

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: P308413

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-CP250-W2A-U-3500K**

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: P308413
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: 22FCZ2-24HE-UNV-L82765-RDP-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1332.0 lumens
Efficiency: N/A
Efficacy: 70.1 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

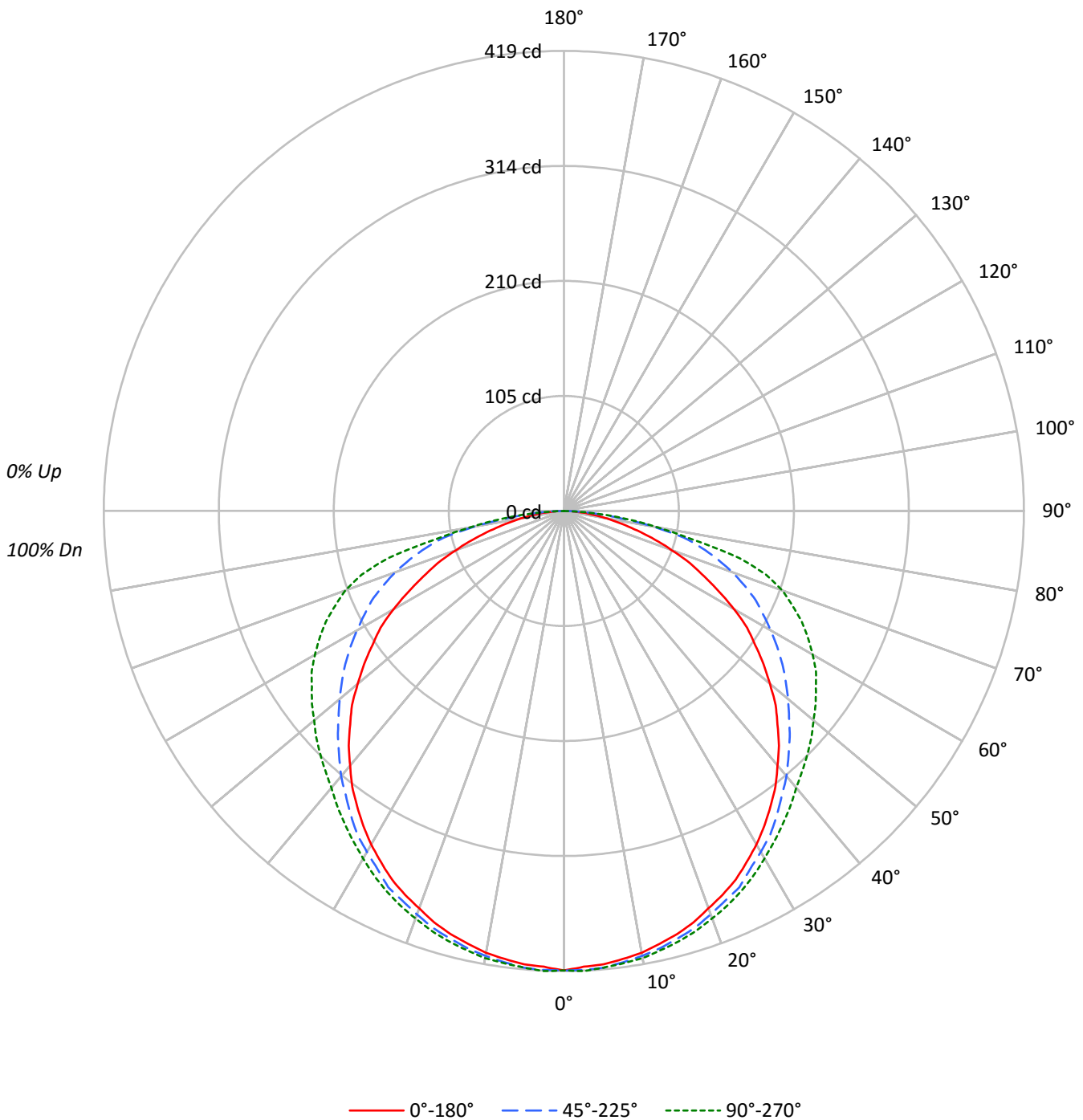
Input Watts (W): 19
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1126	1126	1126
5°	1120	1128	1128
10°	1116	1124	1130
15°	1111	1122	1130
20°	1103	1120	1131
25°	1100	1123	1135
30°	1090	1114	1136
35°	1078	1111	1143
40°	1064	1108	1156
45°	1048	1107	1193
50°	1026	1116	1243
55°	997	1140	1315
60°	965	1171	1408
65°	898	1229	1522
70°	825	1287	1666
75°	724	1355	1722
80°	623	1291	1351
85°	543	939	1028



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.6	3.0
10°-20°	113.6	8.5
20°-30°	173.4	13.0
30°-40°	211.7	15.9
40°-50°	226.3	17.0
50°-60°	218.5	16.4
60°-70°	188.1	14.1
70°-80°	127.2	9.6
80°-90°	33.6	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°	326.6	24.5
0°-40°	538.3	40.4
0°-60°	983.1	73.8
0°-90°	1332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1332.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	418	418	418	418	418	
5°	414	416	417	417	417	39
15°	399	400	403	405	406	113
25°	370	372	378	380	382	170
35°	328	331	338	345	348	205
45°	275	280	291	306	314	213
55°	213	220	243	268	280	191
65°	141	155	193	223	239	140
75°	70	92	130	157	166	75
85°	18	24	30	31	33	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	418.4	418.4	418.4	418.4	418.4
2.5°	415.5	416.4	418.4	418.4	419.4
5°	414.5	415.5	417.4	417.4	417.4
7.5°	411.5	412.5	414.5	415.5	415.5
10°	408.6	409.6	411.5	412.5	413.5
12.5°	403.7	404.7	407.6	409.6	409.6
15°	398.8	399.8	402.7	404.7	405.7
17.5°	392.9	394.9	397.8	399.8	400.8
20°	385.1	387.0	391.0	393.9	394.9
22.5°	378.2	380.2	384.1	387.0	389.0
25°	370.4	372.4	378.2	380.2	382.1
27.5°	360.6	362.6	367.5	371.4	374.3
30°	350.8	352.8	358.6	363.5	365.5
32.5°	340.0	343.0	349.8	353.7	356.7
35°	328.3	331.2	338.1	344.9	347.9
37.5°	316.5	319.4	326.3	335.1	339.0
40°	302.8	306.7	315.5	327.3	329.2
42.5°	290.0	294.9	302.8	316.5	321.4
45°	275.3	280.2	291.0	305.7	313.6
47.5°	261.6	266.5	278.3	295.9	305.7
50°	245.0	251.8	266.5	287.1	296.9
52.5°	229.3	235.2	254.8	277.3	289.1
55°	212.6	219.5	243.0	267.5	280.2
57.5°	197.9	203.8	230.3	257.7	272.4
60°	179.3	187.2	217.5	246.9	261.6
62.5°	159.7	171.5	204.8	235.2	250.8
65°	141.1	154.8	193.0	223.4	239.1
67.5°	124.4	139.1	178.3	210.7	225.4
70°	104.8	123.5	163.6	195.0	211.7
72.5°	87.2	107.8	147.0	178.3	193.0
75°	69.6	92.1	130.3	156.8	165.6
77.5°	53.9	75.4	111.7	119.5	120.5
80°	40.2	59.8	83.3	84.3	87.2
82.5°	27.4	42.1	53.9	58.8	59.8
85°	17.6	24.5	30.4	31.4	33.3
87.5°	7.8	8.8	10.8	9.8	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)