

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: P308087

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP187-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: P308087
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-CP187-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 1298.0 lumens
Efficiency: N/A
Efficacy: 77.7 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

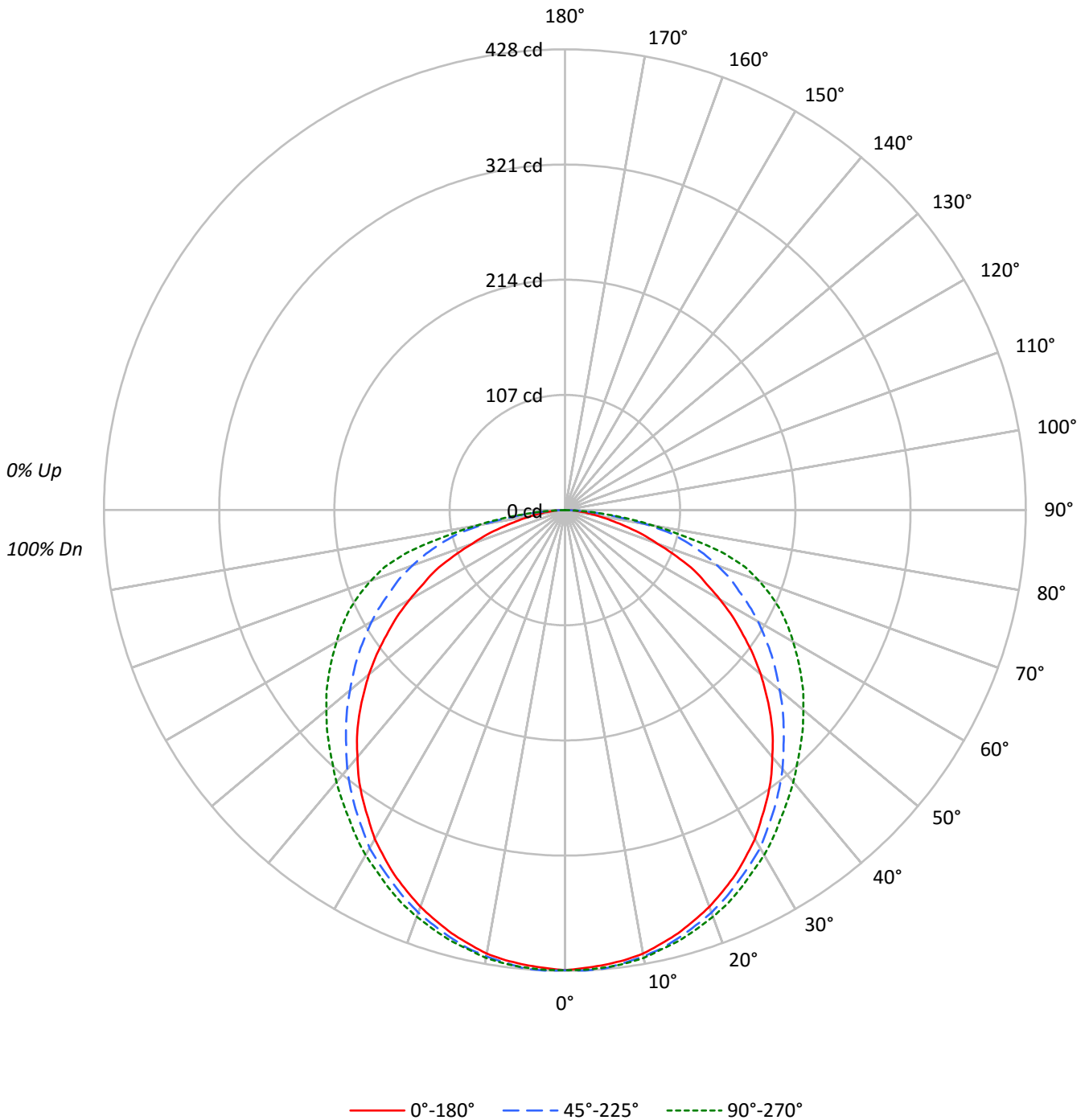
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1150	1150	1150
5°	1146	1155	1152
10°	1143	1150	1154
15°	1134	1145	1152
20°	1123	1139	1151
25°	1111	1130	1150
30°	1097	1127	1150
35°	1076	1114	1148
40°	1053	1104	1159
45°	1028	1094	1178
50°	994	1090	1210
55°	949	1099	1256
60°	894	1115	1318
65°	844	1137	1408
70°	721	1186	1507
75°	604	1234	1567
80°	494	1193	1306
85°	429	886	960



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	3.1
10°-20°	115.9	8.9
20°-30°	175.6	13.5
30°-40°	212.0	16.3
40°-50°	222.8	17.2
50°-60°	209.7	16.2
60°-70°	174.8	13.5
70°-80°	115.8	8.9
80°-90°	30.9	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°	332.0	25.6
0°-40°	544.0	41.9
0°-60°	976.5	75.2
0°-90°	1298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1298.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	427	427	427	427	427	
5°	424	425	427	427	427	40
15°	407	409	411	413	414	115
25°	374	377	381	386	387	172
35°	328	331	339	346	350	205
45°	270	274	287	302	310	208
55°	202	211	234	258	268	181
65°	133	144	178	208	221	129
75°	58	81	119	143	151	63
85°	14	21	29	31	31	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	427.4	427.4	427.4	427.4	427.4
2.5°	425.8	426.6	428.2	428.2	427.4
5°	424.1	425.0	427.4	427.4	426.6
7.5°	421.7	422.5	424.1	425.8	425.0
10°	418.4	419.2	420.9	422.5	422.5
12.5°	412.7	413.5	416.8	417.6	417.6
15°	406.9	408.6	411.0	412.7	413.5
17.5°	399.6	401.2	404.5	407.8	407.8
20°	392.2	393.8	397.9	401.2	402.0
22.5°	383.2	385.7	389.8	393.8	395.5
25°	374.2	376.7	380.7	385.7	387.3
27.5°	363.5	366.0	371.7	377.5	378.3
30°	352.9	355.4	362.7	367.6	370.1
32.5°	339.8	343.1	350.4	357.8	360.3
35°	327.5	330.8	339.0	346.4	349.6
37.5°	314.4	317.7	326.7	335.7	339.8
40°	299.7	303.8	314.4	324.2	330.0
42.5°	285.8	289.9	300.5	313.6	319.3
45°	270.2	274.3	287.4	302.1	309.5
47.5°	253.8	258.7	274.3	292.3	299.7
50°	237.5	243.2	260.4	280.9	289.0
52.5°	220.3	227.6	247.3	269.4	279.2
55°	202.2	211.3	234.2	257.9	267.7
57.5°	185.1	193.2	220.3	245.6	256.3
60°	166.2	176.9	207.2	233.4	244.8
62.5°	148.2	159.7	193.2	221.1	233.4
65°	132.6	144.1	178.5	208.0	221.1
67.5°	112.2	127.7	166.2	194.1	207.2
70°	91.7	113.0	150.7	179.3	191.6
72.5°	76.1	96.6	135.1	163.8	175.2
75°	58.1	81.1	118.7	143.3	150.7
77.5°	43.4	67.1	101.5	113.8	114.6
80°	31.9	51.6	77.0	81.1	84.3
82.5°	22.1	36.0	49.9	54.9	56.5
85°	13.9	21.3	28.7	31.1	31.1
87.5°	7.4	8.2	9.8	9.8	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)