

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: P308377

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-CA08-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: P308377  
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-CA08-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 1435.0 lumens  
Efficiency: N/A  
Efficacy: 75.5 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

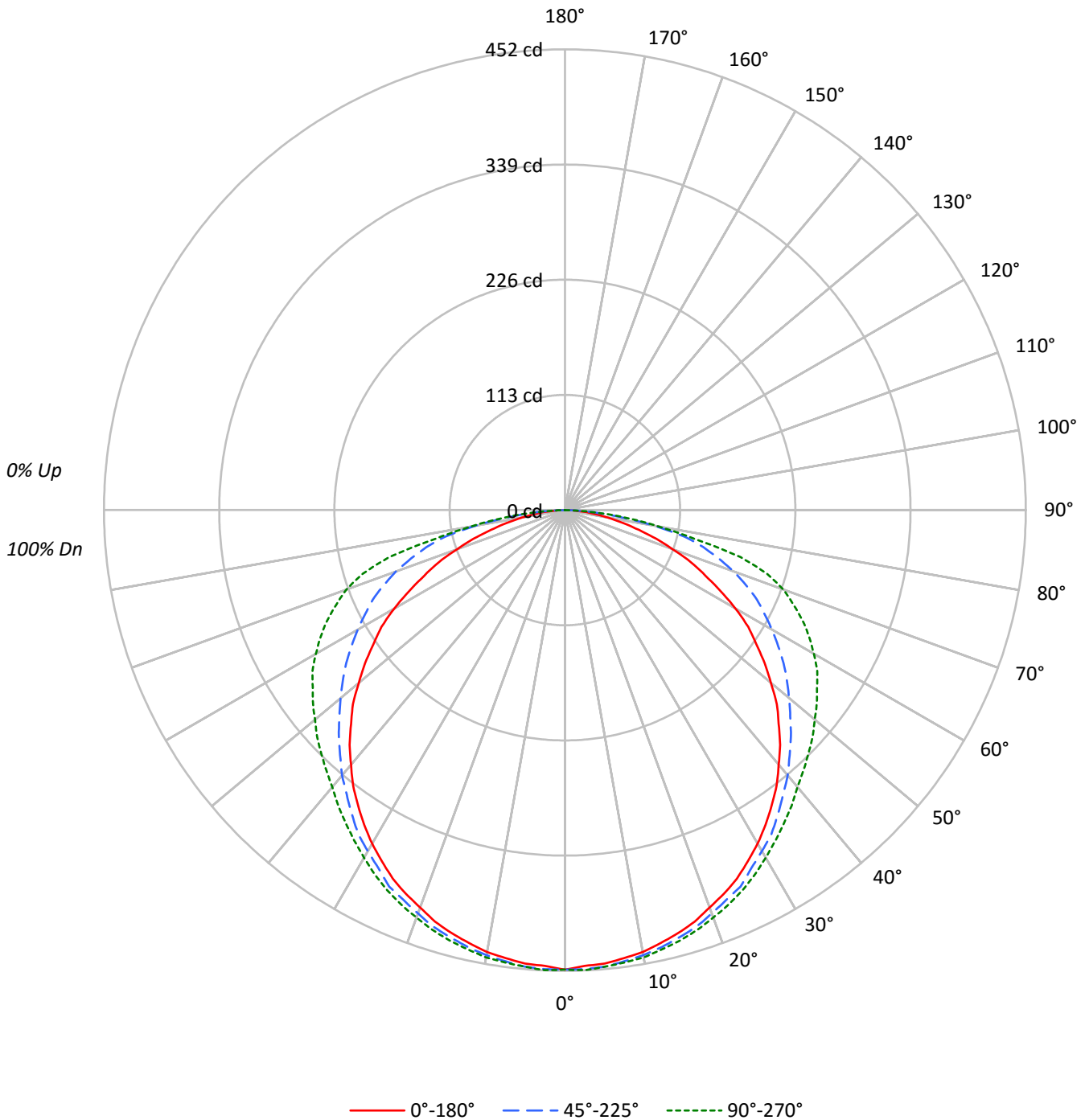
Input Watts (W): 19  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1213	1213	1213
5°	1206	1215	1215
10°	1203	1212	1217
15°	1197	1209	1217
20°	1188	1206	1218
25°	1185	1210	1222
30°	1174	1201	1224
35°	1162	1196	1231
40°	1146	1194	1246
45°	1129	1193	1286
50°	1105	1202	1339
55°	1075	1228	1416
60°	1040	1262	1517
65°	968	1324	1640
70°	889	1387	1794
75°	780	1460	1855
80°	671	1390	1457
85°	587	1010	1108



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.6	3.0
10°-20°	122.4	8.5
20°-30°	186.8	13.0
30°-40°	228.1	15.9
40°-50°	243.9	17.0
50°-60°	235.4	16.4
60°-70°	202.6	14.1
70°-80°	137.1	9.6
80°-90°	36.2	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°	351.8	24.5
0°-40°	579.9	40.4
0°-60°	1059.1	73.8
0°-90°	1435.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1435.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	451	451	451	451	451	
5°	446	448	450	450	450	42
15°	430	431	434	436	437	121
25°	399	401	408	410	412	184
35°	354	357	364	372	375	221
45°	297	302	314	329	338	229
55°	229	236	262	288	302	205
65°	152	167	208	241	258	151
75°	75	99	140	169	178	80
85°	19	26	33	34	36	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	450.8	450.8	450.8	450.8	450.8
2.5°	447.6	448.6	450.8	450.8	451.8
5°	446.5	447.6	449.7	449.7	449.7
7.5°	443.4	444.4	446.5	447.6	447.6
10°	440.2	441.3	443.4	444.4	445.5
12.5°	434.9	436.0	439.1	441.3	441.3
15°	429.6	430.7	433.9	436.0	437.0
17.5°	423.3	425.4	428.6	430.7	431.8
20°	414.9	417.0	421.2	424.4	425.4
22.5°	407.5	409.6	413.8	417.0	419.1
25°	399.0	401.1	407.5	409.6	411.7
27.5°	388.5	390.6	395.9	400.1	403.3
30°	377.9	380.0	386.4	391.6	393.8
32.5°	366.3	369.5	376.9	381.1	384.3
35°	353.6	356.8	364.2	371.6	374.8
37.5°	341.0	344.1	351.5	361.0	365.3
40°	326.2	330.4	339.9	352.6	354.7
42.5°	312.5	317.7	326.2	341.0	346.3
45°	296.6	301.9	313.5	329.4	337.8
47.5°	281.9	287.1	299.8	318.8	329.4
50°	263.9	271.3	287.1	309.3	319.9
52.5°	247.0	253.4	274.5	298.7	311.4
55°	229.1	236.5	261.8	288.2	301.9
57.5°	213.2	219.6	248.1	277.6	293.5
60°	193.2	201.6	234.4	266.0	281.9
62.5°	172.1	184.7	220.6	253.4	270.2
65°	152.0	166.8	208.0	240.7	257.6
67.5°	134.1	149.9	192.1	227.0	242.8
70°	113.0	133.0	176.3	210.1	228.0
72.5°	94.0	116.1	158.3	192.1	208.0
75°	75.0	99.2	140.4	168.9	178.4
77.5°	58.1	81.3	120.3	128.8	129.8
80°	43.3	64.4	89.7	90.8	94.0
82.5°	29.6	45.4	58.1	63.3	64.4
85°	19.0	26.4	32.7	33.8	35.9
87.5°	8.4	9.5	11.6	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)