

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: P313038

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-S-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: P313038
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L83050-S-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 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: 4129.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

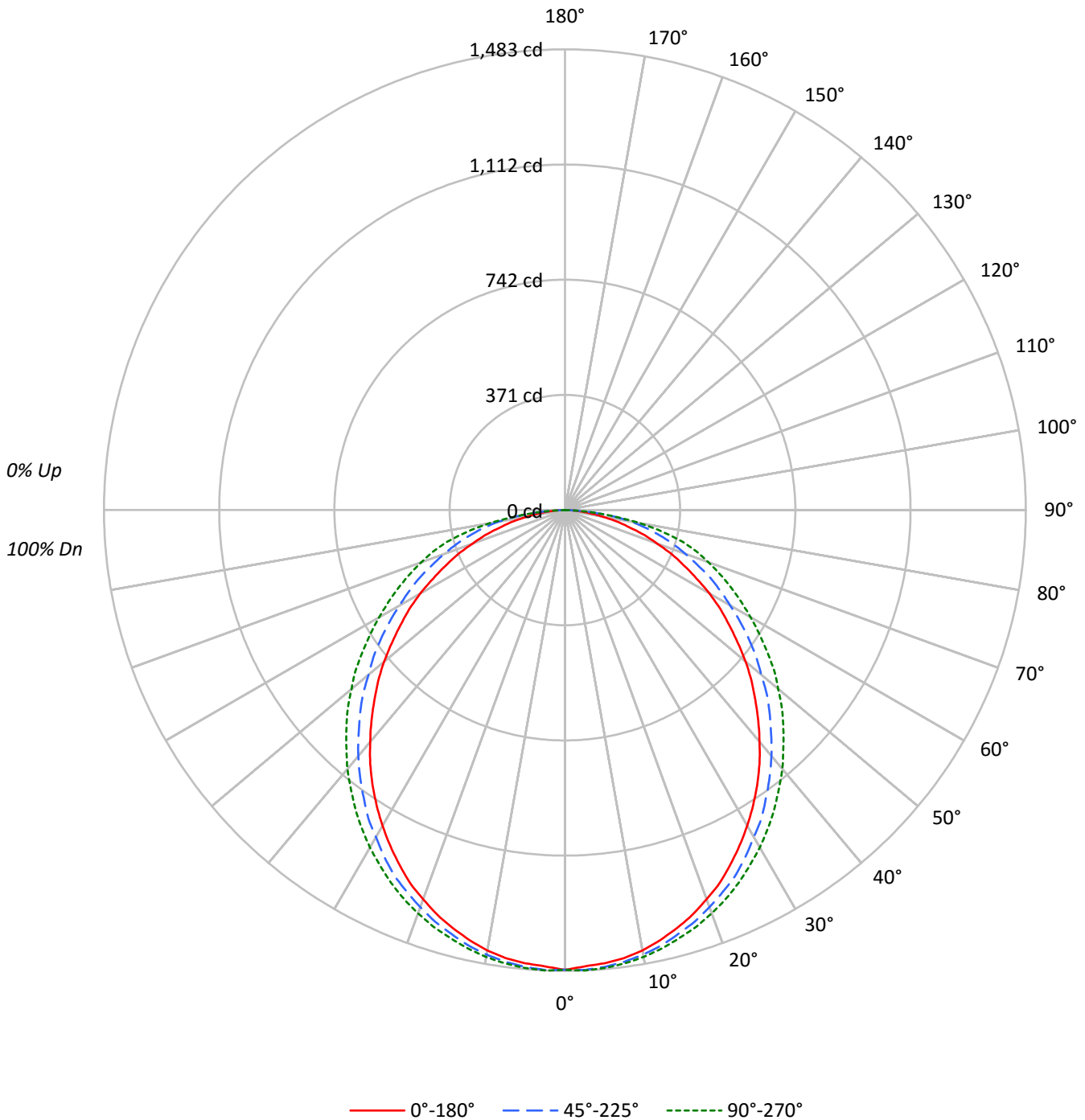
Input Watts (W): 39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	100	100	100	100		
	1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83	83	83	83	83	83		
	2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69	69	69	69	69	69		
	3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58	58	58	58	58	58		
	4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49	49	49	49	49	49		
	5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	43	43	43	43	43		
	6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37	37	37	37	37	37		
	7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	33	33	33	33	33		
	8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30	30	30	30	30	30		
	9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27	27	27	27	27	27		
	10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24	24	24	24	24	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3981	3981	3981
5°	3955	3986	3997
10°	3932	3969	3990
15°	3880	3934	3972
20°	3818	3895	3956
25°	3741	3855	3930
30°	3645	3777	3897
35°	3544	3709	3861
40°	3424	3634	3824
45°	3299	3548	3783
50°	3177	3452	3750
55°	3028	3389	3724
60°	2893	3308	3712
65°	2699	3287	3754
70°	2485	3259	3865
75°	2244	3305	4066
80°	1940	3403	3821
85°	1606	2856	2856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.9	3.4
10°-20°	398.2	9.6
20°-30°	595.8	14.4
30°-40°	705.6	17.1
40°-50°	719.0	17.4
50°-60°	644.5	15.6
60°-70°	504.6	12.2
70°-80°	325.4	7.9
80°-90°	96.1	2.3
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°	1133.9	27.5
0°-40°	1839.4	44.5
0°-60°	3202.9	77.6
0°-90°	4129.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4129.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1480	1480	1480	1480	1480	
5°	1464	1468	1476	1478	1480	139
15°	1393	1401	1412	1424	1426	393
25°	1260	1272	1298	1316	1324	580
35°	1079	1092	1129	1164	1175	674
45°	867	886	932	981	994	669
55°	645	667	722	772	794	579
65°	424	449	516	566	590	421
75°	216	248	318	372	391	231
85°	52	71	92	92	92	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1479.5	1479.5	1479.5	1479.5	1479.5
2.5°	1469.9	1473.8	1481.5	1483.4	1483.4
5°	1464.1	1468.0	1475.7	1477.6	1479.5
7.5°	1454.5	1456.4	1466.1	1469.9	1471.8
10°	1439.1	1442.9	1452.6	1458.4	1460.3
12.5°	1417.9	1423.7	1435.2	1442.9	1444.9
15°	1392.9	1400.6	1412.1	1423.7	1425.6
17.5°	1365.9	1373.6	1389.0	1402.5	1406.3
20°	1333.1	1342.8	1360.1	1375.5	1381.3
22.5°	1300.4	1308.1	1329.3	1348.5	1354.3
25°	1259.9	1271.5	1298.5	1315.8	1323.5
27.5°	1217.5	1231.0	1258.0	1281.1	1288.8
30°	1173.2	1186.7	1215.6	1244.5	1254.1
32.5°	1127.0	1142.4	1177.1	1206.0	1215.6
35°	1078.8	1092.3	1128.9	1163.6	1175.2
37.5°	1028.7	1040.3	1082.7	1119.3	1130.9
40°	974.8	990.2	1034.5	1076.9	1088.5
42.5°	920.9	938.2	982.5	1028.7	1040.3
45°	866.9	886.2	932.4	980.6	994.1
47.5°	814.9	830.3	882.3	928.6	947.8
50°	759.0	774.5	824.5	876.6	895.8
52.5°	701.2	722.4	776.4	826.5	849.6
55°	645.4	666.6	722.4	772.5	793.7
57.5°	593.4	610.7	668.5	720.5	741.7
60°	537.5	552.9	614.6	670.4	689.7
62.5°	477.8	500.9	564.5	616.5	639.6
65°	423.8	448.9	516.3	566.4	589.5
67.5°	373.7	396.9	462.4	516.3	541.3
70°	315.9	346.8	414.2	468.1	491.3
72.5°	269.7	296.7	366.0	420.0	445.0
75°	215.8	248.5	317.9	371.8	391.1
77.5°	171.5	204.2	269.7	312.1	321.7
80°	125.2	158.0	219.6	240.8	246.6
82.5°	84.8	115.6	158.0	163.8	165.7
85°	52.0	71.3	92.5	92.5	92.5
87.5°	25.0	28.9	32.8	30.8	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)