

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: P308461

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CP250-W2A-U-5000K**

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: P308461
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-5000K
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: 1642.0 lumens
Efficiency: N/A
Efficacy: 71.7 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

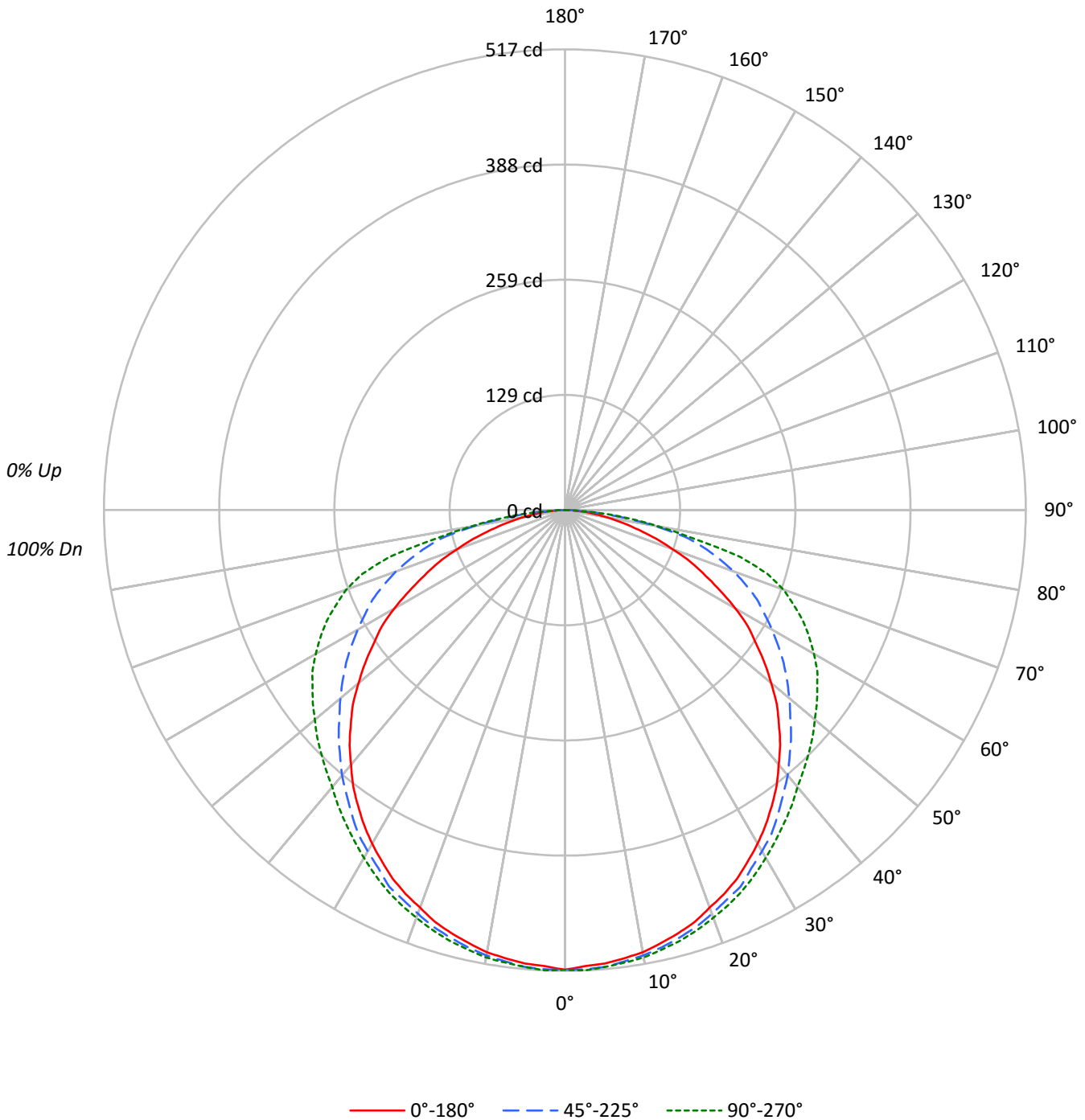
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1388	1388	1388
5°	1380	1390	1390
10°	1376	1386	1393
15°	1370	1383	1393
20°	1359	1380	1394
25°	1356	1385	1399
30°	1344	1374	1400
35°	1329	1369	1409
40°	1311	1366	1426
45°	1292	1365	1471
50°	1264	1376	1532
55°	1230	1406	1621
60°	1189	1443	1736
65°	1107	1515	1876
70°	1017	1587	2053
75°	892	1671	2122
80°	767	1592	1666
85°	670	1155	1269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	3.0
10°-20°	140.1	8.5
20°-30°	213.7	13.0
30°-40°	261.0	15.9
40°-50°	279.0	17.0
50°-60°	269.3	16.4
60°-70°	231.8	14.1
70°-80°	156.9	9.6
80°-90°	41.4	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°	402.6	24.5
0°-40°	663.6	40.4
0°-60°	1211.9	73.8
0°-90°	1642.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1642.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	516	516	516	516	516	
5°	511	512	515	515	515	49
15°	492	493	496	499	500	139
25°	457	459	466	469	471	210
35°	405	408	417	425	429	253
45°	339	346	359	377	386	262
55°	262	271	300	330	346	235
65°	174	191	238	275	295	173
75°	86	114	161	193	204	92
85°	22	30	37	39	41	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	515.8	515.8	515.8	515.8	515.8
2.5°	512.2	513.4	515.8	515.8	517.0
5°	510.9	512.2	514.6	514.6	514.6
7.5°	507.3	508.5	510.9	512.2	512.2
10°	503.7	504.9	507.3	508.5	509.7
12.5°	497.7	498.9	502.5	504.9	504.9
15°	491.6	492.8	496.5	498.9	500.1
17.5°	484.4	486.8	490.4	492.8	494.0
20°	474.7	477.1	482.0	485.6	486.8
22.5°	466.3	468.7	473.5	477.1	479.5
25°	456.6	459.0	466.3	468.7	471.1
27.5°	444.5	446.9	453.0	457.8	461.4
30°	432.4	434.9	442.1	448.1	450.6
32.5°	419.1	422.8	431.2	436.1	439.7
35°	404.7	408.3	416.7	425.2	428.8
37.5°	390.2	393.8	402.2	413.1	417.9
40°	373.2	378.1	388.9	403.4	405.9
42.5°	357.5	363.6	373.2	390.2	396.2
45°	339.4	345.5	358.8	376.9	386.5
47.5°	322.5	328.6	343.0	364.8	376.9
50°	302.0	310.4	328.6	353.9	366.0
52.5°	282.7	289.9	314.1	341.8	356.3
55°	262.1	270.6	299.6	329.8	345.5
57.5°	244.0	251.2	283.9	317.7	335.8
60°	221.0	230.7	268.2	304.4	322.5
62.5°	196.9	211.4	252.5	289.9	309.2
65°	173.9	190.9	238.0	275.4	294.7
67.5°	153.4	171.5	219.8	259.7	277.8
70°	129.2	152.2	201.7	240.4	260.9
72.5°	107.5	132.9	181.2	219.8	238.0
75°	85.8	113.5	160.7	193.3	204.1
77.5°	66.4	93.0	137.7	147.4	148.6
80°	49.5	73.7	102.7	103.9	107.5
82.5°	33.8	51.9	66.4	72.5	73.7
85°	21.7	30.2	37.4	38.7	41.1
87.5°	9.7	10.9	13.3	12.1	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)