

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: P309098

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA08-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: P309098  
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-CA08-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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: 4189.0 lumens  
Efficiency: N/A  
Efficacy: 111.4 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

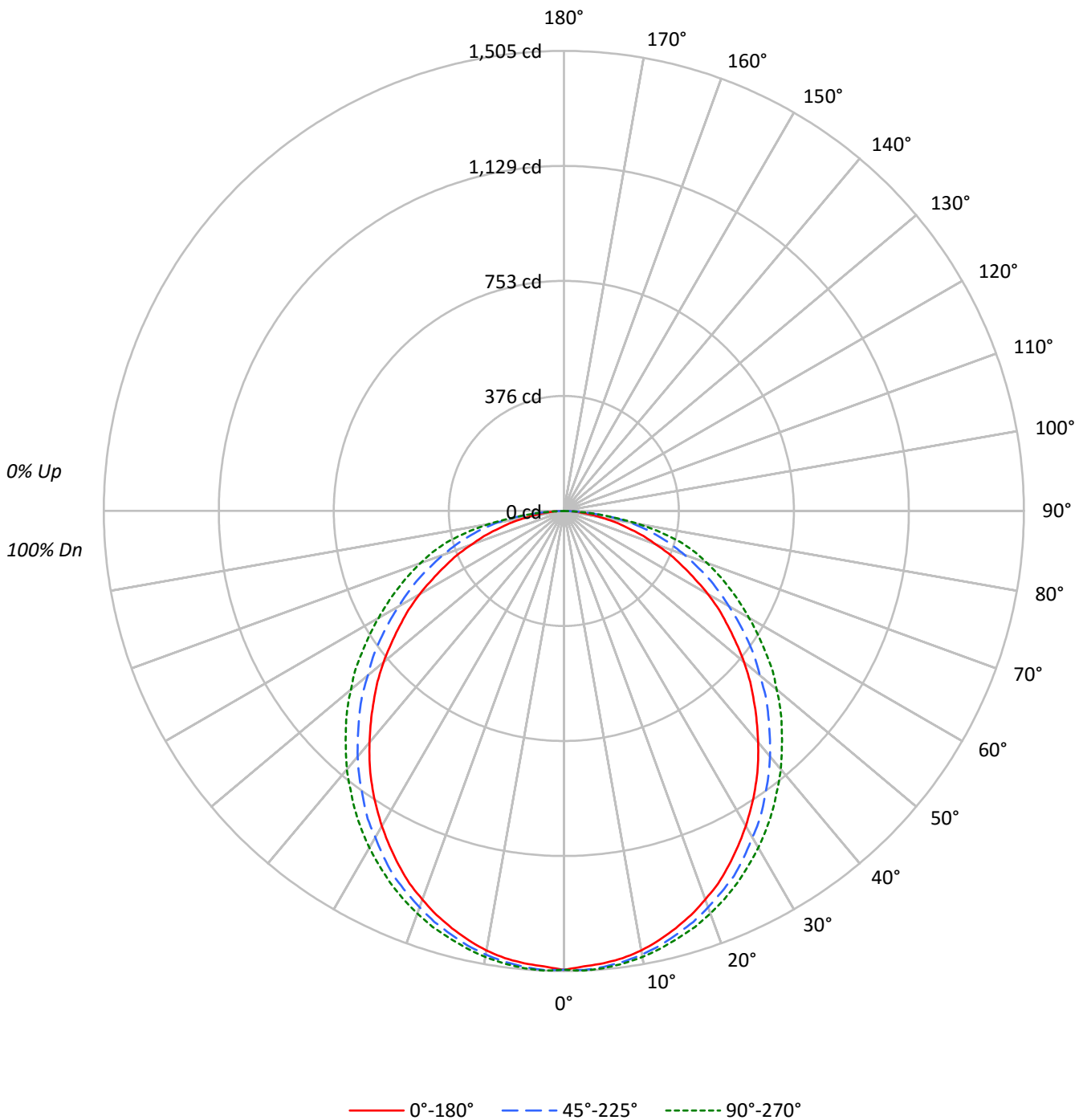
Input Watts (W): 37.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4039	4039	4039
5°	4012	4044	4055
10°	3989	4027	4048
15°	3937	3991	4029
20°	3873	3952	4013
25°	3795	3911	3987
30°	3699	3832	3954
35°	3596	3762	3916
40°	3474	3687	3879
45°	3347	3600	3838
50°	3224	3502	3805
55°	3072	3438	3778
60°	2935	3356	3766
65°	2738	3335	3808
70°	2522	3306	3921
75°	2276	3353	4126
80°	1968	3453	3877
85°	1630	2896	2896



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.9	3.4
10°-20°	404.0	9.6
20°-30°	604.4	14.4
30°-40°	715.8	17.1
40°-50°	729.5	17.4
50°-60°	653.8	15.6
60°-70°	511.9	12.2
70°-80°	330.1	7.9
80°-90°	97.5	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°	1150.4	27.5
0°-40°	1866.2	44.5
0°-60°	3249.5	77.6
0°-90°	4189.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4189.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1501	1501	1501	1501	1501	
5°	1485	1489	1497	1499	1501	141
15°	1413	1421	1433	1444	1446	398
25°	1278	1290	1317	1335	1343	588
35°	1094	1108	1145	1180	1192	684
45°	880	899	946	995	1008	679
55°	655	676	733	784	805	587
65°	430	455	524	575	598	427
75°	219	252	322	377	397	235
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°	1501.0	1501.0	1501.0	1501.0	1501.0
2.5°	1491.3	1495.2	1503.0	1505.0	1505.0
5°	1485.4	1489.3	1497.1	1499.1	1501.0
7.5°	1475.6	1477.6	1487.4	1491.3	1493.2
10°	1460.0	1463.9	1473.7	1479.5	1481.5
12.5°	1438.5	1444.4	1456.1	1463.9	1465.9
15°	1413.1	1420.9	1432.6	1444.4	1446.3
17.5°	1385.7	1393.6	1409.2	1422.9	1426.8
20°	1352.5	1362.3	1379.9	1395.5	1401.4
22.5°	1319.3	1327.1	1348.6	1368.1	1374.0
25°	1278.2	1290.0	1317.3	1334.9	1342.7
27.5°	1235.2	1248.9	1276.3	1299.7	1307.6
30°	1190.3	1204.0	1233.3	1262.6	1272.4
32.5°	1143.4	1159.0	1194.2	1223.5	1233.3
35°	1094.5	1108.2	1145.3	1180.5	1192.2
37.5°	1043.7	1055.4	1098.4	1135.6	1147.3
40°	989.0	1004.6	1049.6	1092.6	1104.3
42.5°	934.2	951.8	996.8	1043.7	1055.4
45°	879.5	899.1	946.0	994.8	1008.5
47.5°	826.7	842.4	895.2	942.1	961.6
50°	770.1	785.7	836.5	889.3	908.8
52.5°	711.4	732.9	787.7	838.5	861.9
55°	654.8	676.3	732.9	783.8	805.3
57.5°	602.0	619.6	678.2	731.0	752.5
60°	545.3	560.9	623.5	680.2	699.7
62.5°	484.7	508.2	572.7	625.4	648.9
65°	430.0	455.4	523.8	574.6	598.1
67.5°	379.2	402.6	469.1	523.8	549.2
70°	320.5	351.8	420.2	474.9	498.4
72.5°	273.6	301.0	371.4	426.1	451.5
75°	218.9	252.1	322.5	377.2	396.8
77.5°	173.9	207.2	273.6	316.6	326.4
80°	127.0	160.3	222.8	244.3	250.2
82.5°	86.0	117.3	160.3	166.1	168.1
85°	52.8	72.3	93.8	93.8	93.8
87.5°	25.4	29.3	33.2	31.3	31.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)