

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: P313034

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-S-CP187-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: P313034
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-CP187-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 4163.0 lumens
Efficiency: N/A
Efficacy: 106.7 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

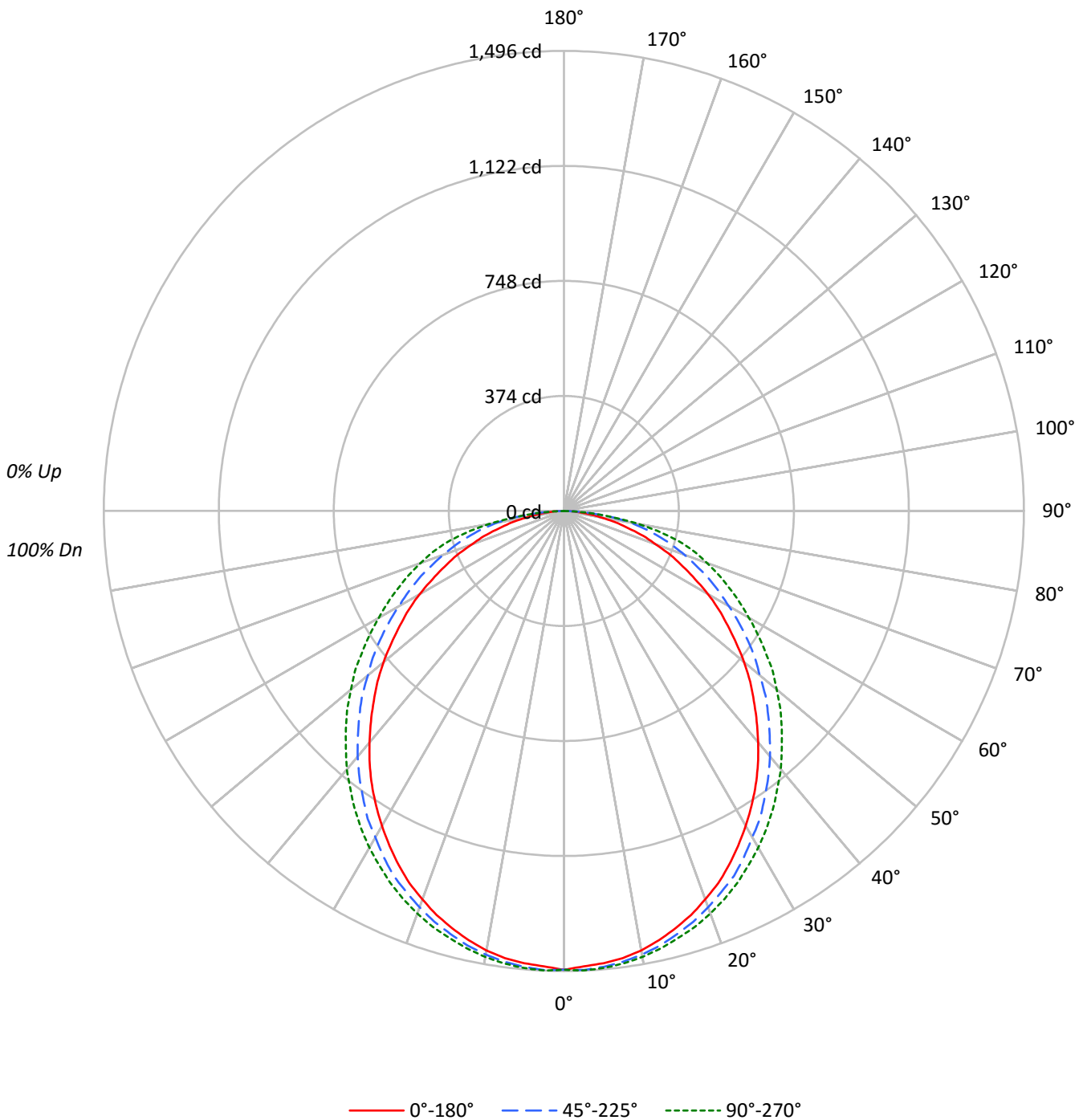
Input Watts (W): 39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	4014	4014	4014
5°	3988	4019	4029
10°	3965	4002	4023
15°	3912	3967	4004
20°	3849	3927	3988
25°	3772	3887	3962
30°	3676	3808	3929
35°	3573	3739	3892
40°	3452	3664	3855
45°	3326	3578	3814
50°	3204	3480	3781
55°	3053	3417	3755
60°	2916	3335	3743
65°	2721	3315	3785
70°	2506	3286	3897
75°	2261	3332	4100
80°	1957	3431	3852
85°	1618	2878	2878



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.1	3.4
10°-20°	401.5	9.6
20°-30°	600.7	14.4
30°-40°	711.4	17.1
40°-50°	725.0	17.4
50°-60°	649.8	15.6
60°-70°	508.7	12.2
70°-80°	328.0	7.9
80°-90°	96.9	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°	1143.2	27.5
0°-40°	1854.6	44.5
0°-60°	3229.3	77.6
0°-90°	4163.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4163.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1492	1492	1492	1492	1492	
5°	1476	1480	1488	1490	1492	140
15°	1404	1412	1424	1435	1437	396
25°	1270	1282	1309	1327	1334	585
35°	1088	1101	1138	1173	1185	680
45°	874	894	940	989	1002	675
55°	651	672	728	779	800	583
65°	427	453	521	571	594	424
75°	218	251	320	375	394	233
85°	52	72	93	93	93	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1491.7	1491.7	1491.7	1491.7	1491.7
2.5°	1482.0	1485.9	1493.7	1495.6	1495.6
5°	1476.2	1480.1	1487.8	1489.8	1491.7
7.5°	1466.5	1468.4	1478.1	1482.0	1484.0
10°	1450.9	1454.8	1464.5	1470.4	1472.3
12.5°	1429.6	1435.4	1447.1	1454.8	1456.8
15°	1404.3	1412.1	1423.8	1435.4	1437.3
17.5°	1377.1	1384.9	1400.4	1414.0	1417.9
20°	1344.1	1353.8	1371.3	1386.8	1392.7
22.5°	1311.1	1318.9	1340.2	1359.7	1365.5
25°	1270.3	1282.0	1309.2	1326.6	1334.4
27.5°	1227.6	1241.2	1268.4	1291.7	1299.4
30°	1182.9	1196.5	1225.6	1254.8	1264.5
32.5°	1136.3	1151.8	1186.8	1215.9	1225.6
35°	1087.7	1101.3	1138.2	1173.2	1184.8
37.5°	1037.2	1048.9	1091.6	1128.5	1140.2
40°	982.8	998.4	1043.0	1085.8	1097.4
42.5°	928.4	945.9	990.6	1037.2	1048.9
45°	874.1	893.5	940.1	988.7	1002.3
47.5°	821.6	837.2	889.6	936.2	955.6
50°	765.3	780.8	831.3	883.8	903.2
52.5°	707.0	728.4	782.8	833.3	856.6
55°	650.7	672.1	728.4	778.9	800.3
57.5°	598.2	615.7	674.0	726.4	747.8
60°	541.9	557.5	619.6	675.9	695.4
62.5°	481.7	505.0	569.1	621.6	644.9
65°	427.3	452.6	520.6	571.1	594.4
67.5°	376.8	400.1	466.2	520.6	545.8
70°	318.5	349.6	417.6	472.0	495.3
72.5°	271.9	299.1	369.0	423.4	448.7
75°	217.5	250.6	320.5	374.9	394.3
77.5°	172.9	205.9	271.9	314.7	324.4
80°	126.3	159.3	221.4	242.8	248.6
82.5°	85.5	116.5	159.3	165.1	167.0
85°	52.4	71.9	93.2	93.2	93.2
87.5°	25.3	29.1	33.0	31.1	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)