

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: P308060

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-2700K**

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: P308060
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-CA08-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 2700K 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: 1387.0 lumens
Efficiency: N/A
Efficacy: 83.1 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

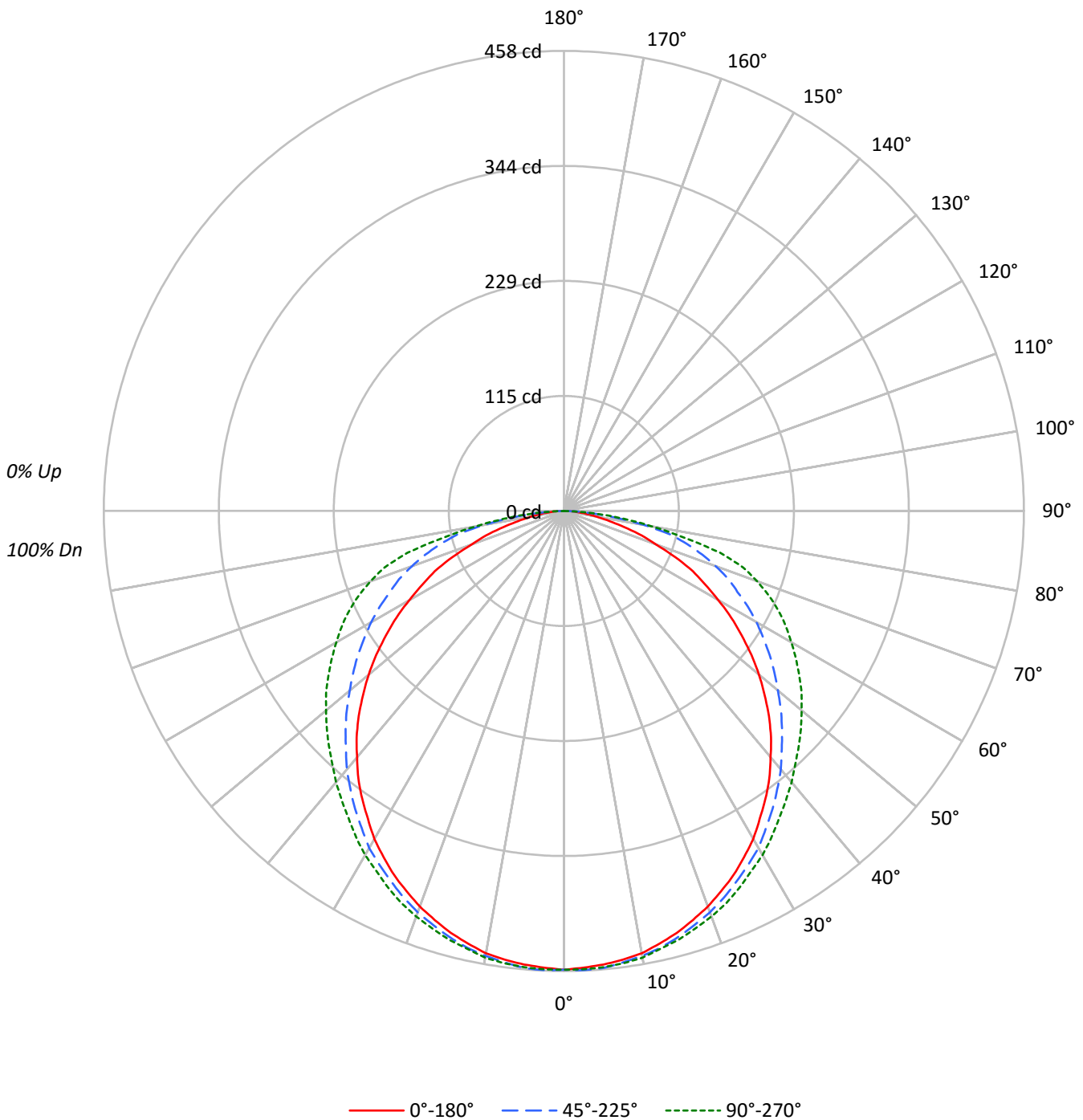
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308060

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P308060

CATALOG NUMBER: 22FC22-20HE-UNV-L82765-HRP-CA08-W2A-U-2700K

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°	1229	1229	1229
5°	1224	1234	1231
10°	1222	1229	1234
15°	1211	1224	1231
20°	1200	1218	1230
25°	1187	1208	1229
30°	1172	1204	1229
35°	1150	1190	1227
40°	1125	1180	1239
45°	1099	1169	1259
50°	1062	1165	1293
55°	1014	1174	1342
60°	956	1192	1408
65°	902	1214	1504
70°	771	1267	1611
75°	646	1319	1674
80°	528	1274	1396
85°	460	945	1025



TEST NUMBER: P308060

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.3	3.1
10°-20°	123.8	8.9
20°-30°	187.7	13.5
30°-40°	226.6	16.3
40°-50°	238.1	17.2
50°-60°	224.0	16.2
60°-70°	186.8	13.5
70°-80°	123.8	8.9
80°-90°	33.0	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°	354.8	25.6
0°-40°	581.4	41.9
0°-60°	1043.5	75.2
0°-90°	1387.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1387.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	457	457	457	457	457	
5°	453	454	457	457	456	43
15°	435	437	439	441	442	123
25°	400	402	407	412	414	184
35°	350	354	362	370	374	219
45°	289	293	307	323	331	222
55°	216	226	250	276	286	193
65°	142	154	191	222	236	138
75°	62	87	127	153	161	67
85°	15	23	31	33	33	17
90°	0	0	0	0	0	



TEST NUMBER: P308060

CATALOG NUMBER: 22FC22-20HE-UNV-L82765-HRP-CA08-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	456.7	456.7	456.7	456.7	456.7
2.5°	455.0	455.8	457.6	457.6	456.7
5°	453.2	454.1	456.7	456.7	455.8
7.5°	450.6	451.5	453.2	455.0	454.1
10°	447.1	448.0	449.7	451.5	451.5
12.5°	441.0	441.8	445.3	446.2	446.2
15°	434.8	436.6	439.2	441.0	441.8
17.5°	427.0	428.7	432.2	435.7	435.7
20°	419.1	420.9	425.2	428.7	429.6
22.5°	409.5	412.1	416.5	420.9	422.6
25°	399.9	402.5	406.9	412.1	413.9
27.5°	388.5	391.1	397.2	403.4	404.2
30°	377.1	379.7	387.6	392.9	395.5
32.5°	363.1	366.6	374.5	382.4	385.0
35°	350.0	353.5	362.2	370.1	373.6
37.5°	336.0	339.5	349.1	358.7	363.1
40°	320.2	324.6	336.0	346.5	352.6
42.5°	305.4	309.7	321.1	335.1	341.2
45°	288.7	293.1	307.1	322.9	330.7
47.5°	271.2	276.5	293.1	312.4	320.2
50°	253.7	259.9	278.2	300.1	308.9
52.5°	235.4	243.2	264.2	287.9	298.4
55°	216.1	225.7	250.2	275.6	286.1
57.5°	197.7	206.5	235.4	262.5	273.9
60°	177.6	189.0	221.4	249.4	261.6
62.5°	158.4	170.6	206.5	236.2	249.4
65°	141.7	154.0	190.7	222.2	236.2
67.5°	119.9	136.5	177.6	207.4	221.4
70°	98.0	120.7	161.0	191.6	204.7
72.5°	81.4	103.2	144.4	175.0	187.2
75°	62.1	86.6	126.9	153.1	161.0
77.5°	46.4	71.7	108.5	121.6	122.5
80°	34.1	55.1	82.2	86.6	90.1
82.5°	23.6	38.5	53.4	58.6	60.4
85°	14.9	22.7	30.6	33.2	33.2
87.5°	7.9	8.7	10.5	10.5	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)