

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: P308095

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P308095
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-6500K
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: 1478.0 lumens
Efficiency: N/A
Efficacy: 84.9 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

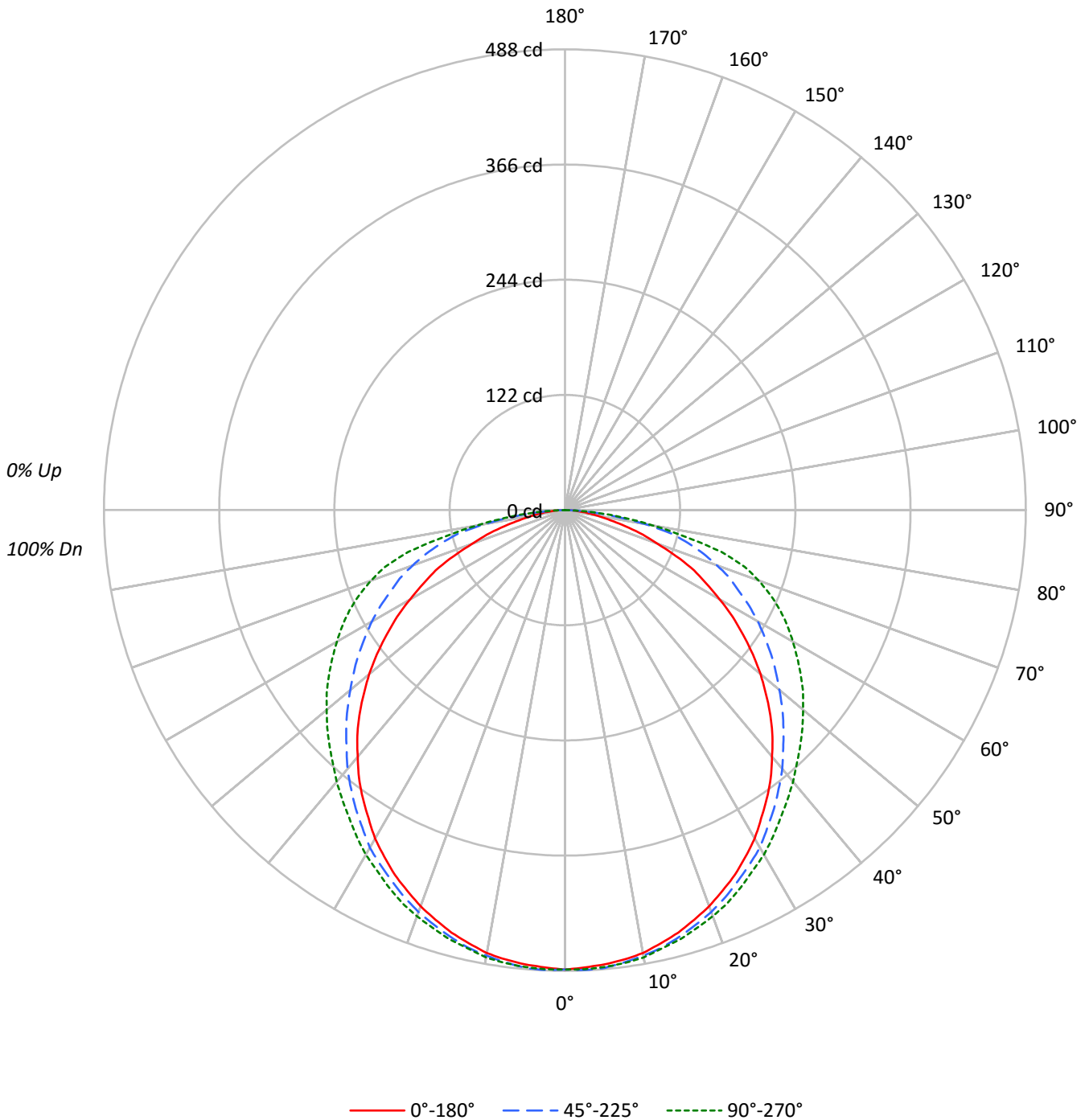
Input Watts (W): 17.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1310	1310	1310
5°	1305	1315	1312
10°	1302	1309	1315
15°	1291	1304	1312
20°	1279	1298	1311
25°	1265	1287	1309
30°	1249	1283	1309
35°	1225	1268	1308
40°	1199	1258	1320
45°	1171	1246	1341
50°	1132	1241	1378
55°	1080	1251	1430
60°	1019	1270	1500
65°	961	1294	1603
70°	821	1350	1717
75°	688	1406	1784
80°	564	1358	1488
85°	491	1007	1093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.1	3.1
10°-20°	131.9	8.9
20°-30°	200.0	13.5
30°-40°	241.5	16.3
40°-50°	253.7	17.2
50°-60°	238.7	16.2
60°-70°	199.0	13.5
70°-80°	131.9	8.9
80°-90°	35.1	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°	378.0	25.6
0°-40°	619.5	41.9
0°-60°	1111.9	75.2
0°-90°	1478.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1478.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	487	487	487	487	487	
5°	483	484	487	487	486	46
15°	463	465	468	470	471	131
25°	426	429	434	439	441	196
35°	373	377	386	394	398	233
45°	308	312	327	344	352	237
55°	230	240	267	294	305	206
65°	151	164	203	237	252	147
75°	66	92	135	163	172	72
85°	16	24	33	35	35	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	486.7	486.7	486.7	486.7	486.7
2.5°	484.8	485.8	487.6	487.6	486.7
5°	483.0	483.9	486.7	486.7	485.8
7.5°	480.2	481.1	483.0	484.8	483.9
10°	476.4	477.4	479.2	481.1	481.1
12.5°	469.9	470.8	474.6	475.5	475.5
15°	463.4	465.2	468.0	469.9	470.8
17.5°	455.0	456.9	460.6	464.3	464.3
20°	446.6	448.5	453.1	456.9	457.8
22.5°	436.3	439.1	443.8	448.5	450.3
25°	426.1	428.9	433.5	439.1	441.0
27.5°	414.0	416.8	423.3	429.8	430.7
30°	401.8	404.6	413.0	418.6	421.4
32.5°	386.9	390.7	399.0	407.4	410.2
35°	372.9	376.7	386.0	394.4	398.1
37.5°	358.0	361.8	372.0	382.3	386.9
40°	341.2	345.9	358.0	369.2	375.7
42.5°	325.4	330.1	342.2	357.1	363.6
45°	307.7	312.3	327.3	344.0	352.4
47.5°	289.0	294.6	312.3	332.9	341.2
50°	270.4	276.9	296.5	319.8	329.1
52.5°	250.8	259.2	281.6	306.7	317.9
55°	230.3	240.5	266.7	293.7	304.9
57.5°	210.7	220.0	250.8	279.7	291.8
60°	189.3	201.4	235.9	265.7	278.8
62.5°	168.8	181.8	220.0	251.7	265.7
65°	151.0	164.1	203.3	236.8	251.7
67.5°	127.7	145.4	189.3	221.0	235.9
70°	104.4	128.7	171.6	204.2	218.2
72.5°	86.7	110.0	153.8	186.5	199.5
75°	66.2	92.3	135.2	163.2	171.6
77.5°	49.4	76.5	115.6	129.6	130.5
80°	36.4	58.7	87.6	92.3	96.0
82.5°	25.2	41.0	56.9	62.5	64.3
85°	15.9	24.2	32.6	35.4	35.4
87.5°	8.4	9.3	11.2	11.2	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)