

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: P312663

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CP250-W2A-U-4500K**

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: P312663
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-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 4500K 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: 1690.0 lumens
Efficiency: N/A
Efficacy: 71.9 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

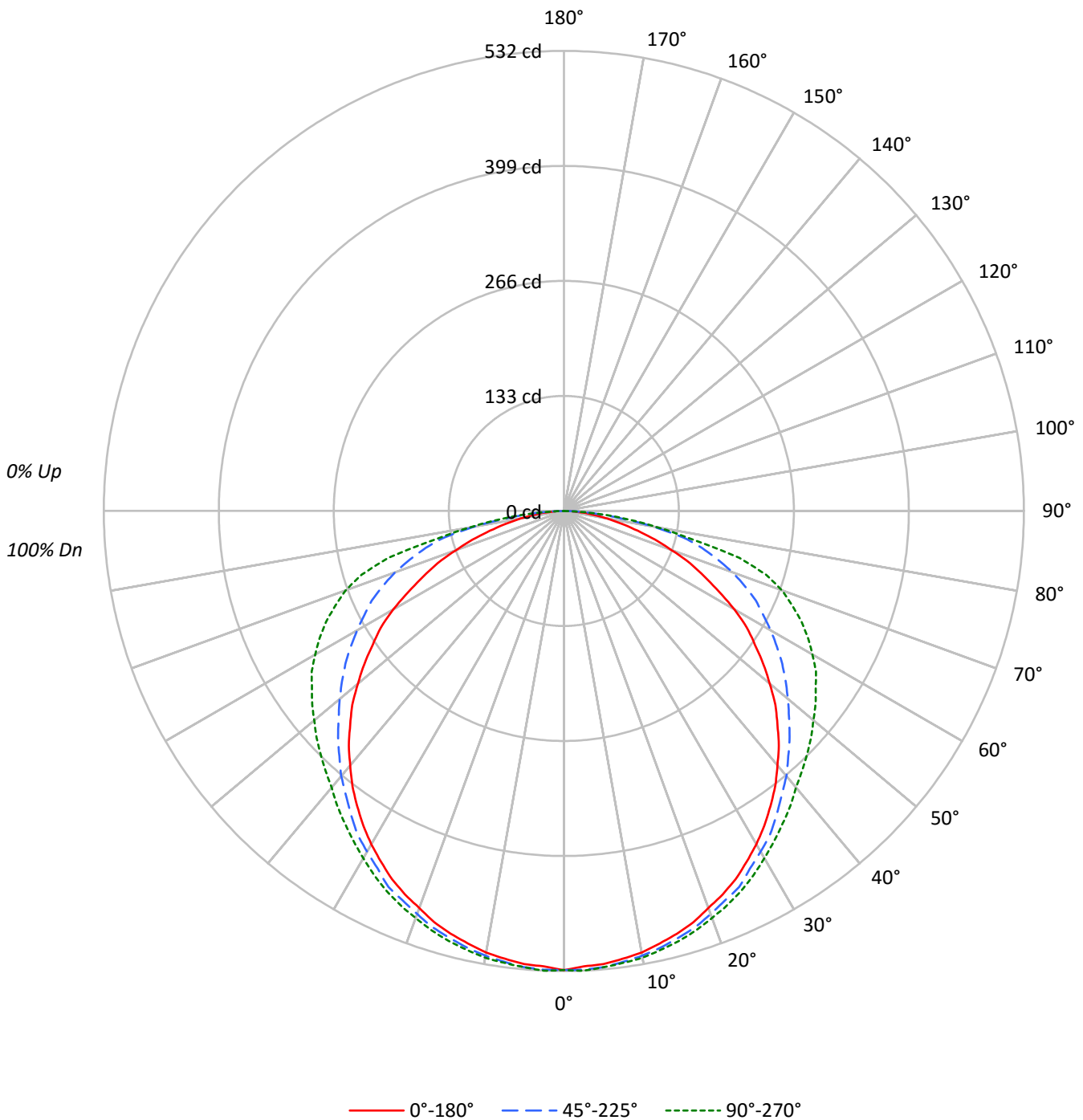
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1429	1429	1429
5°	1421	1431	1431
10°	1417	1427	1433
15°	1410	1424	1434
20°	1399	1420	1435
25°	1395	1425	1440
30°	1383	1414	1441
35°	1368	1409	1450
40°	1350	1406	1467
45°	1329	1405	1514
50°	1301	1416	1577
55°	1266	1446	1668
60°	1224	1485	1786
65°	1140	1559	1931
70°	1046	1633	2113
75°	918	1719	2184
80°	790	1638	1714
85°	692	1189	1306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.2	3.0
10°-20°	144.2	8.5
20°-30°	220.0	13.0
30°-40°	268.6	15.9
40°-50°	287.2	17.0
50°-60°	277.2	16.4
60°-70°	238.6	14.1
70°-80°	161.4	9.6
80°-90°	42.6	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°	414.4	24.5
0°-40°	683.0	40.4
0°-60°	1247.3	73.8
0°-90°	1690.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1690.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	526	527	530	530	530	50
15°	506	507	511	514	515	143
25°	470	472	480	482	485	216
35°	416	420	429	438	441	261
45°	349	356	369	388	398	270
55°	270	278	308	339	356	242
65°	179	196	245	284	303	178
75°	88	117	165	199	210	95
85°	22	31	38	40	42	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	530.9	530.9	530.9	530.9	530.9
2.5°	527.1	528.4	530.9	530.9	532.1
5°	525.9	527.1	529.6	529.6	529.6
7.5°	522.2	523.4	525.9	527.1	527.1
10°	518.4	519.7	522.2	523.4	524.6
12.5°	512.2	513.5	517.2	519.7	519.7
15°	506.0	507.2	511.0	513.5	514.7
17.5°	498.5	501.0	504.8	507.2	508.5
20°	488.6	491.1	496.0	499.8	501.0
22.5°	479.9	482.4	487.3	491.1	493.6
25°	469.9	472.4	479.9	482.4	484.9
27.5°	457.5	460.0	466.2	471.2	474.9
30°	445.1	447.6	455.0	461.2	463.7
32.5°	431.4	435.1	443.8	448.8	452.5
35°	416.5	420.2	428.9	437.6	441.3
37.5°	401.6	405.3	414.0	425.2	430.2
40°	384.2	389.1	400.3	415.2	417.7
42.5°	368.0	374.2	384.2	401.6	407.8
45°	349.3	355.6	369.2	387.9	397.8
47.5°	331.9	338.2	353.1	375.5	387.9
50°	310.8	319.5	338.2	364.3	376.7
52.5°	290.9	298.4	323.2	351.8	366.8
55°	269.8	278.5	308.3	339.4	355.6
57.5°	251.1	258.6	292.2	327.0	345.6
60°	227.5	237.5	276.0	313.3	331.9
62.5°	202.6	217.6	259.8	298.4	318.3
65°	179.0	196.4	244.9	283.5	303.3
67.5°	157.9	176.5	226.3	267.3	285.9
70°	133.0	156.6	207.6	247.4	268.5
72.5°	110.6	136.8	186.5	226.3	244.9
75°	88.3	116.9	165.3	198.9	210.1
77.5°	68.4	95.7	141.7	151.7	152.9
80°	51.0	75.8	105.7	106.9	110.6
82.5°	34.8	53.5	68.4	74.6	75.8
85°	22.4	31.1	38.5	39.8	42.3
87.5°	9.9	11.2	13.7	12.4	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)