

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: P309107

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA125-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: P309107
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-L82765-S-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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

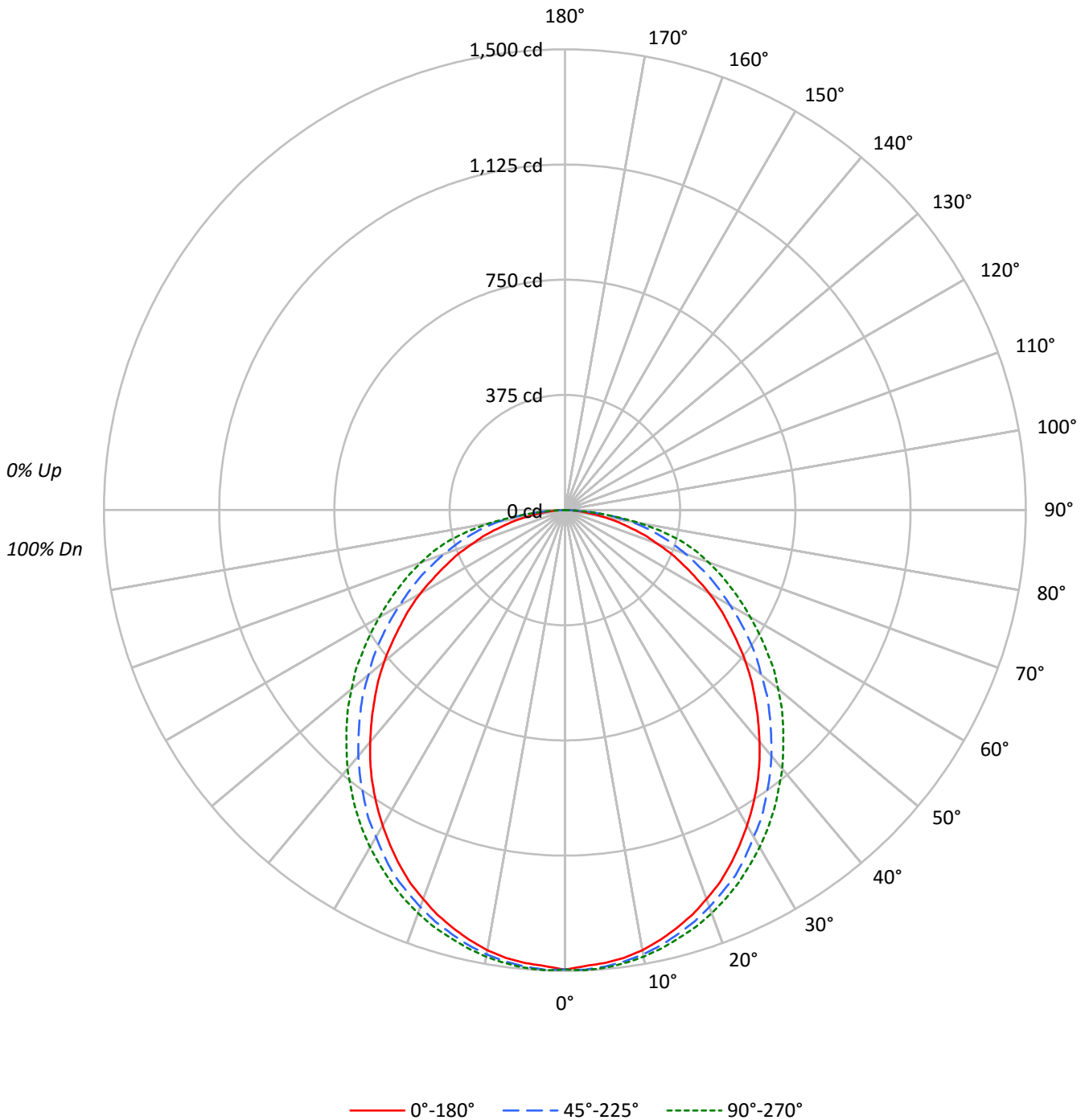
Lumens per Lamp: N/A
Luminaire Lumens: 4174.0 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 37.6
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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4025	4025	4025
5°	3998	4030	4040
10°	3975	4012	4034
15°	3923	3977	4015
20°	3859	3937	3999
25°	3782	3897	3972
30°	3685	3819	3939
35°	3583	3749	3903
40°	3462	3674	3865
45°	3335	3587	3824
50°	3212	3489	3791
55°	3061	3426	3765
60°	2925	3344	3752
65°	2728	3323	3794
70°	2513	3294	3907
75°	2268	3341	4110
80°	1962	3440	3863
85°	1624	2887	2887



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.4	3.4
10°-20°	402.5	9.6
20°-30°	602.3	14.4
30°-40°	713.2	17.1
40°-50°	726.9	17.4
50°-60°	651.5	15.6
60°-70°	510.1	12.2
70°-80°	328.9	7.9
80°-90°	97.2	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°	1146.2	27.5
0°-40°	1859.5	44.5
0°-60°	3237.9	77.6
0°-90°	4174.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4174.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1480	1484	1492	1494	1496	141
15°	1408	1416	1428	1439	1441	397
25°	1274	1285	1313	1330	1338	586
35°	1091	1104	1141	1176	1188	682
45°	876	896	943	991	1005	677
55°	652	674	730	781	802	585
65°	428	454	522	573	596	426
75°	218	251	321	376	395	234
85°	53	72	94	94	94	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1495.7	1495.7	1495.7	1495.7	1495.7
2.5°	1485.9	1489.8	1497.6	1499.6	1499.6
5°	1480.1	1484.0	1491.8	1493.7	1495.7
7.5°	1470.4	1472.3	1482.0	1485.9	1487.9
10°	1454.8	1458.7	1468.4	1474.3	1476.2
12.5°	1433.4	1439.2	1450.9	1458.7	1460.6
15°	1408.0	1415.8	1427.5	1439.2	1441.1
17.5°	1380.8	1388.6	1404.1	1417.8	1421.7
20°	1347.7	1357.4	1374.9	1390.5	1396.4
22.5°	1314.6	1322.3	1343.8	1363.2	1369.1
25°	1273.7	1285.3	1312.6	1330.1	1337.9
27.5°	1230.8	1244.4	1271.7	1295.1	1302.9
30°	1186.0	1199.7	1228.9	1258.1	1267.8
32.5°	1139.3	1154.9	1189.9	1219.1	1228.9
35°	1090.6	1104.2	1141.2	1176.3	1188.0
37.5°	1040.0	1051.6	1094.5	1131.5	1143.2
40°	985.4	1001.0	1045.8	1088.6	1100.3
42.5°	930.9	948.4	993.2	1040.0	1051.6
45°	876.4	895.8	942.6	991.3	1004.9
47.5°	823.8	839.4	892.0	938.7	958.2
50°	767.3	782.9	833.5	886.1	905.6
52.5°	708.9	730.3	784.8	835.5	858.8
55°	652.4	673.8	730.3	780.9	802.4
57.5°	599.8	617.4	675.8	728.4	749.8
60°	543.4	558.9	621.3	677.7	697.2
62.5°	483.0	506.3	570.6	623.2	646.6
65°	428.4	453.8	521.9	572.6	595.9
67.5°	377.8	401.2	467.4	521.9	547.2
70°	319.4	350.5	418.7	473.2	496.6
72.5°	272.6	299.9	370.0	424.6	449.9
75°	218.1	251.2	321.3	375.9	395.3
77.5°	173.3	206.4	272.6	315.5	325.2
80°	126.6	159.7	222.0	243.4	249.3
82.5°	85.7	116.8	159.7	165.5	167.5
85°	52.6	72.1	93.5	93.5	93.5
87.5°	25.3	29.2	33.1	31.2	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)