

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: P312634

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-CP187-W2A-U-5000K**

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: P312634
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-L83050-RDP-CP187-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 1457.0 lumens
Efficiency: N/A
Efficacy: 73.6 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

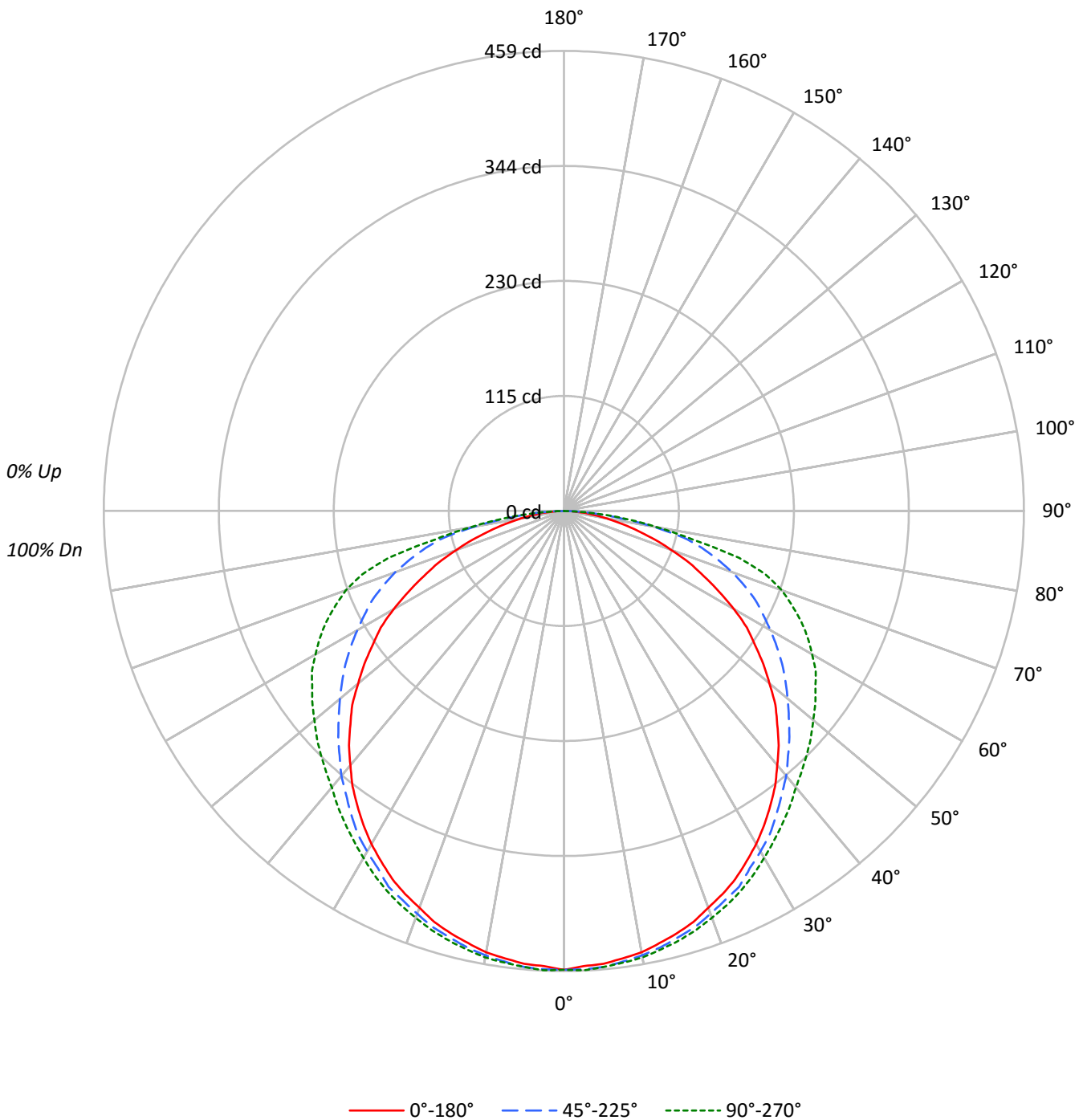
Input Watts (W): 19.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1232	1232	1232
5°	1225	1233	1233
10°	1221	1230	1236
15°	1215	1227	1236
20°	1206	1225	1237
25°	1203	1228	1241
30°	1192	1219	1242
35°	1180	1215	1250
40°	1163	1212	1265
45°	1146	1211	1305
50°	1122	1220	1360
55°	1091	1247	1438
60°	1055	1280	1540
65°	982	1344	1665
70°	902	1408	1821
75°	791	1483	1883
80°	680	1412	1478
85°	596	1025	1124



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.3	3.0
10°-20°	124.3	8.5
20°-30°	189.6	13.0
30°-40°	231.6	15.9
40°-50°	247.6	17.0
50°-60°	239.0	16.4
60°-70°	205.7	14.1
70°-80°	139.2	9.6
80°-90°	36.7	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°	357.2	24.5
0°-40°	588.8	40.4
0°-60°	1075.4	73.8
0°-90°	1457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1457.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	458	458	458	458	458	
5°	453	454	457	457	457	43
15°	436	437	440	443	444	123
25°	405	407	414	416	418	186
35°	359	362	370	377	380	225
45°	301	306	318	334	343	233
55°	233	240	266	293	306	208
65°	154	169	211	244	262	153
75°	76	101	143	172	181	82
85°	19	27	33	34	36	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	457.7	457.7	457.7	457.7	457.7
2.5°	454.5	455.5	457.7	457.7	458.7
5°	453.4	454.5	456.6	456.6	456.6
7.5°	450.2	451.2	453.4	454.5	454.5
10°	447.0	448.0	450.2	451.2	452.3
12.5°	441.6	442.7	445.9	448.0	448.0
15°	436.2	437.3	440.5	442.7	443.7
17.5°	429.8	431.9	435.2	437.3	438.4
20°	421.2	423.4	427.7	430.9	431.9
22.5°	413.7	415.9	420.2	423.4	425.5
25°	405.1	407.3	413.7	415.9	418.0
27.5°	394.4	396.6	401.9	406.2	409.4
30°	383.7	385.9	392.3	397.6	399.8
32.5°	371.9	375.1	382.6	386.9	390.1
35°	359.1	362.3	369.8	377.3	380.5
37.5°	346.2	349.4	356.9	366.6	370.9
40°	331.2	335.5	345.1	358.0	360.1
42.5°	317.3	322.6	331.2	346.2	351.6
45°	301.2	306.5	318.3	334.4	343.0
47.5°	286.2	291.5	304.4	323.7	334.4
50°	268.0	275.5	291.5	314.0	324.8
52.5°	250.8	257.2	278.7	303.3	316.2
55°	232.6	240.1	265.8	292.6	306.5
57.5°	216.5	222.9	251.9	281.9	298.0
60°	196.1	204.7	237.9	270.1	286.2
62.5°	174.7	187.6	224.0	257.2	274.4
65°	154.3	169.3	211.1	244.4	261.5
67.5°	136.1	152.2	195.1	230.4	246.5
70°	114.7	135.0	179.0	213.3	231.5
72.5°	95.4	117.9	160.8	195.1	211.1
75°	76.1	100.8	142.6	171.5	181.1
77.5°	59.0	82.5	122.2	130.8	131.8
80°	43.9	65.4	91.1	92.2	95.4
82.5°	30.0	46.1	59.0	64.3	65.4
85°	19.3	26.8	33.2	34.3	36.4
87.5°	8.6	9.6	11.8	10.7	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)