

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: P308091

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP187-W2A-U-4500K**

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: P308091
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-4500K
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: 1436.0 lumens
Efficiency: N/A
Efficacy: 84.5 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

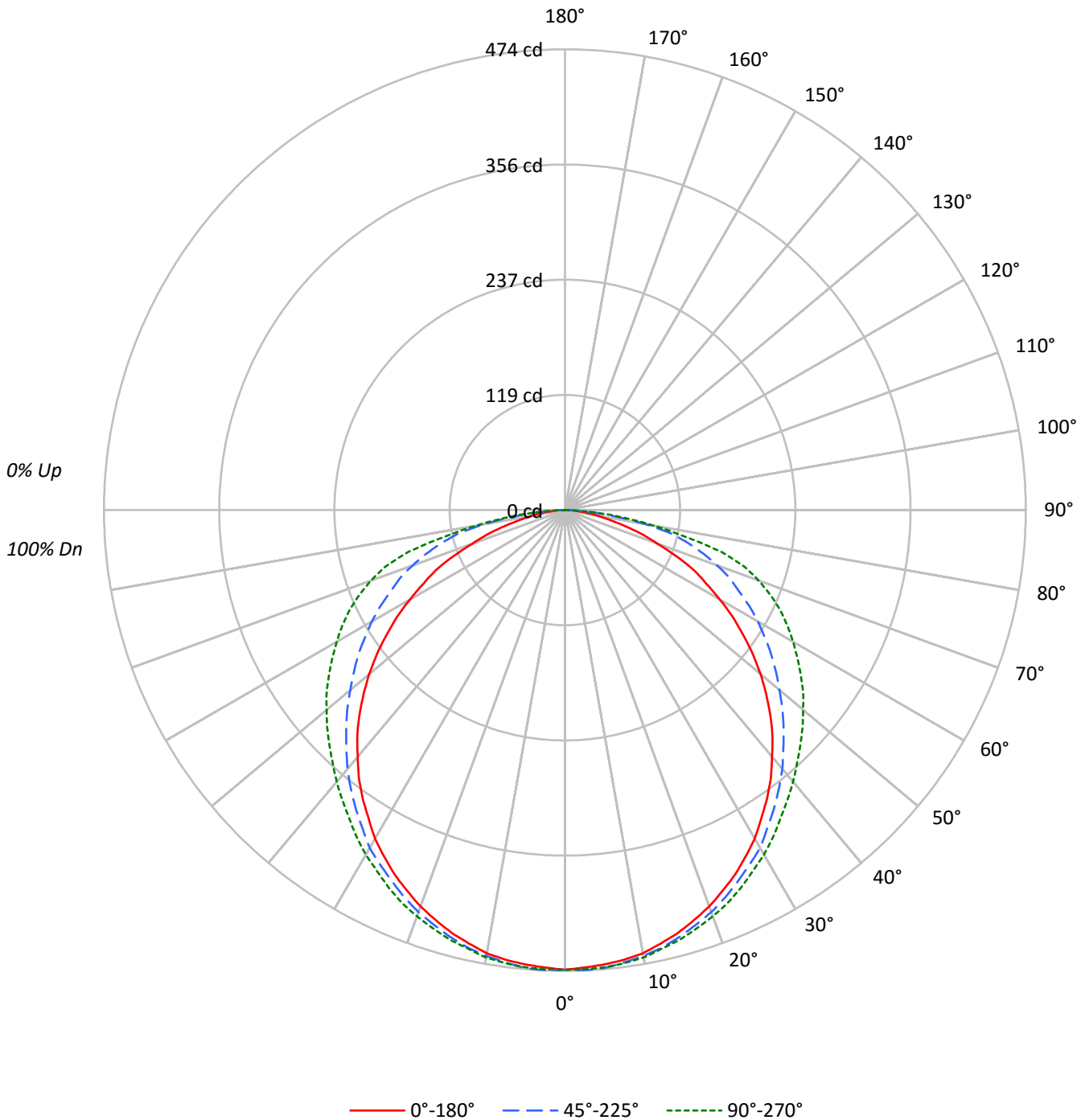
Input Watts (W): 17
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	83	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°	1273	1273	1273
5°	1267	1277	1275
10°	1265	1272	1277
15°	1254	1267	1275
20°	1243	1261	1274
25°	1229	1251	1272
30°	1213	1247	1272
35°	1190	1232	1271
40°	1165	1222	1283
45°	1137	1210	1303
50°	1100	1206	1339
55°	1050	1216	1390
60°	990	1234	1458
65°	934	1258	1557
70°	799	1312	1668
75°	669	1365	1733
80°	547	1320	1446
85°	475	979	1062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.8	3.1
10°-20°	128.2	8.9
20°-30°	194.3	13.5
30°-40°	234.6	16.3
40°-50°	246.5	17.2
50°-60°	231.9	16.2
60°-70°	193.4	13.5
70°-80°	128.1	8.9
80°-90°	34.2	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°	367.3	25.6
0°-40°	601.9	41.9
0°-60°	1080.3	75.2
0°-90°	1436.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1436.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	473	473	473	473	473	
5°	469	470	473	473	472	45
15°	450	452	455	457	458	127
25°	414	417	421	427	428	191
35°	362	366	375	383	387	227
45°	299	304	318	334	342	230
55°	224	234	259	285	296	200
65°	147	159	198	230	245	143
75°	64	90	131	158	167	70
85°	15	24	32	34	34	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	472.9	472.9	472.9	472.9	472.9
2.5°	471.0	472.0	473.8	473.8	472.9
5°	469.2	470.1	472.9	472.9	472.0
7.5°	466.5	467.4	469.2	471.0	470.1
10°	462.9	463.8	465.6	467.4	467.4
12.5°	456.6	457.5	461.1	462.0	462.0
15°	450.2	452.0	454.7	456.6	457.5
17.5°	442.1	443.9	447.5	451.1	451.1
20°	433.9	435.7	440.2	443.9	444.8
22.5°	423.9	426.7	431.2	435.7	437.5
25°	414.0	416.7	421.2	426.7	428.5
27.5°	402.2	404.9	411.3	417.6	418.5
30°	390.4	393.1	401.3	406.7	409.4
32.5°	375.9	379.6	387.7	395.9	398.6
35°	362.3	366.0	375.0	383.2	386.8
37.5°	347.9	351.5	361.4	371.4	375.9
40°	331.5	336.1	347.9	358.7	365.1
42.5°	316.1	320.7	332.5	346.9	353.3
45°	298.9	303.5	318.0	334.3	342.4
47.5°	280.8	286.3	303.5	323.4	331.5
50°	262.7	269.0	288.1	310.7	319.8
52.5°	243.7	251.8	273.6	298.0	308.9
55°	223.7	233.7	259.1	285.3	296.2
57.5°	204.7	213.8	243.7	271.8	283.5
60°	183.9	195.7	229.2	258.2	270.9
62.5°	164.0	176.6	213.8	244.6	258.2
65°	146.7	159.4	197.5	230.1	244.6
67.5°	124.1	141.3	183.9	214.7	229.2
70°	101.5	125.0	166.7	198.4	212.0
72.5°	84.2	106.9	149.5	181.2	193.9
75°	64.3	89.7	131.3	158.5	166.7
77.5°	48.0	74.3	112.3	125.9	126.8
80°	35.3	57.1	85.2	89.7	93.3
82.5°	24.5	39.9	55.3	60.7	62.5
85°	15.4	23.6	31.7	34.4	34.4
87.5°	8.2	9.1	10.9	10.9	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)