

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: P308096

Luminaire Tested: **22FCZ2-20HE-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: P308096
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-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: 1287.0 lumens
Efficiency: N/A
Efficacy: 77.1 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

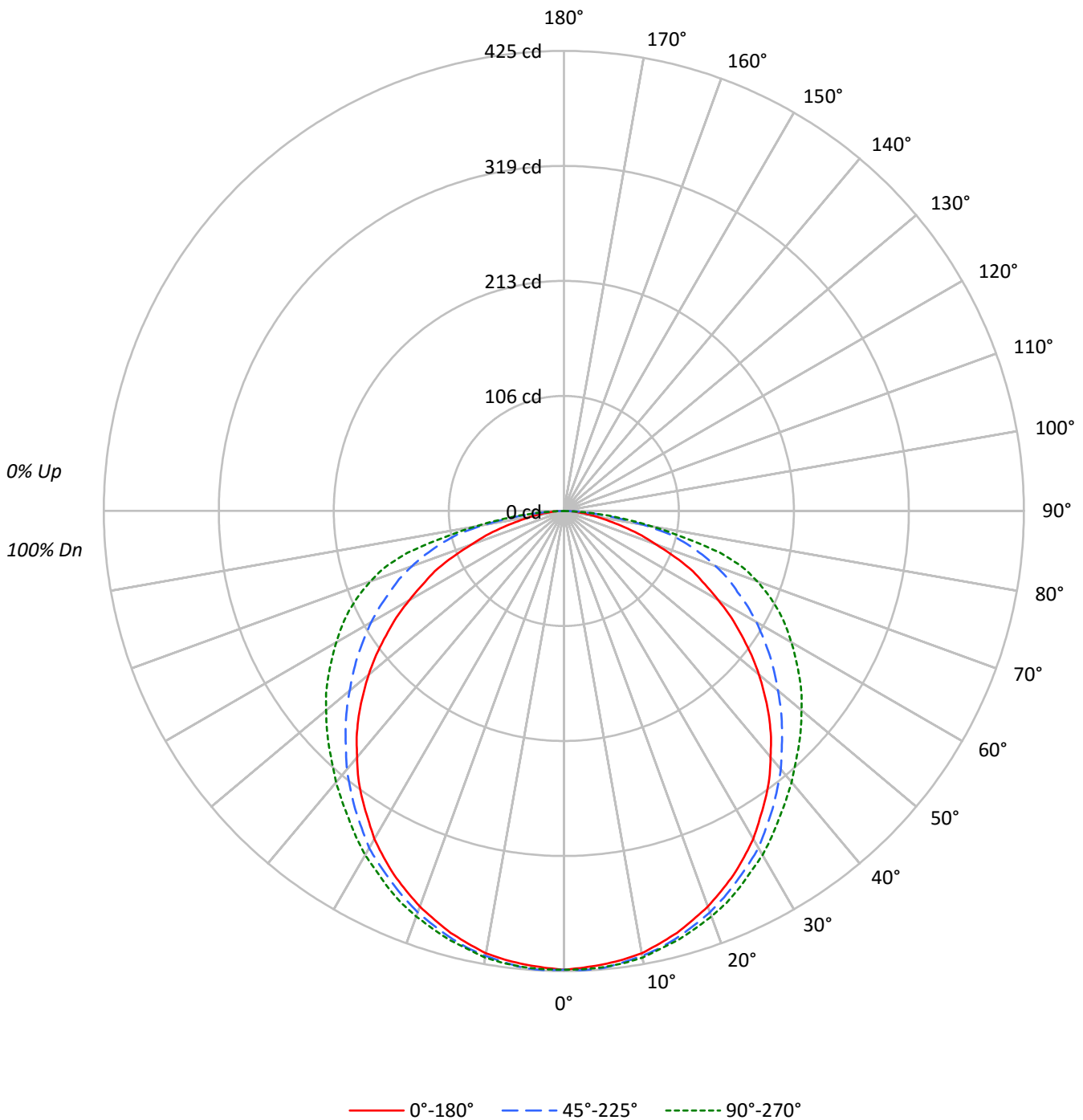
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1140	1140	1140
5°	1136	1145	1143
10°	1134	1140	1145
15°	1124	1136	1142
20°	1114	1130	1141
25°	1102	1121	1140
30°	1087	1118	1140
35°	1067	1104	1139
40°	1044	1095	1149
45°	1020	1085	1168
50°	985	1081	1200
55°	941	1089	1246
60°	887	1105	1306
65°	837	1127	1396
70°	715	1175	1495
75°	599	1224	1553
80°	491	1182	1296
85°	426	877	954



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.2	3.1
10°-20°	114.9	8.9
20°-30°	174.1	13.5
30°-40°	210.3	16.3
40°-50°	220.9	17.2
50°-60°	207.9	16.2
60°-70°	173.3	13.5
70°-80°	114.8	8.9
80°-90°	30.6	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°	329.2	25.6
0°-40°	539.4	41.9
0°-60°	968.2	75.2
0°-90°	1287.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1287.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	424	424	424	424	424	
5°	420	421	424	424	423	40
15°	404	405	408	409	410	114
25°	371	374	378	382	384	171
35°	325	328	336	343	347	203
45°	268	272	285	300	307	206
55°	200	210	232	256	266	179
65°	132	143	177	206	219	128
75°	58	80	118	142	149	63
85°	14	21	28	31	31	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	423.8	423.8	423.8	423.8	423.8
2.5°	422.2	423.0	424.6	424.6	423.8
5°	420.5	421.4	423.8	423.8	423.0
7.5°	418.1	418.9	420.5	422.2	421.4
10°	414.9	415.7	417.3	418.9	418.9
12.5°	409.2	410.0	413.2	414.1	414.1
15°	403.5	405.1	407.6	409.2	410.0
17.5°	396.2	397.8	401.1	404.3	404.3
20°	388.9	390.5	394.6	397.8	398.6
22.5°	380.0	382.4	386.4	390.5	392.1
25°	371.0	373.5	377.5	382.4	384.0
27.5°	360.5	362.9	368.6	374.3	375.1
30°	349.9	352.4	359.7	364.5	367.0
32.5°	336.9	340.2	347.5	354.8	357.2
35°	324.7	328.0	336.1	343.4	346.7
37.5°	311.8	315.0	323.9	332.9	336.9
40°	297.1	301.2	311.8	321.5	327.2
42.5°	283.3	287.4	298.0	310.9	316.6
45°	267.9	272.0	285.0	299.6	306.9
47.5°	251.7	256.6	272.0	289.8	297.1
50°	235.4	241.1	258.2	278.5	286.6
52.5°	218.4	225.7	245.2	267.1	276.8
55°	200.5	209.5	232.2	255.7	265.5
57.5°	183.5	191.6	218.4	243.6	254.1
60°	164.8	175.4	205.4	231.4	242.7
62.5°	146.9	158.3	191.6	219.2	231.4
65°	131.5	142.9	177.0	206.2	219.2
67.5°	111.2	126.7	164.8	192.4	205.4
70°	90.9	112.0	149.4	177.8	190.0
72.5°	75.5	95.8	134.0	162.4	173.7
75°	57.6	80.4	117.7	142.1	149.4
77.5°	43.0	66.6	100.7	112.8	113.7
80°	31.7	51.1	76.3	80.4	83.6
82.5°	21.9	35.7	49.5	54.4	56.0
85°	13.8	21.1	28.4	30.9	30.9
87.5°	7.3	8.1	9.7	9.7	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)