

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: P312662

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CP250-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: P312662
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 1674.0 lumens
Efficiency: N/A
Efficacy: 73.1 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

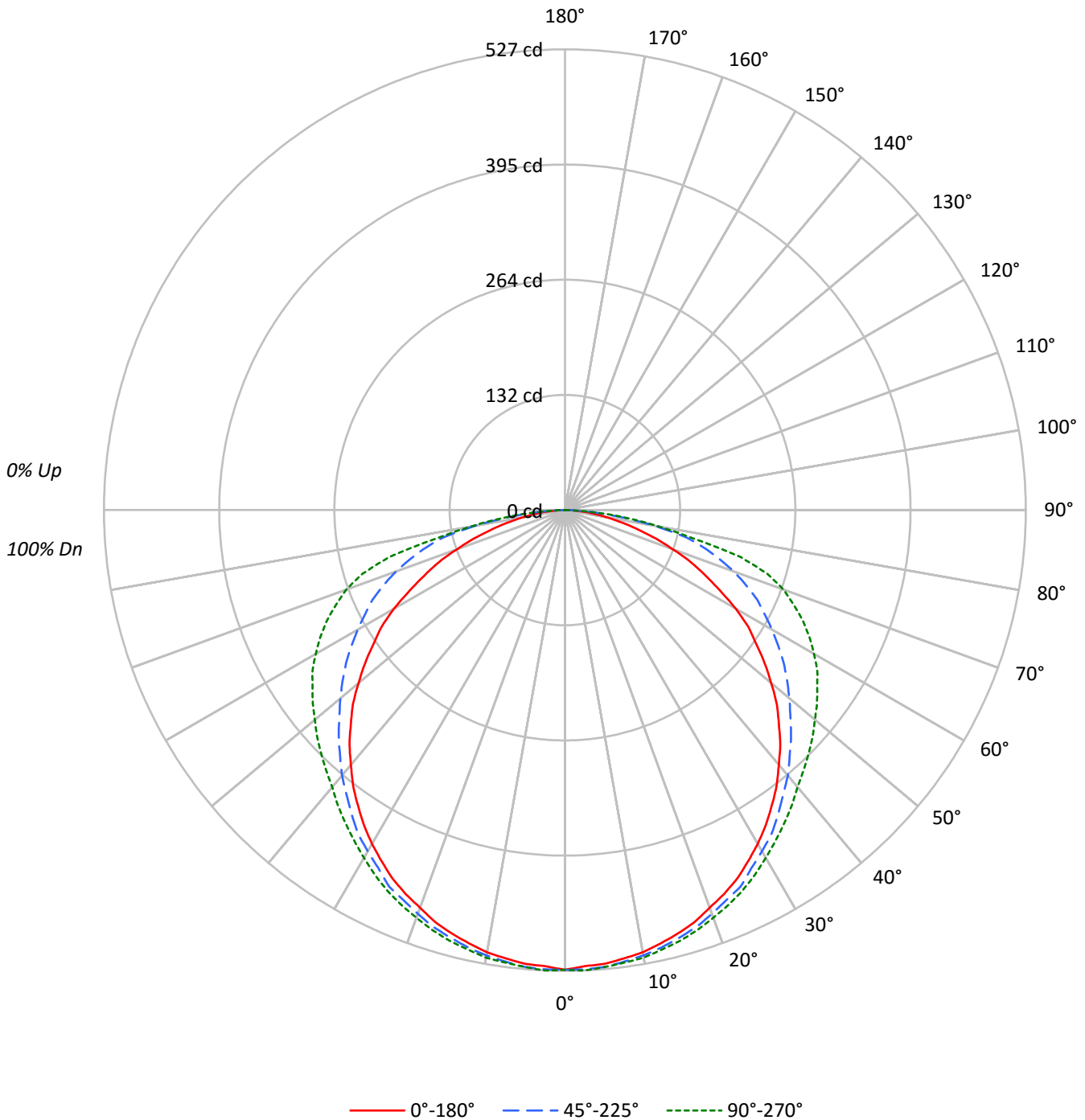
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1415	1415	1415
5°	1407	1417	1417
10°	1403	1413	1420
15°	1396	1410	1420
20°	1386	1407	1421
25°	1382	1411	1426
30°	1370	1400	1427
35°	1355	1396	1436
40°	1337	1393	1454
45°	1317	1392	1500
50°	1289	1402	1562
55°	1254	1433	1652
60°	1213	1471	1770
65°	1129	1545	1913
70°	1037	1618	2093
75°	909	1703	2164
80°	783	1623	1698
85°	685	1179	1294



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.7	3.0
10°-20°	142.8	8.5
20°-30°	217.9	13.0
30°-40°	266.1	15.9
40°-50°	284.5	17.0
50°-60°	274.6	16.4
60°-70°	236.4	14.1
70°-80°	159.9	9.6
80°-90°	42.2	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°	410.4	24.5
0°-40°	676.5	40.4
0°-60°	1235.5	73.8
0°-90°	1674.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1674.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	526	526	526	526	526	
5°	521	522	525	525	525	49
15°	501	502	506	509	510	141
25°	466	468	475	478	480	214
35°	412	416	425	434	437	258
45°	346	352	366	384	394	267
55°	267	276	305	336	352	239
65°	177	195	243	281	300	176
75°	87	116	164	197	208	94
85°	22	31	38	39	42	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	525.8	525.8	525.8	525.8	525.8
2.5°	522.1	523.4	525.8	525.8	527.1
5°	520.9	522.1	524.6	524.6	524.6
7.5°	517.2	518.4	520.9	522.1	522.1
10°	513.5	514.7	517.2	518.4	519.7
12.5°	507.4	508.6	512.3	514.7	514.7
15°	501.2	502.4	506.1	508.6	509.8
17.5°	493.8	496.3	500.0	502.4	503.7
20°	484.0	486.4	491.4	495.0	496.3
22.5°	475.3	477.8	482.7	486.4	488.9
25°	465.5	468.0	475.3	477.8	480.3
27.5°	453.2	455.6	461.8	466.7	470.4
30°	440.9	443.3	450.7	456.9	459.3
32.5°	427.3	431.0	439.6	444.6	448.3
35°	412.5	416.2	424.9	433.5	437.2
37.5°	397.8	401.5	410.1	421.2	426.1
40°	380.5	385.4	396.5	411.3	413.8
42.5°	364.5	370.7	380.5	397.8	403.9
45°	346.0	352.2	365.7	384.2	394.1
47.5°	328.8	335.0	349.7	371.9	384.2
50°	307.9	316.5	335.0	360.8	373.1
52.5°	288.2	295.5	320.2	348.5	363.3
55°	267.2	275.8	305.4	336.2	352.2
57.5°	248.8	256.1	289.4	323.9	342.3
60°	225.4	235.2	273.4	310.3	328.8
62.5°	200.7	215.5	257.4	295.5	315.3
65°	177.3	194.6	242.6	280.8	300.5
67.5°	156.4	174.9	224.1	264.8	283.2
70°	131.8	155.2	205.7	245.1	266.0
72.5°	109.6	135.5	184.7	224.1	242.6
75°	87.4	115.8	163.8	197.0	208.1
77.5°	67.7	94.8	140.4	150.2	151.5
80°	50.5	75.1	104.7	105.9	109.6
82.5°	34.5	53.0	67.7	73.9	75.1
85°	22.2	30.8	38.2	39.4	41.9
87.5°	9.9	11.1	13.5	12.3	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)