

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: P308141

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP250-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: P308141
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: 22FCZ2-24HE-UNV-L82765-HRP-CP250-W2A-U-2700K
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: 1452.0 lumens
Efficiency: N/A
Efficacy: 76.8 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

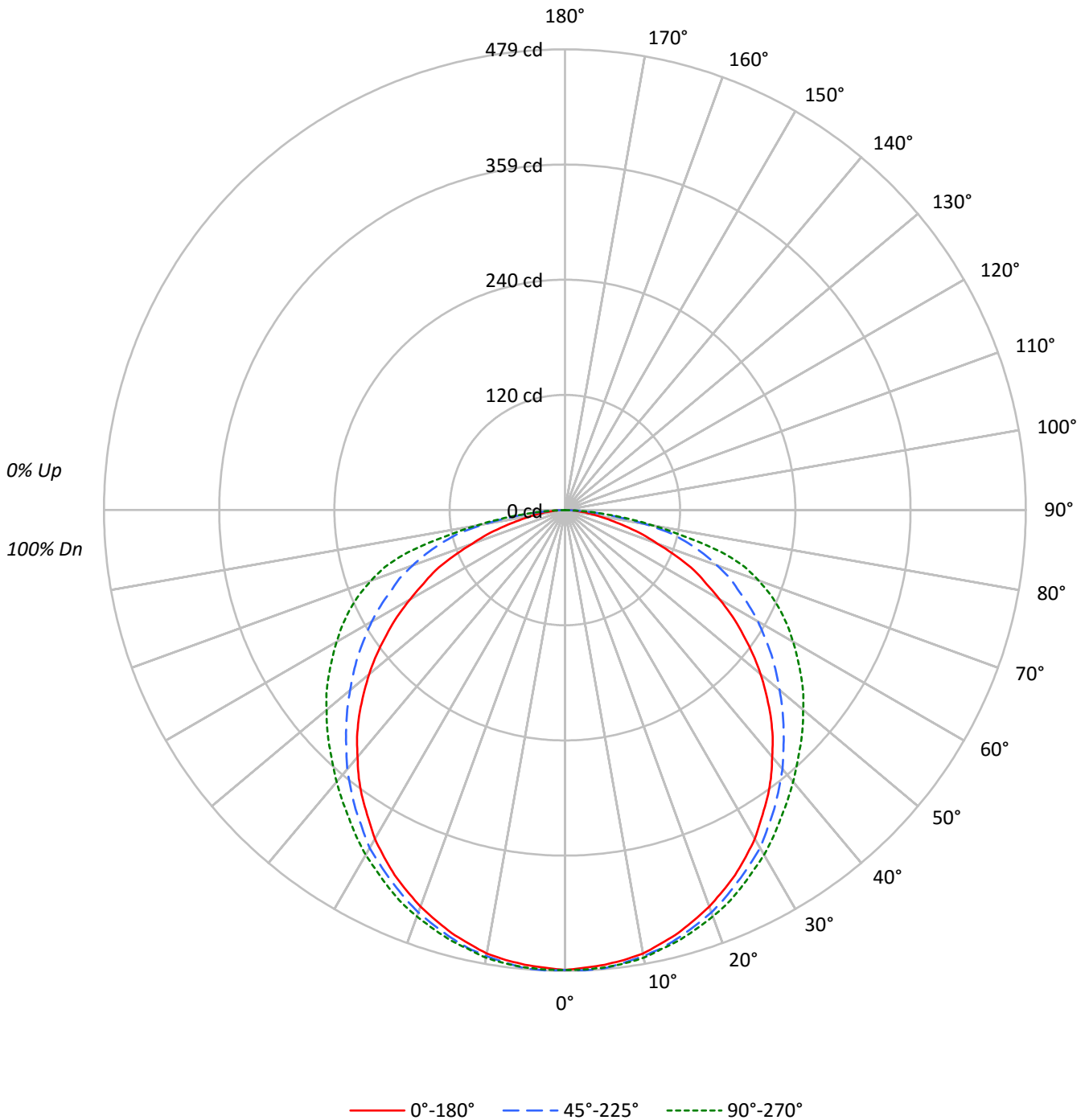
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1287	1287	1287
5°	1282	1291	1289
10°	1279	1286	1291
15°	1268	1281	1289
20°	1256	1275	1288
25°	1243	1265	1286
30°	1227	1261	1286
35°	1204	1246	1285
40°	1177	1235	1297
45°	1150	1224	1318
50°	1112	1220	1353
55°	1061	1229	1405
60°	1001	1247	1474
65°	945	1272	1575
70°	807	1326	1686
75°	676	1381	1752
80°	553	1334	1461
85°	482	991	1074



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.3	3.1
10°-20°	129.6	8.9
20°-30°	196.4	13.5
30°-40°	237.2	16.3
40°-50°	249.2	17.2
50°-60°	234.5	16.2
60°-70°	195.5	13.5
70°-80°	129.6	8.9
80°-90°	34.5	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°	371.4	25.6
0°-40°	608.6	41.9
0°-60°	1092.3	75.2
0°-90°	1452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	478	478	478	478	478	
5°	474	475	478	478	477	45
15°	455	457	460	462	463	128
25°	419	421	426	431	433	193
35°	366	370	379	387	391	229
45°	302	307	322	338	346	233
55°	226	236	262	288	300	202
65°	148	161	200	233	247	144
75°	65	91	133	160	168	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°	478.1	478.1	478.1	478.1	478.1
2.5°	476.3	477.2	479.0	479.0	478.1
5°	474.5	475.4	478.1	478.1	477.2
7.5°	471.7	472.6	474.5	476.3	475.4
10°	468.1	469.0	470.8	472.6	472.6
12.5°	461.6	462.6	466.2	467.1	467.1
15°	455.2	457.1	459.8	461.6	462.6
17.5°	447.0	448.8	452.5	456.1	456.1
20°	438.7	440.6	445.2	448.8	449.7
22.5°	428.7	431.4	436.0	440.6	442.4
25°	418.6	421.3	425.9	431.4	433.2
27.5°	406.7	409.4	415.8	422.3	423.2
30°	394.8	397.5	405.8	411.3	414.0
32.5°	380.1	383.8	392.0	400.3	403.0
35°	366.4	370.0	379.2	387.4	391.1
37.5°	351.7	355.4	365.5	375.5	380.1
40°	335.2	339.8	351.7	362.7	369.1
42.5°	319.7	324.2	336.2	350.8	357.2
45°	302.3	306.8	321.5	338.0	346.2
47.5°	283.9	289.4	306.8	327.0	335.2
50°	265.6	272.0	291.3	314.2	323.3
52.5°	246.4	254.6	276.6	301.3	312.3
55°	226.2	236.3	262.0	288.5	299.5
57.5°	207.0	216.2	246.4	274.8	286.7
60°	185.9	197.8	231.7	261.0	273.9
62.5°	165.8	178.6	216.2	247.3	261.0
65°	148.4	161.2	199.7	232.7	247.3
67.5°	125.5	142.9	185.9	217.1	231.7
70°	102.6	126.4	168.5	200.6	214.3
72.5°	85.2	108.1	151.1	183.2	196.0
75°	65.0	90.7	132.8	160.3	168.5
77.5°	48.5	75.1	113.6	127.3	128.2
80°	35.7	57.7	86.1	90.7	94.3
82.5°	24.7	40.3	55.9	61.4	63.2
85°	15.6	23.8	32.1	34.8	34.8
87.5°	8.2	9.2	11.0	11.0	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)