

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: P308102

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP250-W2A-U-5500K**

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: P308102
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-L82765-HRP-CP250-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 1458.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

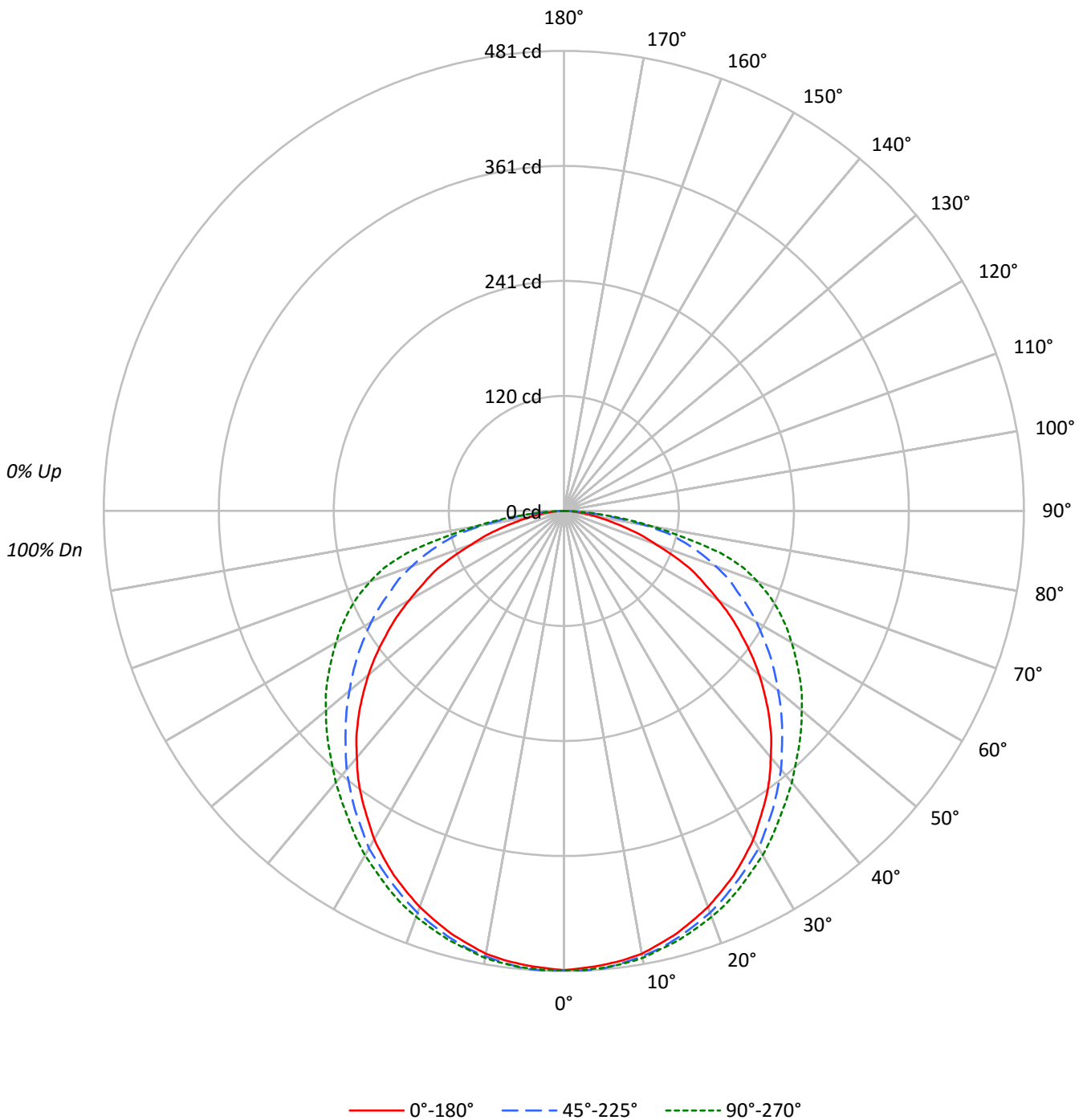
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1292	1292	1292
5°	1287	1297	1294
10°	1284	1292	1297
15°	1273	1286	1294
20°	1262	1280	1293
25°	1248	1270	1292
30°	1232	1266	1292
35°	1209	1251	1290
40°	1182	1241	1302
45°	1155	1228	1323
50°	1117	1225	1359
55°	1066	1234	1411
60°	1005	1252	1480
65°	949	1277	1581
70°	810	1331	1693
75°	679	1387	1759
80°	556	1340	1468
85°	482	994	1081



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.5	3.1
10°-20°	130.2	8.9
20°-30°	197.3	13.5
30°-40°	238.2	16.3
40°-50°	250.3	17.2
50°-60°	235.5	16.2
60°-70°	196.3	13.5
70°-80°	130.1	8.9
80°-90°	34.7	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°	372.9	25.6
0°-40°	611.1	41.9
0°-60°	1096.9	75.2
0°-90°	1458.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1458.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	480	480	480	480	480	
5°	476	477	480	480	479	45
15°	457	459	462	464	464	129
25°	420	423	428	433	435	194
35°	368	372	381	389	393	230
45°	304	308	323	339	348	234
55°	227	237	263	290	301	203
65°	149	162	200	234	248	145
75°	65	91	133	161	169	71
85°	16	24	32	35	35	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	480.1	480.1	480.1	480.1	480.1
2.5°	478.3	479.2	481.0	481.0	480.1
5°	476.4	477.3	480.1	480.1	479.2
7.5°	473.7	474.6	476.4	478.3	477.3
10°	470.0	470.9	472.7	474.6	474.6
12.5°	463.5	464.5	468.1	469.1	469.1
15°	457.1	458.9	461.7	463.5	464.5
17.5°	448.8	450.7	454.4	458.0	458.0
20°	440.6	442.4	447.0	450.7	451.6
22.5°	430.4	433.2	437.8	442.4	444.2
25°	420.3	423.1	427.7	433.2	435.0
27.5°	408.4	411.1	417.6	424.0	424.9
30°	396.4	399.2	407.4	413.0	415.7
32.5°	381.7	385.4	393.6	401.9	404.7
35°	367.9	371.6	380.8	389.0	392.7
37.5°	353.2	356.9	367.0	377.1	381.7
40°	336.6	341.2	353.2	364.2	370.7
42.5°	321.0	325.6	337.5	352.3	358.7
45°	303.5	308.1	322.8	339.4	347.7
47.5°	285.1	290.6	308.1	328.3	336.6
50°	266.7	273.2	292.5	315.5	324.7
52.5°	247.4	255.7	277.8	302.6	313.6
55°	227.2	237.3	263.0	289.7	300.8
57.5°	207.9	217.1	247.4	275.9	287.9
60°	186.7	198.7	232.7	262.1	275.0
62.5°	166.5	179.3	217.1	248.3	262.1
65°	149.0	161.9	200.5	233.6	248.3
67.5°	126.0	143.5	186.7	218.0	232.7
70°	103.0	126.9	169.2	201.4	215.2
72.5°	85.5	108.5	151.8	183.9	196.8
75°	65.3	91.1	133.4	161.0	169.2
77.5°	48.7	75.4	114.0	127.8	128.8
80°	35.9	57.9	86.5	91.1	94.7
82.5°	24.8	40.5	56.1	61.6	63.5
85°	15.6	23.9	32.2	35.0	35.0
87.5°	8.3	9.2	11.0	11.0	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)