

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: P312652

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CP125-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: P312652
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 1763.0 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

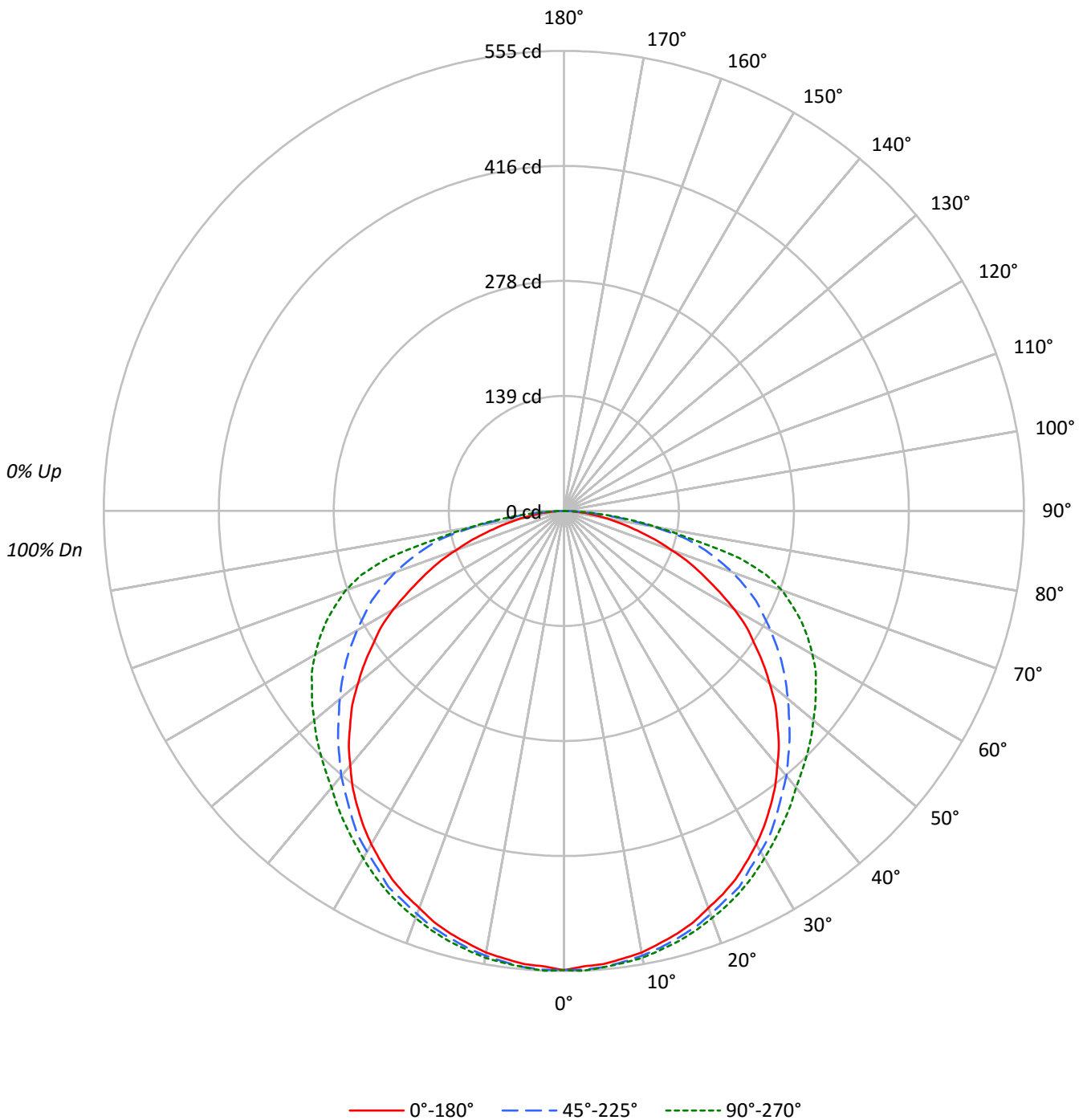
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					10	0
RW	70	50	30	10	70	50	30	10	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				100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82				82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67				67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55				55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47				47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40				40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35				35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31				31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27				27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24				24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22				22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1490	1490	1490
5°	1482	1492	1492
10°	1478	1488	1495
15°	1471	1485	1496
20°	1460	1482	1497
25°	1455	1486	1502
30°	1443	1475	1503
35°	1427	1470	1512
40°	1408	1467	1531
45°	1387	1466	1579
50°	1357	1477	1645
55°	1320	1509	1740
60°	1277	1549	1864
65°	1189	1627	2015
70°	1092	1704	2204
75°	958	1794	2279
80°	824	1708	1788
85°	719	1241	1362



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.4	3.0
10°-20°	150.4	8.5
20°-30°	229.5	13.0
30°-40°	280.2	15.9
40°-50°	299.6	17.0
50°-60°	289.2	16.4
60°-70°	248.9	14.1
70°-80°	168.4	9.6
80°-90°	44.4	2.5
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°	432.3	24.5
0°-40°	712.5	40.4
0°-60°	1301.2	73.8
0°-90°	1763.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1763.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	554	554	554	554	554	
5°	549	550	552	552	552	52
15°	528	529	533	536	537	149
25°	490	493	501	503	506	226
35°	434	438	447	456	460	272
45°	364	371	385	405	415	281
55°	281	290	322	354	371	252
65°	187	205	256	296	316	186
75°	92	122	172	208	219	99
85°	23	32	40	42	44	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	553.8	553.8	553.8	553.8	553.8
2.5°	549.9	551.2	553.8	553.8	555.1
5°	548.6	549.9	552.5	552.5	552.5
7.5°	544.7	546.0	548.6	549.9	549.9
10°	540.8	542.1	544.7	546.0	547.3
12.5°	534.3	535.6	539.5	542.1	542.1
15°	527.9	529.1	533.0	535.6	536.9
17.5°	520.1	522.7	526.6	529.1	530.4
20°	509.7	512.3	517.5	521.4	522.7
22.5°	500.6	503.2	508.4	512.3	514.9
25°	490.2	492.8	500.6	503.2	505.8
27.5°	477.3	479.9	486.3	491.5	495.4
30°	464.3	466.9	474.7	481.2	483.8
32.5°	450.0	453.9	463.0	468.2	472.1
35°	434.5	438.4	447.4	456.5	460.4
37.5°	418.9	422.8	431.9	443.5	448.7
40°	400.8	405.9	417.6	433.2	435.8
42.5°	383.9	390.4	400.8	418.9	425.4
45°	364.4	370.9	385.2	404.6	415.0
47.5°	346.3	352.8	368.3	391.7	404.6
50°	324.2	333.3	352.8	380.0	393.0
52.5°	303.5	311.3	337.2	367.0	382.6
55°	281.4	290.5	321.6	354.1	370.9
57.5°	262.0	269.8	304.8	341.1	360.5
60°	237.3	247.7	287.9	326.8	346.3
62.5°	211.4	227.0	271.1	311.3	332.0
65°	186.8	204.9	255.5	295.7	316.5
67.5°	164.7	184.2	236.0	278.8	298.3
70°	138.8	163.4	216.6	258.1	280.1
72.5°	115.4	142.7	194.5	236.0	255.5
75°	92.1	121.9	172.5	207.5	219.2
77.5°	71.3	99.9	147.8	158.2	159.5
80°	53.2	79.1	110.2	111.5	115.4
82.5°	36.3	55.8	71.3	77.8	79.1
85°	23.3	32.4	40.2	41.5	44.1
87.5°	10.4	11.7	14.3	13.0	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)