

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: P308090

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP187-W2A-U-4000K**

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: P308090
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-4000K
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: 1412.0 lumens
Efficiency: N/A
Efficacy: 83.5 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

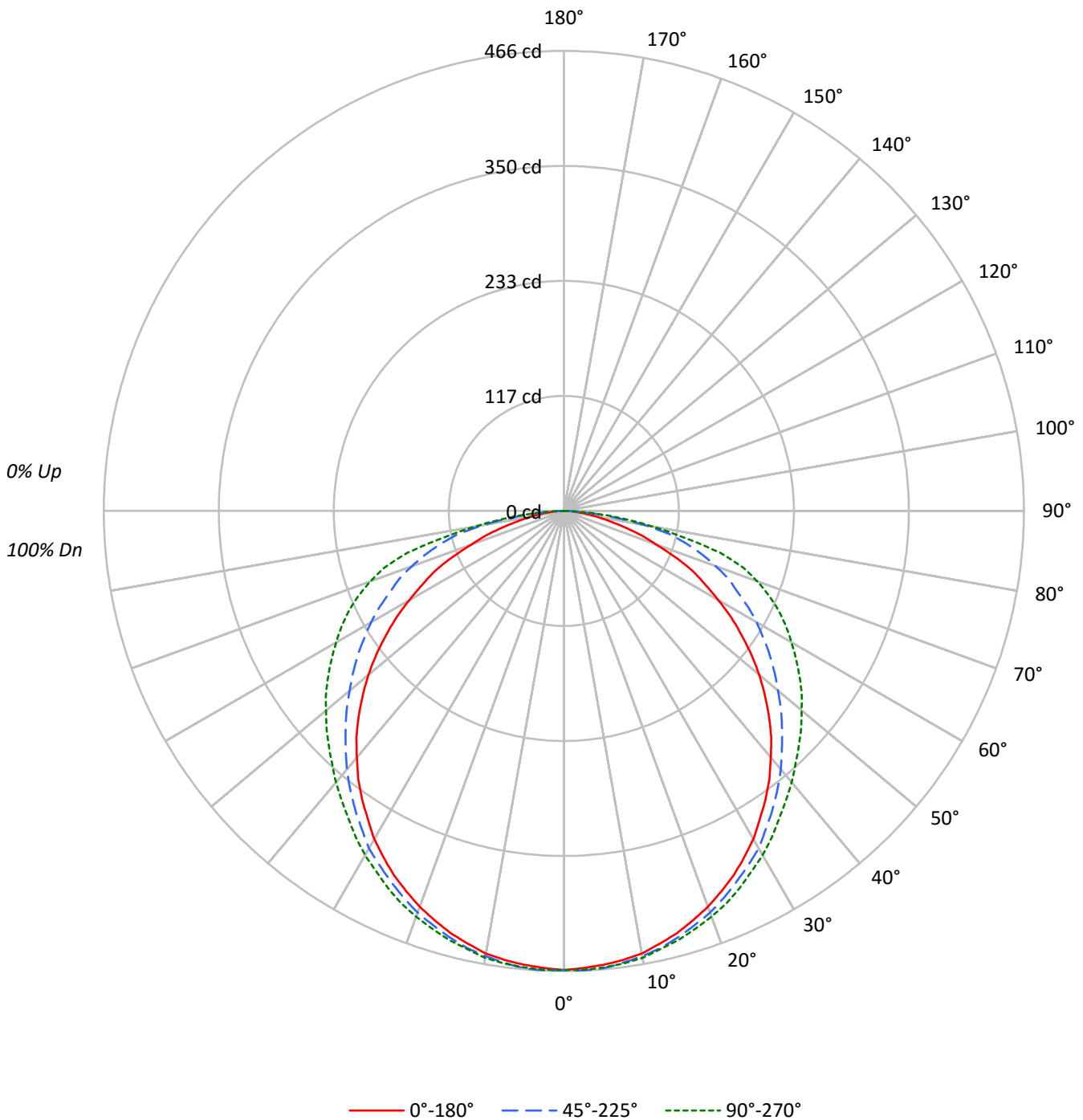
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-20HE-UNV-L82765-HRP-CP187-W2A-U-4000K

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°	1251	1251	1251
5°	1246	1256	1254
10°	1244	1251	1256
15°	1233	1246	1253
20°	1222	1240	1252
25°	1209	1230	1251
30°	1193	1226	1251
35°	1170	1212	1249
40°	1145	1201	1261
45°	1118	1190	1281
50°	1081	1186	1316
55°	1032	1195	1367
60°	973	1213	1433
65°	919	1237	1531
70°	785	1290	1640
75°	657	1343	1704
80°	538	1297	1421
85°	466	963	1044



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.1	3.1
10°-20°	126.1	8.9
20°-30°	191.0	13.5
30°-40°	230.7	16.3
40°-50°	242.4	17.2
50°-60°	228.1	16.2
60°-70°	190.2	13.5
70°-80°	126.0	8.9
80°-90°	33.6	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°	361.2	25.6
0°-40°	591.8	41.9
0°-60°	1062.3	75.2
0°-90°	1412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1412.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	465	465	465	465	465	
5°	461	462	465	465	464	44
15°	443	444	447	449	450	125
25°	407	410	414	420	421	187
35°	356	360	369	377	380	223
45°	294	298	313	329	337	226
55°	220	230	255	281	291	197
65°	144	157	194	226	240	140
75°	63	88	129	156	164	69
85°	15	23	31	34	34	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	465.0	465.0	465.0	465.0	465.0
2.5°	463.2	464.1	465.8	465.8	465.0
5°	461.4	462.3	465.0	465.0	464.1
7.5°	458.7	459.6	461.4	463.2	462.3
10°	455.2	456.0	457.8	459.6	459.6
12.5°	448.9	449.8	453.4	454.3	454.3
15°	442.7	444.5	447.1	448.9	449.8
17.5°	434.7	436.5	440.0	443.6	443.6
20°	426.7	428.4	432.9	436.5	437.3
22.5°	416.9	419.5	424.0	428.4	430.2
25°	407.1	409.7	414.2	419.5	421.3
27.5°	395.5	398.2	404.4	410.6	411.5
30°	383.9	386.6	394.6	399.9	402.6
32.5°	369.6	373.2	381.2	389.2	391.9
35°	356.3	359.9	368.8	376.8	380.3
37.5°	342.0	345.6	355.4	365.2	369.6
40°	326.0	330.5	342.0	352.7	359.0
42.5°	310.9	315.3	326.9	341.1	347.4
45°	293.9	298.4	312.6	328.7	336.7
47.5°	276.1	281.5	298.4	318.0	326.0
50°	258.3	264.5	283.2	305.5	314.4
52.5°	239.6	247.6	269.0	293.0	303.7
55°	220.0	229.8	254.7	280.6	291.3
57.5°	201.3	210.2	239.6	267.2	278.8
60°	180.8	192.4	225.4	253.9	266.3
62.5°	161.2	173.7	210.2	240.5	253.9
65°	144.3	156.8	194.2	226.2	240.5
67.5°	122.0	139.0	180.8	211.1	225.4
70°	99.8	122.9	163.9	195.1	208.4
72.5°	82.8	105.1	147.0	178.1	190.6
75°	63.2	88.2	129.2	155.9	163.9
77.5°	47.2	73.0	110.4	123.8	124.7
80°	34.7	56.1	83.7	88.2	91.7
82.5°	24.0	39.2	54.3	59.7	61.5
85°	15.1	23.2	31.2	33.8	33.8
87.5°	8.0	8.9	10.7	10.7	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)