

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: P308099

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP250-W2A-U-4000K**

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: P308099
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-4000K
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: 1400.0 lumens
Efficiency: N/A
Efficacy: 82.8 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

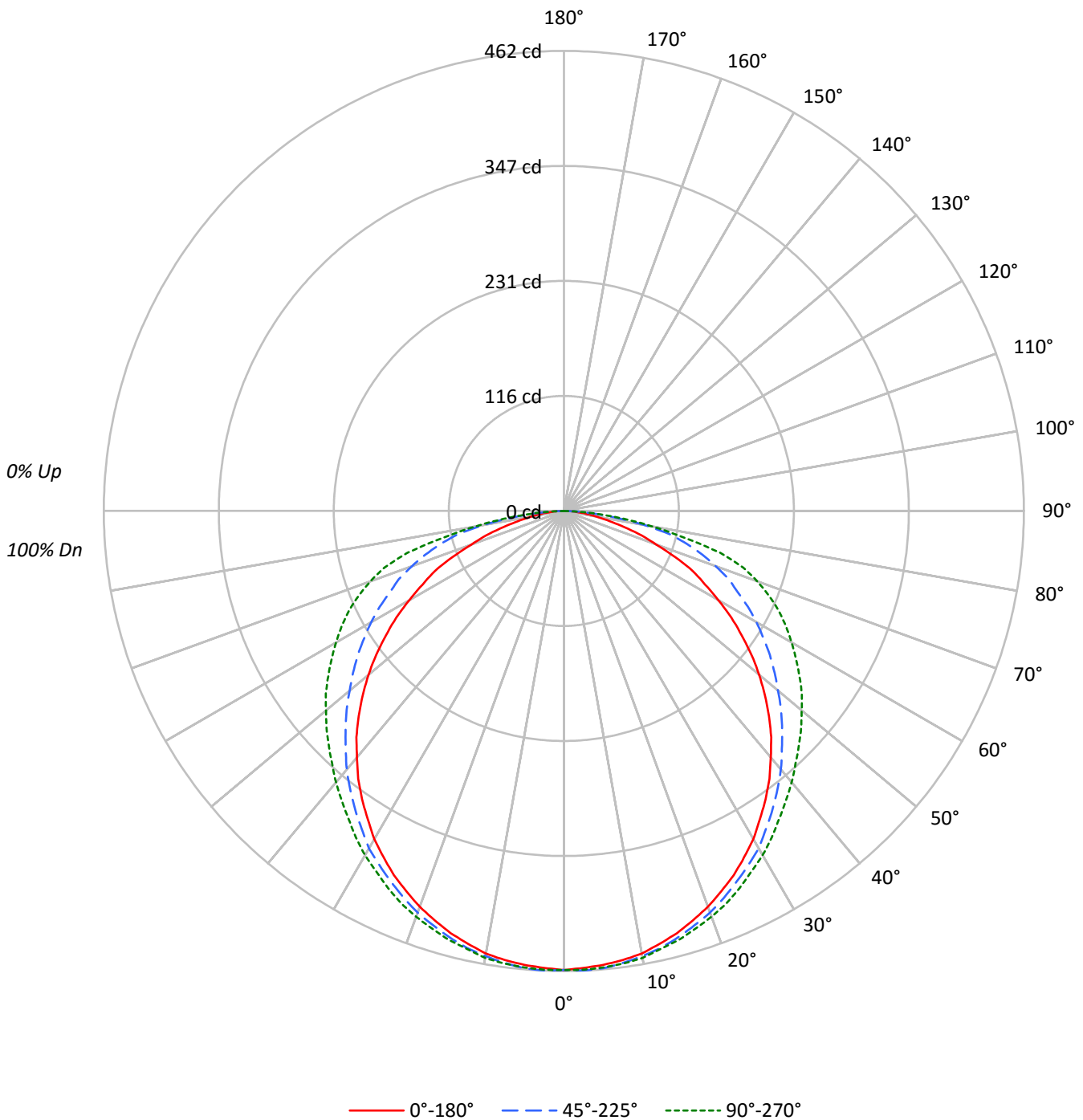
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1241	1241	1241
5°	1236	1245	1243
10°	1233	1240	1245
15°	1223	1235	1243
20°	1211	1229	1242
25°	1198	1219	1240
30°	1183	1216	1240
35°	1161	1201	1239
40°	1135	1191	1250
45°	1109	1180	1270
50°	1072	1176	1305
55°	1023	1185	1355
60°	965	1202	1421
65°	911	1226	1519
70°	778	1279	1626
75°	652	1332	1690
80°	533	1286	1410
85°	463	954	1037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	3.1
10°-20°	125.0	8.9
20°-30°	189.4	13.5
30°-40°	228.7	16.3
40°-50°	240.3	17.2
50°-60°	226.1	16.2
60°-70°	188.5	13.5
70°-80°	124.9	8.9
80°-90°	33.3	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°	358.1	25.6
0°-40°	586.8	41.9
0°-60°	1053.2	75.2
0°-90°	1400.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1400.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	461	461	461	461	461	
5°	458	458	461	461	460	43
15°	439	441	443	445	446	124
25°	404	406	411	416	418	186
35°	353	357	366	374	377	221
45°	291	296	310	326	334	224
55°	218	228	253	278	289	195
65°	143	155	192	224	238	139
75°	63	87	128	155	162	68
85°	15	23	31	34	34	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	461.0	461.0	461.0	461.0	461.0
2.5°	459.2	460.1	461.9	461.9	461.0
5°	457.5	458.4	461.0	461.0	460.1
7.5°	454.8	455.7	457.5	459.2	458.4
10°	451.3	452.2	453.9	455.7	455.7
12.5°	445.1	446.0	449.5	450.4	450.4
15°	438.9	440.7	443.3	445.1	446.0
17.5°	431.0	432.7	436.3	439.8	439.8
20°	423.0	424.8	429.2	432.7	433.6
22.5°	413.3	416.0	420.4	424.8	426.6
25°	403.6	406.2	410.7	416.0	417.7
27.5°	392.1	394.8	401.0	407.1	408.0
30°	380.6	383.3	391.2	396.5	399.2
32.5°	366.5	370.0	378.0	385.9	388.6
35°	353.3	356.8	365.6	373.6	377.1
37.5°	339.1	342.7	352.4	362.1	366.5
40°	323.2	327.6	339.1	349.7	355.9
42.5°	308.2	312.6	324.1	338.2	344.4
45°	291.4	295.9	310.0	325.9	333.8
47.5°	273.8	279.1	295.9	315.3	323.2
50°	256.1	262.3	280.8	302.9	311.8
52.5°	237.6	245.5	266.7	290.6	301.2
55°	218.1	227.9	252.6	278.2	288.8
57.5°	199.6	208.4	237.6	264.9	276.4
60°	179.3	190.8	223.4	251.7	264.1
62.5°	159.9	172.2	208.4	238.5	251.7
65°	143.1	155.4	192.5	224.3	238.5
67.5°	121.0	137.8	179.3	209.3	223.4
70°	98.9	121.9	162.5	193.4	206.7
72.5°	82.1	104.2	145.7	176.6	189.0
75°	62.7	87.4	128.1	154.6	162.5
77.5°	46.8	72.4	109.5	122.8	123.6
80°	34.4	55.6	83.0	87.4	91.0
82.5°	23.8	38.9	53.9	59.2	60.9
85°	15.0	23.0	30.9	33.6	33.6
87.5°	7.9	8.8	10.6	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)