

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: P313015

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-S-CA08-W2A-U-3000K**

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: P313015
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-CA08-W2A-U-3000K
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: 3966.0 lumens
Efficiency: N/A
Efficacy: 106.9 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

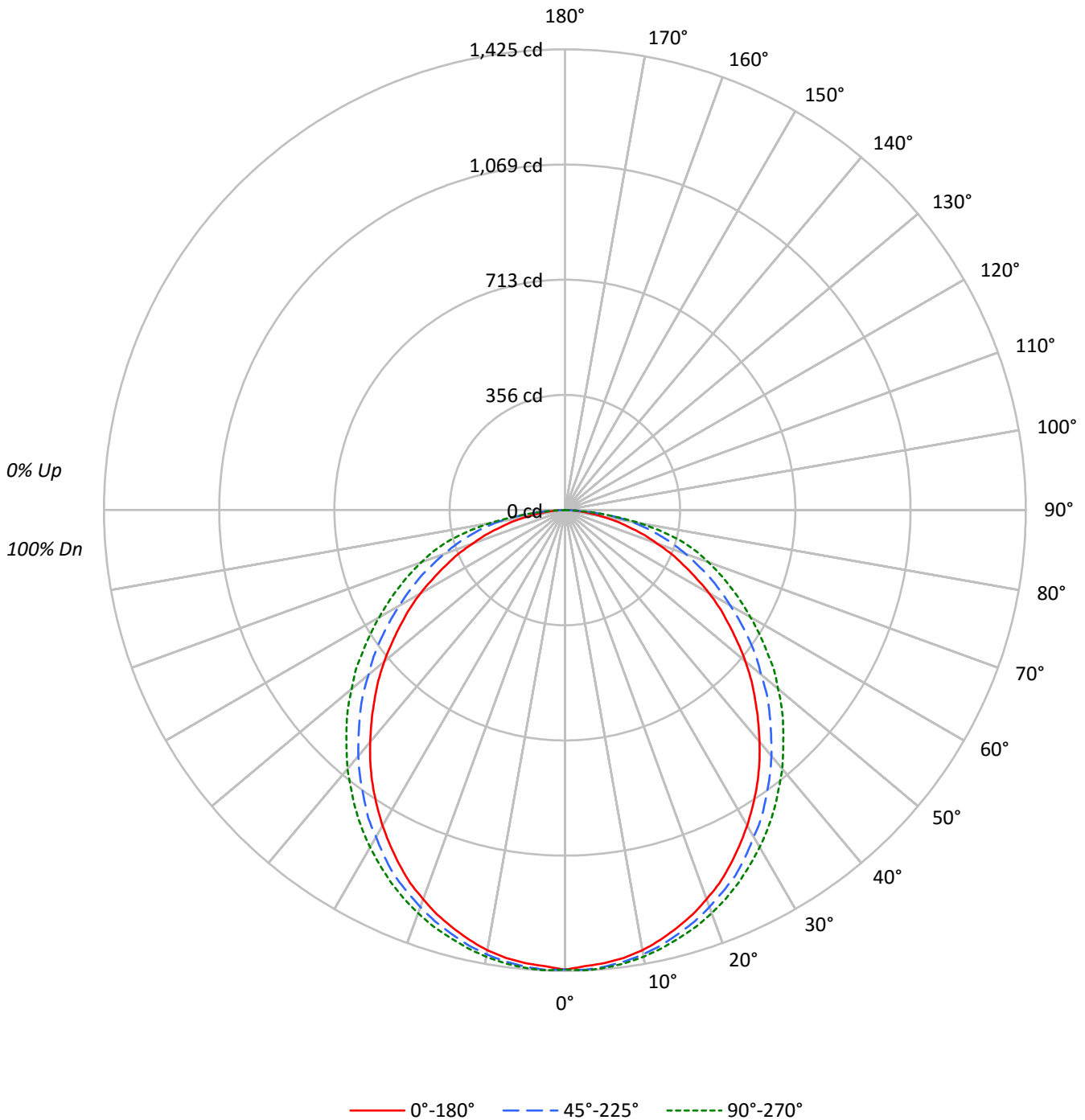
Input Watts (W): 37.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3824	3824	3824
5°	3799	3829	3839
10°	3777	3812	3833
15°	3727	3779	3815
20°	3667	3741	3800
25°	3593	3703	3775
30°	3502	3628	3743
35°	3404	3562	3708
40°	3289	3491	3673
45°	3169	3408	3634
50°	3052	3316	3602
55°	2908	3255	3577
60°	2779	3177	3566
65°	2592	3158	3605
70°	2388	3130	3713
75°	2154	3174	3905
80°	1864	3270	3671
85°	1544	2742	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.4	3.4
10°-20°	382.5	9.6
20°-30°	572.3	14.4
30°-40°	677.7	17.1
40°-50°	690.7	17.4
50°-60°	619.0	15.6
60°-70°	484.6	12.2
70°-80°	312.5	7.9
80°-90°	92.3	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°	1089.1	27.5
0°-40°	1766.8	44.5
0°-60°	3076.5	77.6
0°-90°	3966.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3966.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1421	1421	1421	1421	1421	
5°	1406	1410	1417	1419	1421	134
15°	1338	1345	1356	1368	1369	377
25°	1210	1221	1247	1264	1271	557
35°	1036	1049	1084	1118	1129	648
45°	833	851	896	942	955	643
55°	620	640	694	742	762	556
65°	407	431	496	544	566	404
75°	207	239	305	357	376	222
85°	50	68	89	89	89	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1421.1	1421.1	1421.1	1421.1	1421.1
2.5°	1411.9	1415.6	1423.0	1424.8	1424.8
5°	1406.3	1410.0	1417.4	1419.3	1421.1
7.5°	1397.1	1398.9	1408.2	1411.9	1413.7
10°	1382.3	1386.0	1395.2	1400.8	1402.6
12.5°	1361.9	1367.5	1378.6	1386.0	1387.8
15°	1337.9	1345.3	1356.4	1367.5	1369.3
17.5°	1312.0	1319.4	1334.2	1347.1	1350.8
20°	1280.5	1289.8	1306.4	1321.2	1326.8
22.5°	1249.1	1256.5	1276.8	1295.3	1300.9
25°	1210.2	1221.3	1247.2	1263.9	1271.3
27.5°	1169.5	1182.4	1208.3	1230.5	1237.9
30°	1126.9	1139.9	1167.6	1195.4	1204.6
32.5°	1082.5	1097.3	1130.6	1158.4	1167.6
35°	1036.2	1049.2	1084.4	1117.7	1128.8
37.5°	988.1	999.2	1039.9	1075.1	1086.2
40°	936.3	951.1	993.7	1034.4	1045.5
42.5°	884.5	901.2	943.7	988.1	999.2
45°	832.7	851.2	895.6	941.9	954.8
47.5°	782.7	797.5	847.5	891.9	910.4
50°	729.1	743.9	792.0	842.0	860.5
52.5°	673.6	693.9	745.7	793.8	816.0
55°	619.9	640.3	693.9	742.0	762.4
57.5°	569.9	586.6	642.1	692.1	712.4
60°	516.3	531.1	590.3	644.0	662.5
62.5°	458.9	481.1	542.2	592.1	614.3
65°	407.1	431.2	495.9	544.0	566.2
67.5°	359.0	381.2	444.1	495.9	520.0
70°	303.5	333.1	397.8	449.7	471.9
72.5°	259.1	285.0	351.6	403.4	427.5
75°	207.2	238.7	305.3	357.1	375.6
77.5°	164.7	196.1	259.1	299.8	309.0
80°	120.3	151.7	211.0	231.3	236.9
82.5°	81.4	111.0	151.7	157.3	159.1
85°	50.0	68.5	88.8	88.8	88.8
87.5°	24.1	27.8	31.5	29.6	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)