

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: P312631

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-CP187-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: P312631
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-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 1375.0 lumens
Efficiency: N/A
Efficacy: 72.8 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

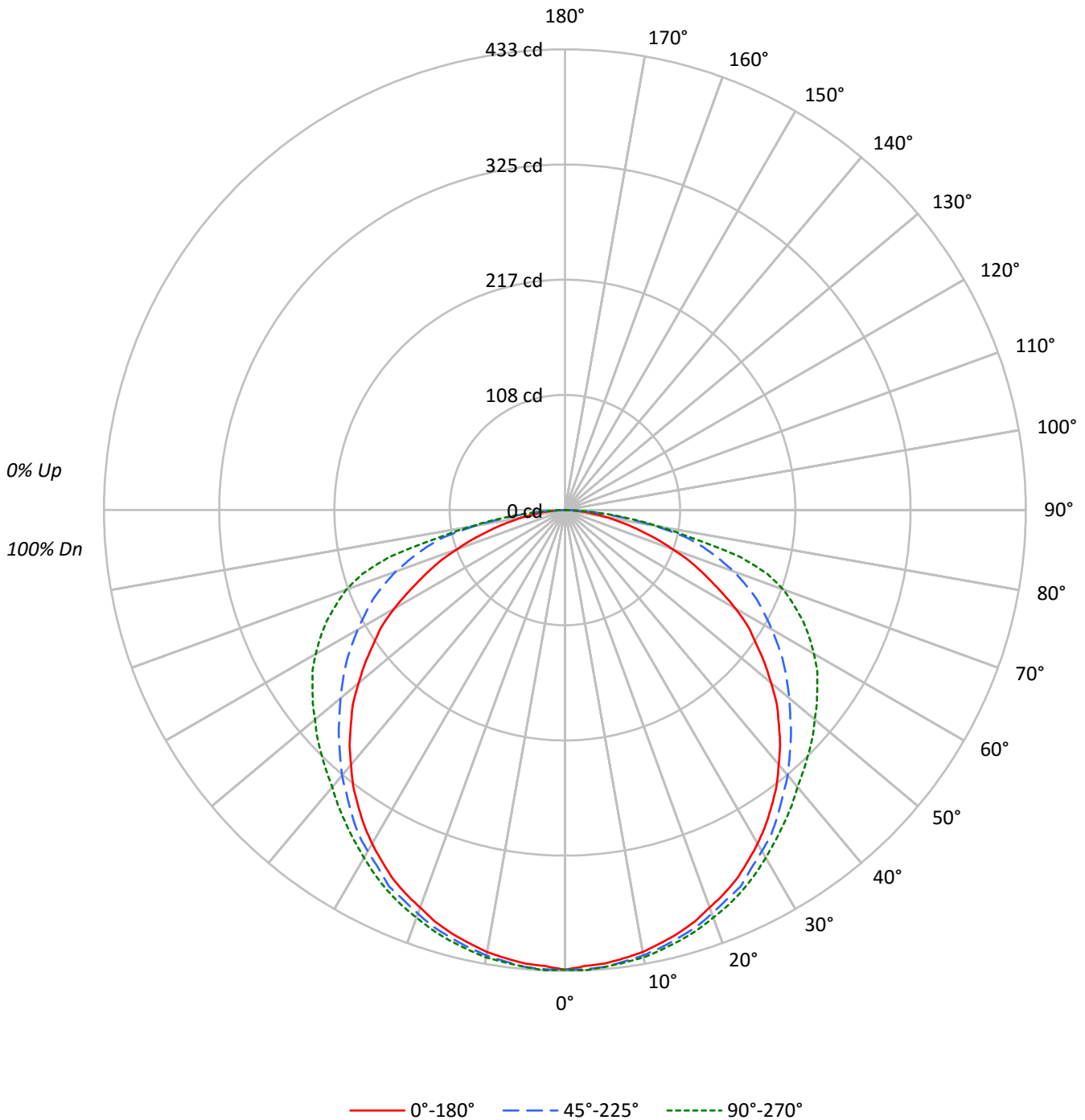
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1162	1162	1162
5°	1156	1164	1164
10°	1153	1161	1167
15°	1147	1158	1167
20°	1138	1156	1167
25°	1135	1159	1171
30°	1125	1150	1172
35°	1113	1146	1180
40°	1098	1144	1194
45°	1082	1143	1232
50°	1059	1152	1283
55°	1030	1177	1357
60°	996	1209	1454
65°	928	1269	1571
70°	851	1329	1719
75°	747	1398	1777
80°	643	1333	1395
85°	562	969	1062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	3.0
10°-20°	117.3	8.5
20°-30°	179.0	13.0
30°-40°	218.5	15.9
40°-50°	233.7	17.0
50°-60°	225.5	16.4
60°-70°	194.1	14.1
70°-80°	131.3	9.6
80°-90°	34.7	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°	337.1	24.5
0°-40°	555.7	40.4
0°-60°	1014.9	73.8
0°-90°	1375.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1375.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	428	429	431	431	431	41
15°	412	413	416	418	419	116
25°	382	384	390	392	394	176
35°	339	342	349	356	359	212
45°	284	289	300	316	324	219
55°	220	227	251	276	289	197
65°	146	160	199	231	247	145
75°	72	95	134	162	171	77
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°	431.9	431.9	431.9	431.9	431.9
2.5°	428.9	429.9	431.9	431.9	432.9
5°	427.9	428.9	430.9	430.9	430.9
7.5°	424.8	425.8	427.9	428.9	428.9
10°	421.8	422.8	424.8	425.8	426.9
12.5°	416.7	417.8	420.8	422.8	422.8
15°	411.7	412.7	415.7	417.8	418.8
17.5°	405.6	407.6	410.7	412.7	413.7
20°	397.5	399.5	403.6	406.6	407.6
22.5°	390.4	392.5	396.5	399.5	401.6
25°	382.3	384.4	390.4	392.5	394.5
27.5°	372.2	374.3	379.3	383.4	386.4
30°	362.1	364.1	370.2	375.3	377.3
32.5°	351.0	354.0	361.1	365.2	368.2
35°	338.9	341.9	349.0	356.0	359.1
37.5°	326.7	329.7	336.8	345.9	350.0
40°	312.6	316.6	325.7	337.8	339.9
42.5°	299.4	304.5	312.6	326.7	331.8
45°	284.2	289.3	300.4	315.6	323.7
47.5°	270.1	275.1	287.3	305.5	315.6
50°	252.9	260.0	275.1	296.4	306.5
52.5°	236.7	242.8	263.0	286.3	298.4
55°	219.5	226.6	250.9	276.1	289.3
57.5°	204.3	210.4	237.7	266.0	281.2
60°	185.1	193.2	224.6	254.9	270.1
62.5°	164.9	177.0	211.4	242.8	258.9
65°	145.7	159.8	199.3	230.6	246.8
67.5°	128.5	143.6	184.1	217.5	232.6
70°	108.2	127.4	168.9	201.3	218.5
72.5°	90.0	111.3	151.7	184.1	199.3
75°	71.8	95.1	134.5	161.8	170.9
77.5°	55.6	77.9	115.3	123.4	124.4
80°	41.5	61.7	86.0	87.0	90.0
82.5°	28.3	43.5	55.6	60.7	61.7
85°	18.2	25.3	31.4	32.4	34.4
87.5°	8.1	9.1	11.1	10.1	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)