

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: P308462

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CP250-W2A-U-5500K**

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: P308462
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-L82765-RDP-CP250-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 3000K 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: 1658.0 lumens
Efficiency: N/A
Efficacy: 72.1 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

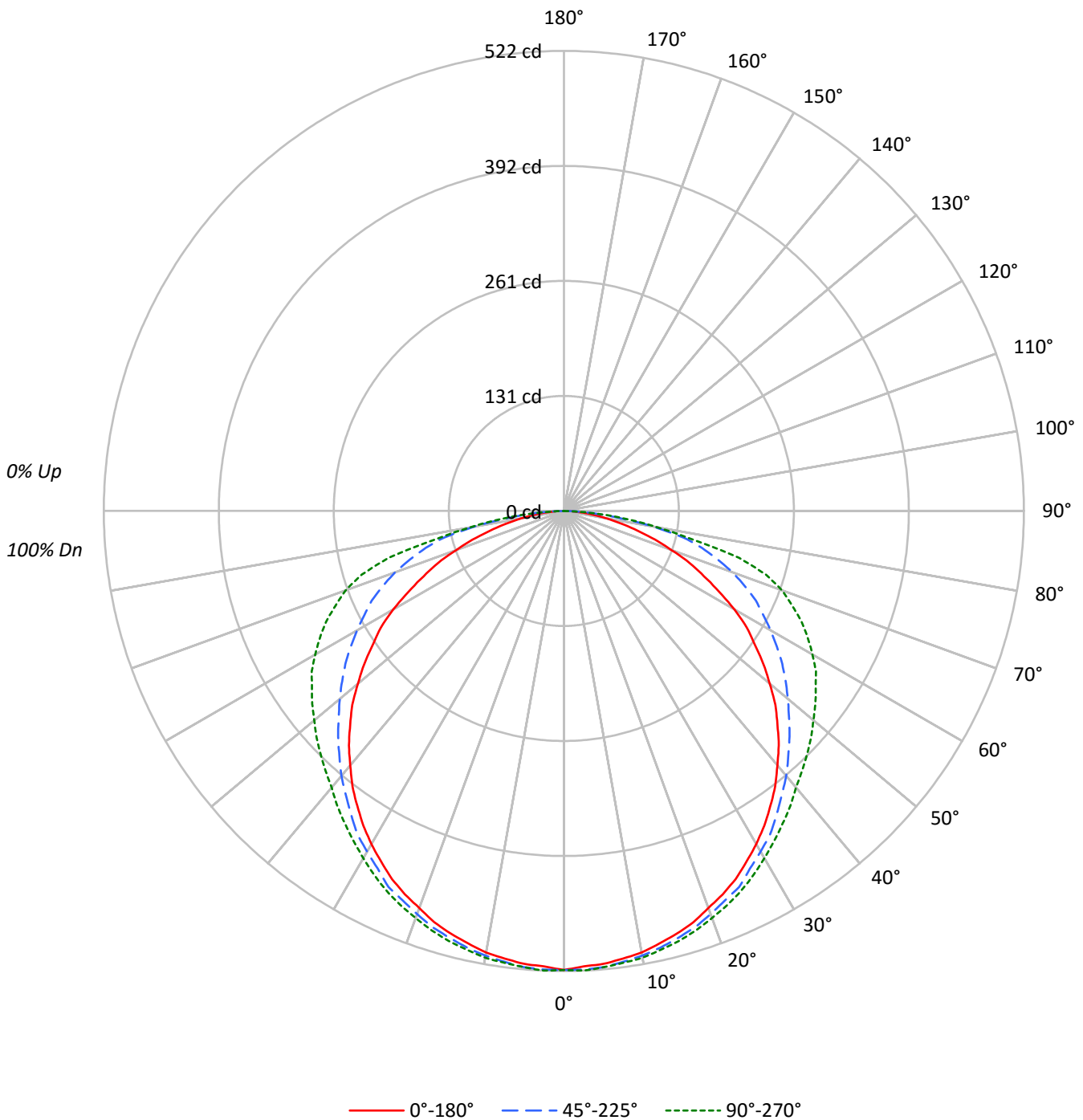
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1401	1401	1401
5°	1394	1404	1404
10°	1390	1400	1406
15°	1383	1397	1407
20°	1373	1394	1407
25°	1369	1398	1412
30°	1357	1387	1413
35°	1342	1382	1422
40°	1324	1379	1440
45°	1304	1378	1485
50°	1276	1389	1547
55°	1242	1419	1636
60°	1201	1457	1753
65°	1118	1530	1895
70°	1027	1603	2073
75°	900	1686	2143
80°	775	1607	1683
85°	679	1167	1281



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	3.0
10°-20°	141.4	8.5
20°-30°	215.8	13.0
30°-40°	263.5	15.9
40°-50°	281.7	17.0
50°-60°	272.0	16.4
60°-70°	234.1	14.1
70°-80°	158.4	9.6
80°-90°	41.8	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°	406.5	24.5
0°-40°	670.0	40.4
0°-60°	1223.7	73.8
0°-90°	1658.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1658.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	521	521	521	521	521	
5°	516	517	520	520	520	49
15°	496	498	501	504	505	140
25°	461	464	471	473	476	212
35°	409	412	421	429	433	256
45°	343	349	362	380	390	265
55°	265	273	302	333	349	237
65°	176	193	240	278	298	175
75°	87	115	162	195	206	93
85°	22	30	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°	520.8	520.8	520.8	520.8	520.8
2.5°	517.1	518.4	520.8	520.8	522.0
5°	515.9	517.1	519.6	519.6	519.6
7.5°	512.3	513.5	515.9	517.1	517.1
10°	508.6	509.8	512.3	513.5	514.7
12.5°	502.5	503.7	507.4	509.8	509.8
15°	496.4	497.6	501.3	503.7	505.0
17.5°	489.1	491.5	495.2	497.6	498.9
20°	479.3	481.8	486.7	490.3	491.5
22.5°	470.8	473.2	478.1	481.8	484.2
25°	461.0	463.5	470.8	473.2	475.7
27.5°	448.8	451.3	457.4	462.3	465.9
30°	436.6	439.1	446.4	452.5	454.9
32.5°	423.2	426.9	435.4	440.3	444.0
35°	408.6	412.3	420.8	429.3	433.0
37.5°	394.0	397.6	406.2	417.1	422.0
40°	376.9	381.8	392.7	407.4	409.8
42.5°	361.0	367.1	376.9	394.0	400.1
45°	342.7	348.8	362.2	380.5	390.3
47.5°	325.7	331.8	346.4	368.3	380.5
50°	304.9	313.5	331.8	357.4	369.6
52.5°	285.4	292.7	317.1	345.2	359.8
55°	264.7	273.2	302.5	333.0	348.8
57.5°	246.4	253.7	286.6	320.8	339.1
60°	223.2	233.0	270.8	307.4	325.7
62.5°	198.8	213.4	254.9	292.7	312.2
65°	175.6	192.7	240.3	278.1	297.6
67.5°	154.9	173.2	222.0	262.2	280.5
70°	130.5	153.7	203.7	242.7	263.5
72.5°	108.6	134.2	183.0	222.0	240.3
75°	86.6	114.7	162.2	195.2	206.1
77.5°	67.1	93.9	139.0	148.8	150.0
80°	50.0	74.4	103.7	104.9	108.6
82.5°	34.2	52.4	67.1	73.2	74.4
85°	22.0	30.5	37.8	39.0	41.5
87.5°	9.8	11.0	13.4	12.2	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)