

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: P308414

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-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: P308414
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-4000K
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: 1361.0 lumens
Efficiency: N/A
Efficacy: 71.3 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

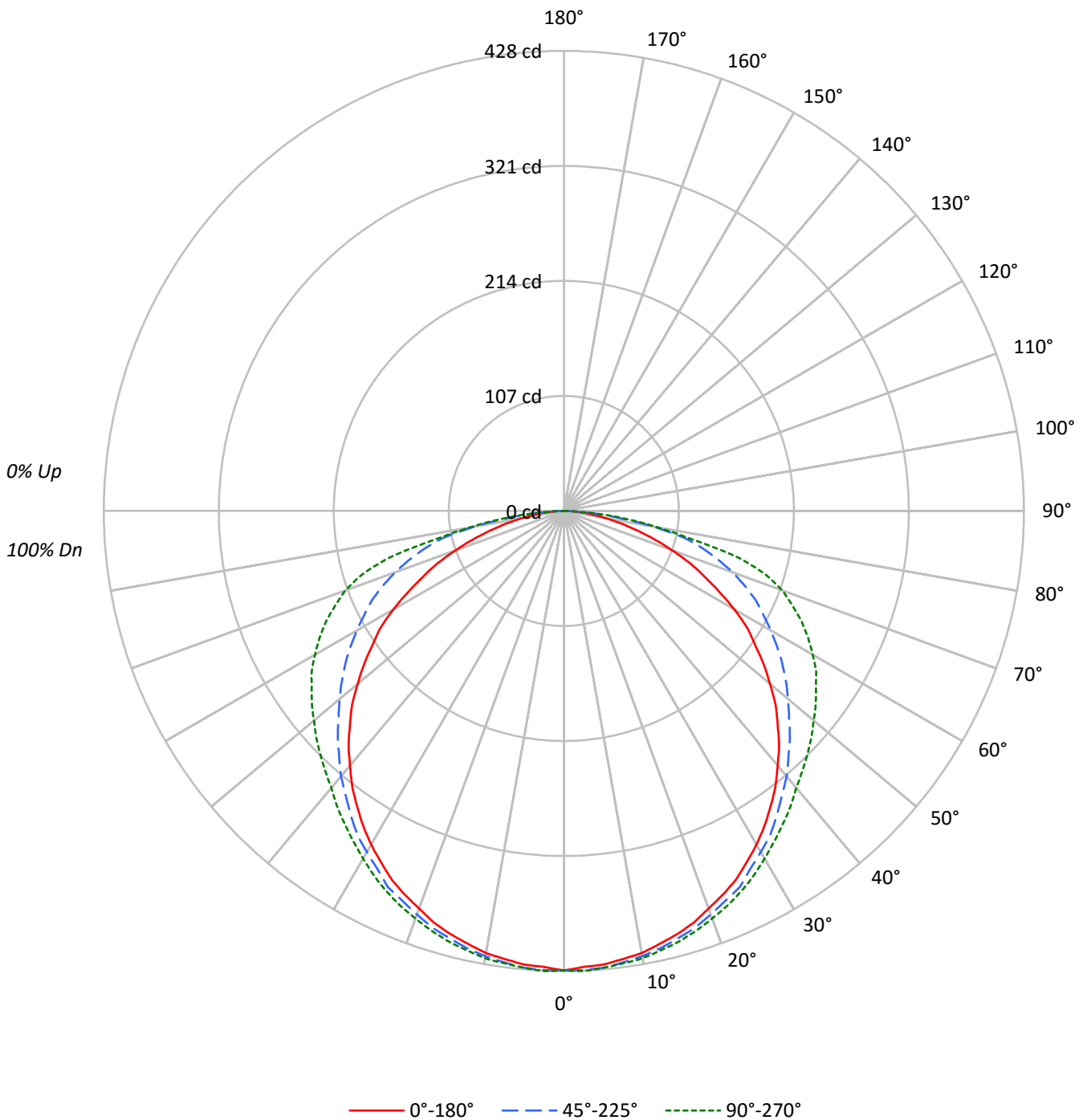
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1150	1150	1150
5°	1144	1152	1152
10°	1141	1149	1154
15°	1135	1146	1155
20°	1127	1144	1155
25°	1124	1148	1159
30°	1114	1139	1160
35°	1102	1135	1168
40°	1087	1133	1182
45°	1071	1132	1219
50°	1048	1140	1270
55°	1019	1165	1343
60°	986	1196	1439
65°	918	1256	1556
70°	843	1316	1702
75°	739	1385	1759
80°	635	1319	1381
85°	556	957	1050



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.4	3.0
10°-20°	116.1	8.5
20°-30°	177.2	13.0
30°-40°	216.3	15.9
40°-50°	231.3	17.0
50°-60°	223.2	16.4
60°-70°	192.2	14.1
70°-80°	130.0	9.6
80°-90°	34.3	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°	333.7	24.5
0°-40°	550.0	40.4
0°-60°	1004.5	73.8
0°-90°	1361.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1361.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	424	424	426	426	426	40
15°	408	408	412	414	414	115
25°	378	380	386	388	390	174
35°	335	338	345	352	355	210
45°	281	286	297	312	320	217
55°	217	224	248	273	286	195
65°	144	158	197	228	244	143
75°	71	94	133	160	169	76
85°	18	25	31	32	34	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	427.5	427.5	427.5	427.5	427.5
2.5°	424.5	425.5	427.5	427.5	428.5
5°	423.5	424.5	426.5	426.5	426.5
7.5°	420.5	421.5	423.5	424.5	424.5
10°	417.5	418.5	420.5	421.5	422.5
12.5°	412.5	413.5	416.5	418.5	418.5
15°	407.5	408.5	411.5	413.5	414.5
17.5°	401.5	403.5	406.5	408.5	409.5
20°	393.5	395.5	399.5	402.5	403.5
22.5°	386.5	388.5	392.5	395.5	397.5
25°	378.5	380.5	386.5	388.5	390.5
27.5°	368.4	370.4	375.5	379.5	382.5
30°	358.4	360.4	366.4	371.4	373.4
32.5°	347.4	350.4	357.4	361.4	364.4
35°	335.4	338.4	345.4	352.4	355.4
37.5°	323.4	326.4	333.4	342.4	346.4
40°	309.4	313.4	322.4	334.4	336.4
42.5°	296.4	301.4	309.4	323.4	328.4
45°	281.3	286.3	297.4	312.4	320.4
47.5°	267.3	272.3	284.3	302.4	312.4
50°	250.3	257.3	272.3	293.4	303.4
52.5°	234.3	240.3	260.3	283.3	295.4
55°	217.3	224.3	248.3	273.3	286.3
57.5°	202.2	208.3	235.3	263.3	278.3
60°	183.2	191.2	222.3	252.3	267.3
62.5°	163.2	175.2	209.3	240.3	256.3
65°	144.2	158.2	197.2	228.3	244.3
67.5°	127.2	142.2	182.2	215.3	230.3
70°	107.1	126.2	167.2	199.2	216.3
72.5°	89.1	110.1	150.2	182.2	197.2
75°	71.1	94.1	133.2	160.2	169.2
77.5°	55.1	77.1	114.1	122.1	123.1
80°	41.0	61.1	85.1	86.1	89.1
82.5°	28.0	43.1	55.1	60.1	61.1
85°	18.0	25.0	31.0	32.0	34.0
87.5°	8.0	9.0	11.0	10.0	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)