

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: P312886

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-CP250-W2A-U-3500K**

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: P312886
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3500K 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: 3693.0 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

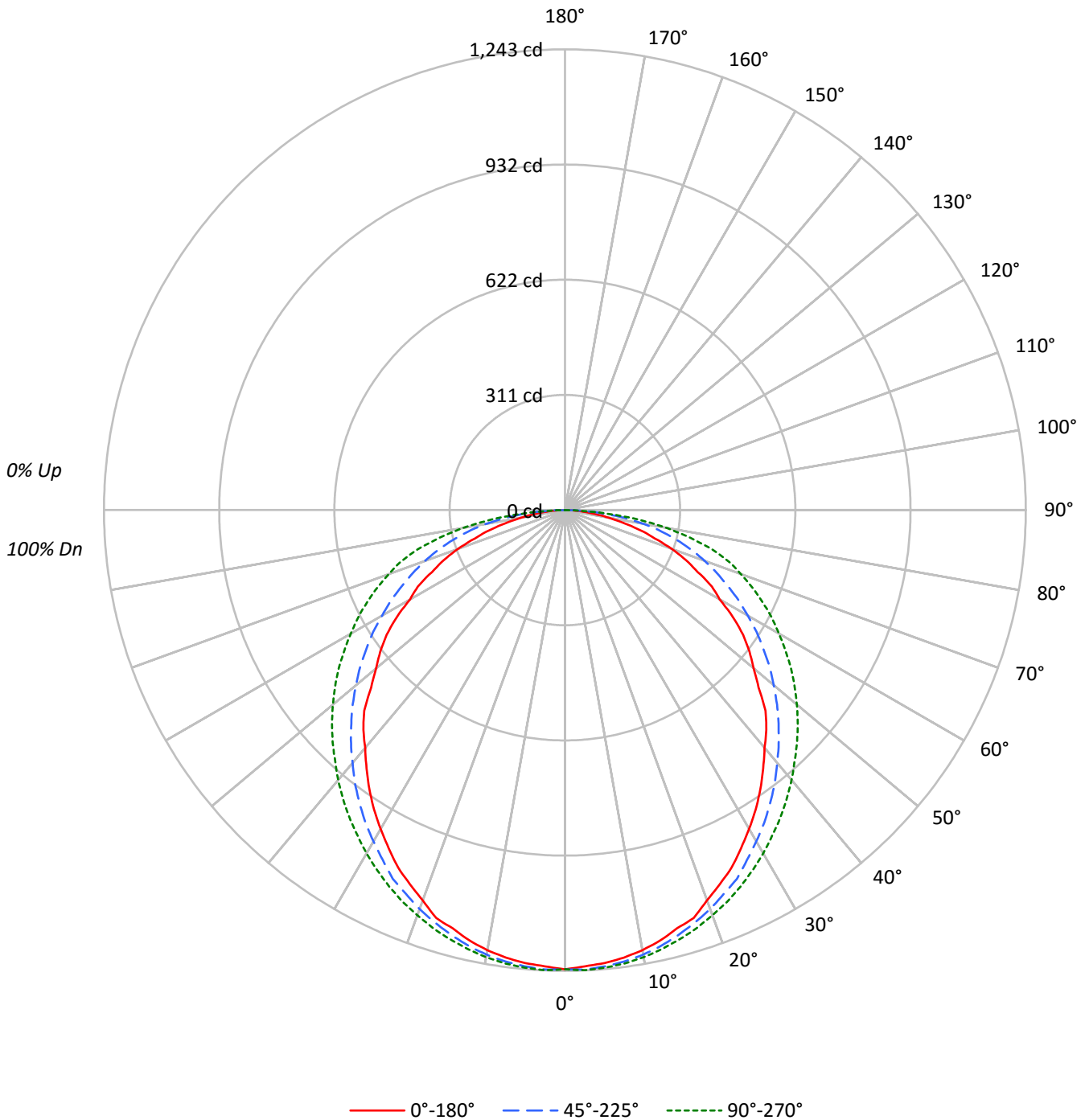
Input Watts (W): 37.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3334	3334	3334
5°	3314	3337	3347
10°	3294	3328	3347
15°	3255	3304	3339
20°	3209	3280	3330
25°	3159	3259	3327
30°	3086	3207	3323
35°	3019	3170	3327
40°	2943	3129	3340
45°	2912	3101	3370
50°	2782	3078	3419
55°	2753	3068	3491
60°	2597	3063	3587
65°	2521	3084	3748
70°	2419	3157	3977
75°	2205	3253	4282
80°	1891	3369	4328
85°	1528	3220	3711



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.2	3.2
10°-20°	334.5	9.1
20°-30°	503.4	13.6
30°-40°	604.2	16.4
40°-50°	631.4	17.1
50°-60°	588.5	15.9
60°-70°	482.6	13.1
70°-80°	325.2	8.8
80°-90°	105.9	2.9
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°	955.1	25.9
0°-40°	1559.2	42.2
0°-60°	2779.2	75.3
0°-90°	3693.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3693.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1227	1230	1236	1237	1239	116
15°	1168	1175	1186	1197	1198	330
25°	1064	1071	1098	1114	1121	489
35°	919	932	965	999	1013	575
45°	765	771	815	864	886	585
55°	587	597	654	716	744	520
65°	396	414	484	555	589	394
75°	212	235	313	384	412	223
85°	50	71	104	122	120	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1239.0	1239.0	1239.0	1239.0	1239.0
2.5°	1232.0	1235.5	1240.8	1242.6	1242.6
5°	1226.7	1230.2	1235.5	1237.3	1239.0
7.5°	1217.8	1221.4	1228.4	1232.0	1233.7
10°	1205.4	1209.0	1217.8	1223.1	1224.9
12.5°	1189.5	1193.1	1203.7	1210.8	1212.5
15°	1168.3	1175.4	1186.0	1196.6	1198.4
17.5°	1154.2	1152.4	1166.6	1178.9	1182.5
20°	1120.6	1129.4	1145.4	1159.5	1163.0
22.5°	1092.3	1099.4	1120.6	1136.5	1143.6
25°	1064.0	1071.1	1097.6	1113.5	1120.6
27.5°	1028.7	1039.3	1064.0	1087.0	1095.9
30°	993.3	1004.0	1032.2	1058.7	1069.4
32.5°	958.0	970.4	1000.4	1028.7	1041.1
35°	919.1	931.5	965.1	998.6	1012.8
37.5°	878.5	894.4	929.7	966.8	982.7
40°	837.8	853.7	890.8	933.3	950.9
42.5°	804.2	811.3	853.7	899.7	917.3
45°	765.3	770.6	814.8	864.3	885.5
47.5°	708.8	728.2	775.9	830.7	851.9
50°	664.6	685.8	735.3	793.6	816.6
52.5°	627.5	641.6	696.4	754.7	781.2
55°	586.8	597.4	654.0	715.8	744.1
57.5°	537.3	556.8	613.3	677.0	705.2
60°	482.5	507.3	569.1	638.1	666.4
62.5°	447.2	461.3	528.5	597.4	629.2
65°	395.9	413.6	484.3	555.0	588.6
67.5°	353.5	371.2	443.6	514.3	547.9
70°	307.5	325.2	401.2	471.9	505.5
72.5°	254.5	279.3	358.8	429.5	464.9
75°	212.1	235.1	312.9	383.6	411.8
77.5°	164.4	194.4	266.9	325.2	346.4
80°	122.0	152.0	217.4	259.8	279.3
82.5°	83.1	113.1	162.6	194.4	205.0
85°	49.5	70.7	104.3	122.0	120.2
87.5°	23.0	30.0	42.4	42.4	40.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)