

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: P312655

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CP187-W2A-U-3000K**

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: P312655  
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: 22FCZ2-29HE-UNV-L83050-RDP-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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**

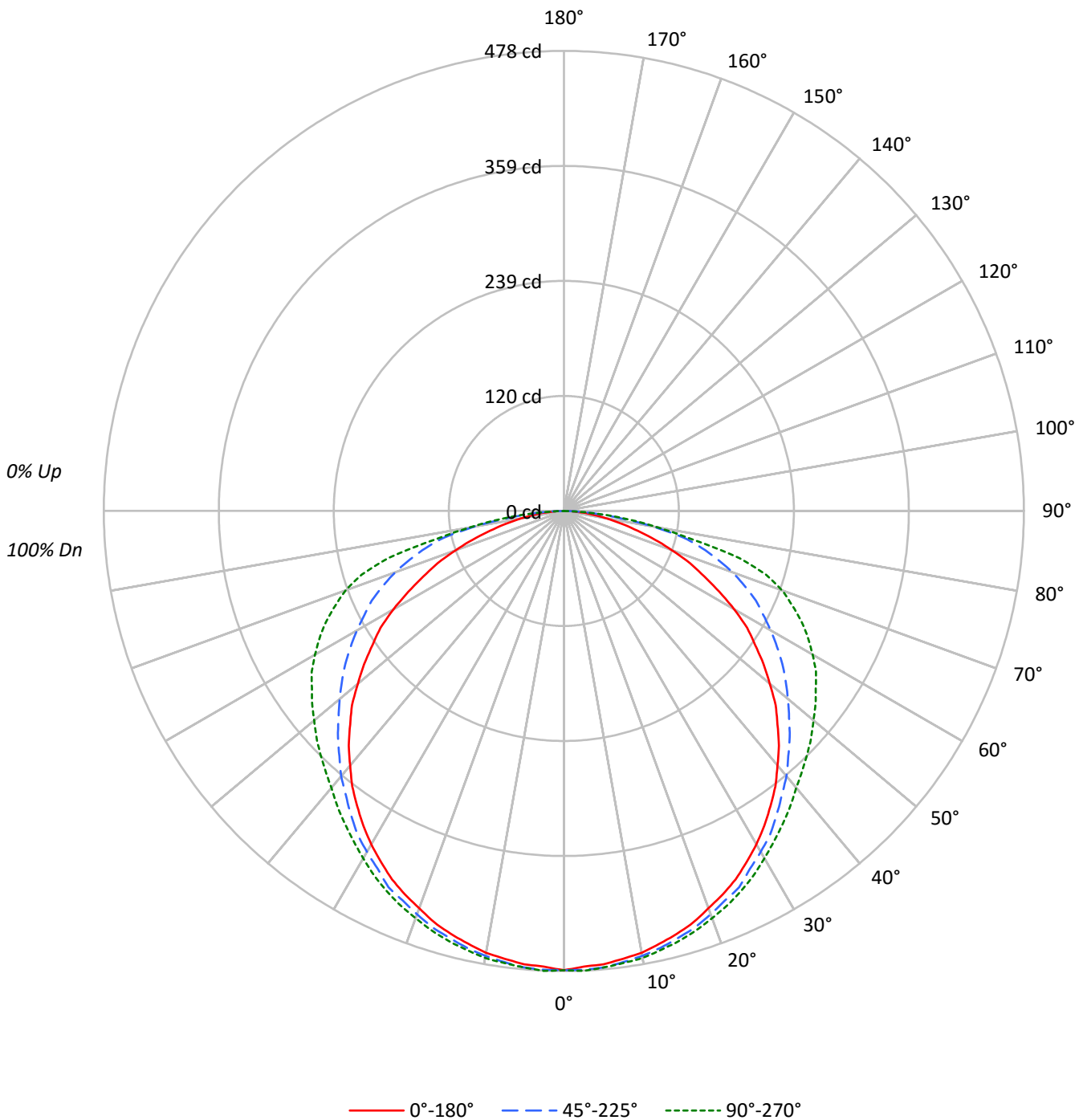
Lumens per Lamp: N/A  
Luminaire Lumens: 1519.0 lumens  
Efficiency: N/A  
Efficacy: 67.8 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1284	1284	1284
5°	1277	1286	1286
10°	1273	1282	1289
15°	1267	1280	1289
20°	1258	1277	1290
25°	1254	1281	1294
30°	1243	1271	1295
35°	1230	1266	1303
40°	1213	1264	1319
45°	1195	1263	1361
50°	1170	1272	1418
55°	1138	1300	1499
60°	1101	1335	1606
65°	1025	1401	1736
70°	941	1468	1899
75°	824	1545	1963
80°	710	1472	1542
85°	621	1068	1173



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.1	3.0
10°-20°	129.6	8.5
20°-30°	197.7	13.0
30°-40°	241.4	15.9
40°-50°	258.1	17.0
50°-60°	249.1	16.4
60°-70°	214.5	14.1
70°-80°	145.1	9.6
80°-90°	38.3	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°	372.4	24.5
0°-40°	613.9	40.4
0°-60°	1121.1	73.8
0°-90°	1519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1519.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	477	477	477	477	477	
5°	473	474	476	476	476	45
15°	455	456	459	462	463	128
25°	422	425	431	434	436	194
35°	374	378	386	393	397	234
45°	314	320	332	349	358	242
55°	242	250	277	305	320	217
65°	161	177	220	255	273	160
75°	79	105	149	179	189	85
85°	20	28	35	36	38	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	477.1	477.1	477.1	477.1	477.1
2.5°	473.8	474.9	477.1	477.1	478.3
5°	472.7	473.8	476.0	476.0	476.0
7.5°	469.3	470.4	472.7	473.8	473.8
10°	466.0	467.1	469.3	470.4	471.6
12.5°	460.4	461.5	464.9	467.1	467.1
15°	454.8	455.9	459.3	461.5	462.6
17.5°	448.1	450.3	453.7	455.9	457.0
20°	439.2	441.4	445.9	449.2	450.3
22.5°	431.3	433.6	438.0	441.4	443.6
25°	422.4	424.6	431.3	433.6	435.8
27.5°	411.2	413.5	419.0	423.5	426.9
30°	400.0	402.3	409.0	414.6	416.8
32.5°	387.7	391.1	398.9	403.4	406.7
35°	374.3	377.7	385.5	393.3	396.7
37.5°	360.9	364.3	372.1	382.2	386.6
40°	345.3	349.8	359.8	373.2	375.5
42.5°	330.8	336.3	345.3	360.9	366.5
45°	314.0	319.6	331.9	348.6	357.6
47.5°	298.4	303.9	317.4	337.5	348.6
50°	279.4	287.2	303.9	327.4	338.6
52.5°	261.5	268.2	290.5	316.2	329.6
55°	242.5	250.3	277.1	305.1	319.6
57.5°	225.7	232.4	262.6	293.9	310.6
60°	204.5	213.4	248.1	281.6	298.4
62.5°	182.1	195.6	233.5	268.2	286.1
65°	160.9	176.6	220.1	254.8	272.7
67.5°	141.9	158.7	203.4	240.2	257.0
70°	119.6	140.8	186.6	222.4	241.4
72.5°	99.5	122.9	167.6	203.4	220.1
75°	79.3	105.0	148.6	178.8	188.8
77.5°	61.5	86.0	127.4	136.3	137.4
80°	45.8	68.2	95.0	96.1	99.5
82.5°	31.3	48.0	61.5	67.0	68.2
85°	20.1	27.9	34.6	35.8	38.0
87.5°	8.9	10.1	12.3	11.2	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)