

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: P308420

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-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: P308420
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L82765-RDP-CA08-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1576.0 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

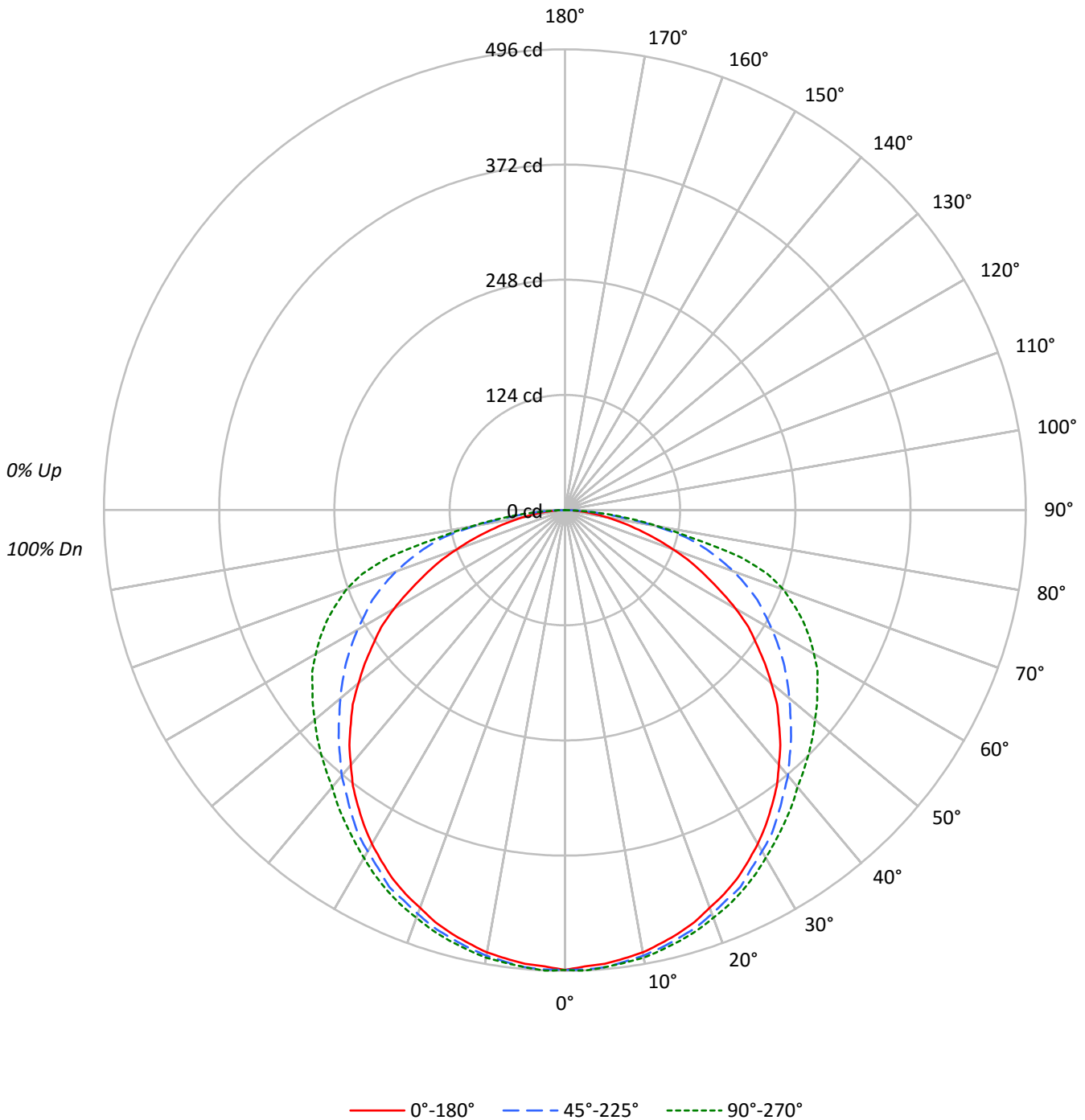
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1332	1332	1332
5°	1325	1334	1334
10°	1321	1330	1337
15°	1315	1327	1337
20°	1305	1325	1338
25°	1301	1329	1343
30°	1290	1318	1344
35°	1276	1314	1352
40°	1258	1311	1368
45°	1240	1310	1412
50°	1213	1320	1471
55°	1180	1349	1556
60°	1142	1385	1666
65°	1063	1454	1801
70°	976	1523	1970
75°	856	1603	2037
80°	736	1526	1599
85°	645	1108	1216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.8	3.0
10°-20°	134.5	8.5
20°-30°	205.1	13.0
30°-40°	250.5	15.9
40°-50°	267.8	17.0
50°-60°	258.5	16.4
60°-70°	222.5	14.1
70°-80°	150.6	9.6
80°-90°	39.7	2.5
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°	386.4	24.5
0°-40°	636.9	40.4
0°-60°	1163.2	73.8
0°-90°	1576.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1576.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	495	495	495	495	495	
5°	490	492	494	494	494	47
15°	472	473	476	479	480	133
25°	438	441	448	450	452	202
35°	388	392	400	408	412	243
45°	326	332	344	362	371	251
55°	252	260	288	316	332	225
65°	167	183	228	264	283	166
75°	82	109	154	186	196	88
85°	21	29	36	37	39	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	495.0	495.0	495.0	495.0	495.0
2.5°	491.6	492.7	495.0	495.0	496.2
5°	490.4	491.6	493.9	493.9	493.9
7.5°	486.9	488.1	490.4	491.6	491.6
10°	483.5	484.6	486.9	488.1	489.3
12.5°	477.7	478.8	482.3	484.6	484.6
15°	471.9	473.0	476.5	478.8	480.0
17.5°	464.9	467.2	470.7	473.0	474.2
20°	455.6	457.9	462.6	466.1	467.2
22.5°	447.5	449.8	454.5	457.9	460.3
25°	438.2	440.6	447.5	449.8	452.2
27.5°	426.6	429.0	434.8	439.4	442.9
30°	415.1	417.4	424.3	430.1	432.4
32.5°	402.3	405.8	413.9	418.5	422.0
35°	388.4	391.9	400.0	408.1	411.6
37.5°	374.5	378.0	386.1	396.5	401.1
40°	358.2	362.9	373.3	387.2	389.5
42.5°	343.2	349.0	358.2	374.5	380.3
45°	325.8	331.6	344.3	361.7	371.0
47.5°	309.6	315.3	329.3	350.1	361.7
50°	289.8	298.0	315.3	339.7	351.3
52.5°	271.3	278.2	301.4	328.1	342.0
55°	251.6	259.7	287.5	316.5	331.6
57.5°	234.2	241.1	272.5	304.9	322.3
60°	212.2	221.4	257.4	292.2	309.6
62.5°	189.0	202.9	242.3	278.2	296.8
65°	166.9	183.2	228.4	264.3	282.9
67.5°	147.2	164.6	211.0	249.3	266.7
70°	124.1	146.1	193.6	230.7	250.4
72.5°	103.2	127.5	173.9	211.0	228.4
75°	82.3	109.0	154.2	185.5	195.9
77.5°	63.8	89.3	132.2	141.4	142.6
80°	47.5	70.7	98.5	99.7	103.2
82.5°	32.5	49.9	63.8	69.6	70.7
85°	20.9	29.0	35.9	37.1	39.4
87.5°	9.3	10.4	12.8	11.6	11.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)