

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: P308415

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-CP250-W2A-U-4500K**

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: P308415
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-4500K
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: 1385.0 lumens
Efficiency: N/A
Efficacy: 71.8 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

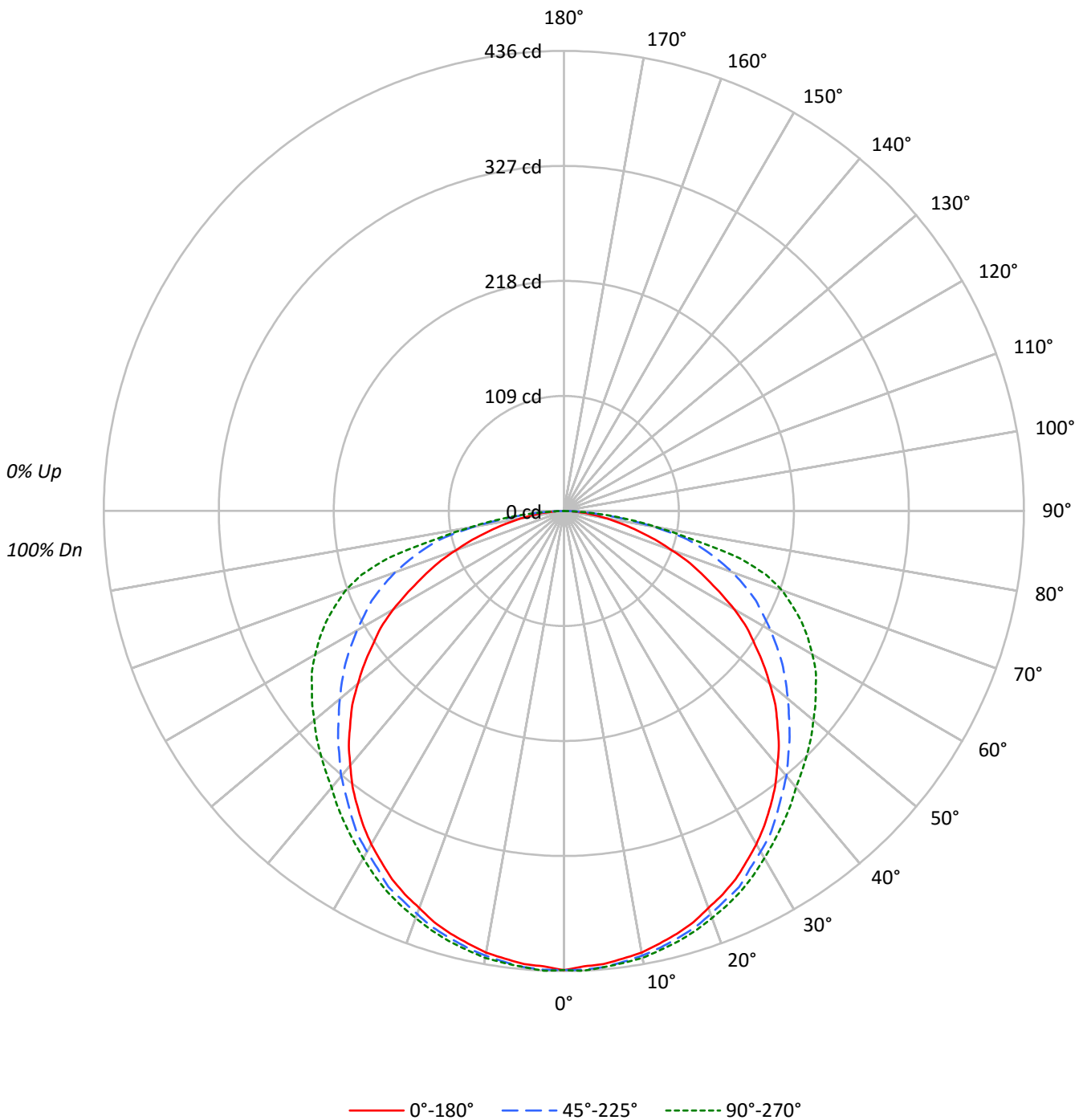
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1171	1171	1171
5°	1164	1172	1172
10°	1161	1169	1175
15°	1155	1167	1175
20°	1147	1164	1176
25°	1143	1168	1180
30°	1134	1159	1181
35°	1121	1155	1188
40°	1106	1153	1202
45°	1090	1152	1241
50°	1066	1160	1292
55°	1037	1186	1367
60°	1004	1217	1464
65°	934	1278	1583
70°	858	1338	1732
75°	752	1409	1790
80°	648	1342	1406
85°	565	976	1068



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.2	3.0
10°-20°	118.2	8.5
20°-30°	180.3	13.0
30°-40°	220.1	15.9
40°-50°	235.4	17.0
50°-60°	227.2	16.4
60°-70°	195.6	14.1
70°-80°	132.3	9.6
80°-90°	34.9	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°	339.6	24.5
0°-40°	559.7	40.4
0°-60°	1022.2	73.8
0°-90°	1385.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1385.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	435	435	435	435	435	
5°	431	432	434	434	434	41
15°	415	416	419	421	422	117
25°	385	387	393	395	397	177
35°	341	344	352	359	362	214
45°	286	291	303	318	326	221
55°	221	228	253	278	291	198
65°	147	161	201	232	249	146
75°	72	96	136	163	172	78
85°	18	26	32	33	35	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	435.1	435.1	435.1	435.1	435.1
2.5°	432.0	433.0	435.1	435.1	436.1
5°	431.0	432.0	434.0	434.0	434.0
7.5°	427.9	428.9	431.0	432.0	432.0
10°	424.9	425.9	427.9	428.9	430.0
12.5°	419.8	420.8	423.8	425.9	425.9
15°	414.7	415.7	418.8	420.8	421.8
17.5°	408.6	410.6	413.7	415.7	416.7
20°	400.4	402.4	406.5	409.6	410.6
22.5°	393.3	395.3	399.4	402.4	404.5
25°	385.1	387.2	393.3	395.3	397.4
27.5°	374.9	377.0	382.1	386.1	389.2
30°	364.8	366.8	372.9	378.0	380.0
32.5°	353.5	356.6	363.7	367.8	370.9
35°	341.3	344.4	351.5	358.6	361.7
37.5°	329.1	332.1	339.3	348.4	352.5
40°	314.8	318.9	328.1	340.3	342.3
42.5°	301.6	306.7	314.8	329.1	334.2
45°	286.3	291.4	302.6	317.9	326.0
47.5°	272.0	277.1	289.4	307.7	317.9
50°	254.7	261.8	277.1	298.5	308.7
52.5°	238.4	244.5	264.9	288.3	300.6
55°	221.1	228.2	252.7	278.1	291.4
57.5°	205.8	211.9	239.4	268.0	283.2
60°	186.5	194.6	226.2	256.8	272.0
62.5°	166.1	178.3	212.9	244.5	260.8
65°	146.7	161.0	200.7	232.3	248.6
67.5°	129.4	144.7	185.4	219.1	234.3
70°	109.0	128.4	170.1	202.8	220.1
72.5°	90.7	112.1	152.8	185.4	200.7
75°	72.3	95.8	135.5	163.0	172.2
77.5°	56.0	78.5	116.1	124.3	125.3
80°	41.8	62.2	86.6	87.6	90.7
82.5°	28.5	43.8	56.0	61.1	62.2
85°	18.3	25.5	31.6	32.6	34.6
87.5°	8.2	9.2	11.2	10.2	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)