

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: P312445

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-HRP-CA125-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: P312445
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L83050-HRP-CA125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 1475.0 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

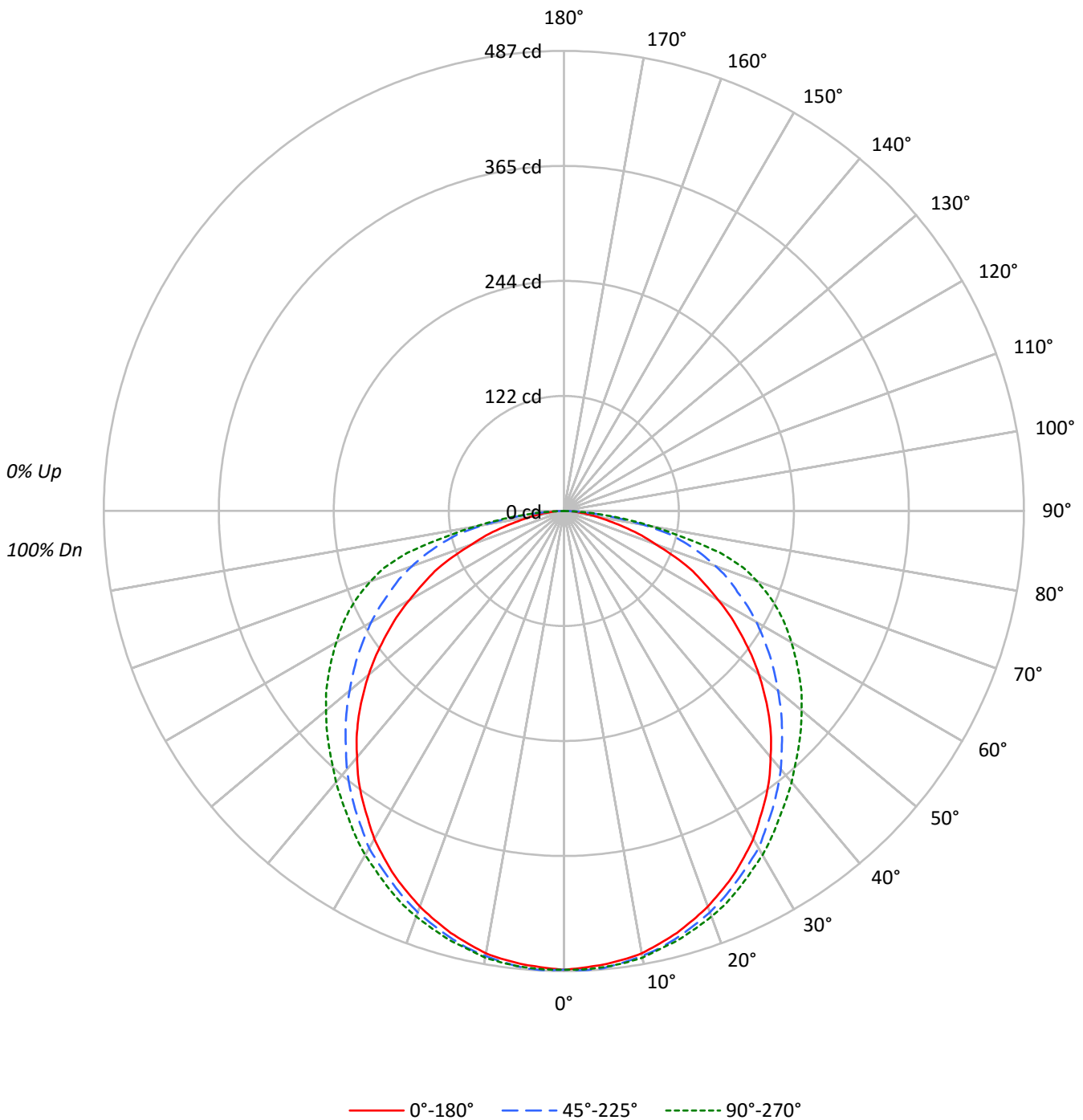
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1307	1307	1307
5°	1302	1312	1310
10°	1299	1307	1312
15°	1288	1301	1309
20°	1276	1295	1308
25°	1262	1285	1307
30°	1246	1281	1307
35°	1223	1265	1305
40°	1196	1255	1317
45°	1169	1243	1338
50°	1129	1239	1375
55°	1078	1248	1428
60°	1017	1267	1497
65°	960	1291	1599
70°	820	1347	1713
75°	687	1403	1780
80°	563	1356	1485
85°	488	1007	1093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	3.1
10°-20°	131.7	8.9
20°-30°	199.6	13.5
30°-40°	241.0	16.3
40°-50°	253.2	17.2
50°-60°	238.2	16.2
60°-70°	198.6	13.5
70°-80°	131.6	8.9
80°-90°	35.1	2.4
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°	377.3	25.6
0°-40°	618.2	41.9
0°-60°	1109.7	75.2
0°-90°	1475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1475.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	482	483	486	486	485	46
15°	462	464	467	469	470	130
25°	425	428	433	438	440	196
35°	372	376	385	394	397	233
45°	307	312	327	343	352	236
55°	230	240	266	293	304	206
65°	151	164	203	236	251	147
75°	66	92	135	163	171	72
85°	16	24	33	35	35	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	485.7	485.7	485.7	485.7	485.7
2.5°	483.8	484.8	486.6	486.6	485.7
5°	482.0	482.9	485.7	485.7	484.8
7.5°	479.2	480.1	482.0	483.8	482.9
10°	475.5	476.4	478.3	480.1	480.1
12.5°	469.0	469.9	473.6	474.5	474.5
15°	462.4	464.3	467.1	469.0	469.9
17.5°	454.1	455.9	459.6	463.4	463.4
20°	445.7	447.6	452.2	455.9	456.9
22.5°	435.5	438.2	442.9	447.6	449.4
25°	425.2	428.0	432.7	438.2	440.1
27.5°	413.1	415.9	422.4	428.9	429.9
30°	401.0	403.8	412.2	417.8	420.6
32.5°	386.1	389.9	398.2	406.6	409.4
35°	372.2	375.9	385.2	393.6	397.3
37.5°	357.3	361.0	371.3	381.5	386.1
40°	340.5	345.2	357.3	368.5	375.0
42.5°	324.7	329.4	341.5	356.4	362.9
45°	307.1	311.7	326.6	343.3	351.7
47.5°	288.4	294.0	311.7	332.2	340.5
50°	269.8	276.3	295.9	319.1	328.5
52.5°	250.3	258.7	281.0	306.1	317.3
55°	229.8	240.1	266.1	293.1	304.3
57.5°	210.3	219.6	250.3	279.1	291.2
60°	188.9	201.0	235.4	265.2	278.2
62.5°	168.4	181.4	219.6	251.2	265.2
65°	150.7	163.8	202.8	236.3	251.2
67.5°	127.5	145.2	188.9	220.5	235.4
70°	104.2	128.4	171.2	203.8	217.7
72.5°	86.5	109.8	153.5	186.1	199.1
75°	66.1	92.1	134.9	162.8	171.2
77.5°	49.3	76.3	115.4	129.3	130.3
80°	36.3	58.6	87.5	92.1	95.8
82.5°	25.1	40.9	56.8	62.3	64.2
85°	15.8	24.2	32.6	35.4	35.4
87.5°	8.4	9.3	11.2	11.2	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)