0	413.9	464.1	484.7
62.5°	325.2	335.5	384.4	434.5	457.7
65°	288.0	300.8	352.2	403.7	428.1
67.5°	257.1	270.0	322.7	374.1	398.5
70°	223.7	236.5	291.8	343.2	367.7
72.5°	185.1	203.1	261.0	312.4	338.1
75°	154.3	171.0	227.5	279.0	299.5
77.5°	119.6	141.4	194.1	236.5	252.0
80°	88.7	110.6	158.1	189.0	203.1
82.5°	60.4	82.3	118.3	141.4	149.1
85°	36.0	51.4	75.8	88.7	87.4
87.5°	16.7	21.9	30.9	30.9	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)