

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: P308100

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP250-W2A-U-4500K**

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: P308100
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-4500K
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: 1425.0 lumens
Efficiency: N/A
Efficacy: 83.8 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

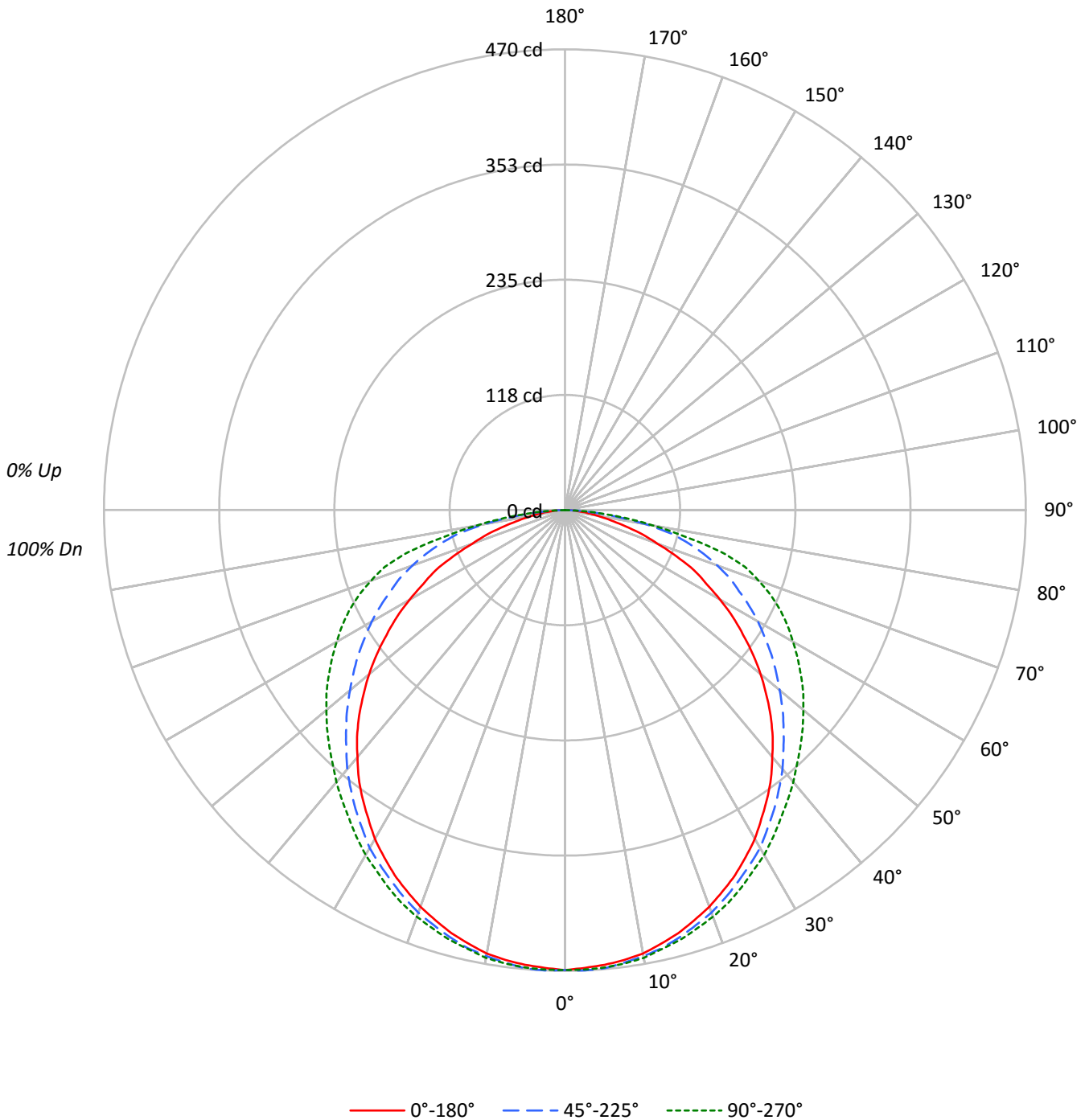
Input Watts (W): 17
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1263	1263	1263
5°	1258	1267	1265
10°	1255	1262	1267
15°	1245	1257	1265
20°	1233	1251	1264
25°	1220	1241	1262
30°	1204	1237	1262
35°	1181	1223	1261
40°	1156	1213	1273
45°	1129	1201	1293
50°	1091	1197	1328
55°	1042	1206	1379
60°	982	1224	1447
65°	927	1248	1545
70°	792	1301	1655
75°	663	1355	1720
80°	544	1309	1435
85°	472	973	1056



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.5	3.1
10°-20°	127.2	8.9
20°-30°	192.8	13.5
30°-40°	232.8	16.3
40°-50°	244.6	17.2
50°-60°	230.2	16.2
60°-70°	191.9	13.5
70°-80°	127.2	8.9
80°-90°	33.9	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°	364.5	25.6
0°-40°	597.3	41.9
0°-60°	1072.1	75.2
0°-90°	1425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1425.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	469	469	469	469	469	
5°	466	466	469	469	468	44
15°	447	449	451	453	454	126
25°	411	414	418	423	425	189
35°	360	363	372	380	384	225
45°	297	301	316	332	340	228
55°	222	232	257	283	294	199
65°	146	158	196	228	243	142
75°	64	89	130	157	165	69
85°	15	23	32	34	34	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	469.2	469.2	469.2	469.2	469.2
2.5°	467.4	468.3	470.1	470.1	469.2
5°	465.6	466.5	469.2	469.2	468.3
7.5°	462.9	463.8	465.6	467.4	466.5
10°	459.3	460.2	462.0	463.8	463.8
12.5°	453.1	454.0	457.6	458.4	458.4
15°	446.8	448.6	451.3	453.1	454.0
17.5°	438.7	440.5	444.1	447.7	447.7
20°	430.6	432.4	436.9	440.5	441.4
22.5°	420.7	423.4	427.9	432.4	434.2
25°	410.8	413.5	418.0	423.4	425.2
27.5°	399.1	401.8	408.1	414.4	415.3
30°	387.4	390.1	398.2	403.6	406.3
32.5°	373.1	376.6	384.7	392.8	395.5
35°	359.6	363.2	372.2	380.2	383.8
37.5°	345.2	348.8	358.7	368.6	373.1
40°	329.0	333.5	345.2	356.0	362.3
42.5°	313.7	318.2	329.9	344.3	350.6
45°	296.6	301.1	315.5	331.7	339.8
47.5°	278.7	284.1	301.1	320.9	329.0
50°	260.7	267.0	285.9	308.3	317.3
52.5°	241.8	249.9	271.5	295.7	306.5
55°	222.0	231.9	257.1	283.2	293.9
57.5°	203.2	212.1	241.8	269.7	281.4
60°	182.5	194.2	227.4	256.2	268.8
62.5°	162.7	175.3	212.1	242.7	256.2
65°	145.6	158.2	196.0	228.3	242.7
67.5°	123.2	140.2	182.5	213.0	227.4
70°	100.7	124.1	165.4	196.9	210.3
72.5°	83.6	106.1	148.3	179.8	192.4
75°	63.8	89.0	130.3	157.3	165.4
77.5°	47.6	73.7	111.5	124.9	125.8
80°	35.1	56.6	84.5	89.0	92.6
82.5°	24.3	39.6	54.8	60.2	62.0
85°	15.3	23.4	31.5	34.2	34.2
87.5°	8.1	9.0	10.8	10.8	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)