

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: P308360

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-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: P308360
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: 22FCZ2-20HE-UNV-L82765-RDP-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1216.0 lumens
Efficiency: N/A
Efficacy: 72.0 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

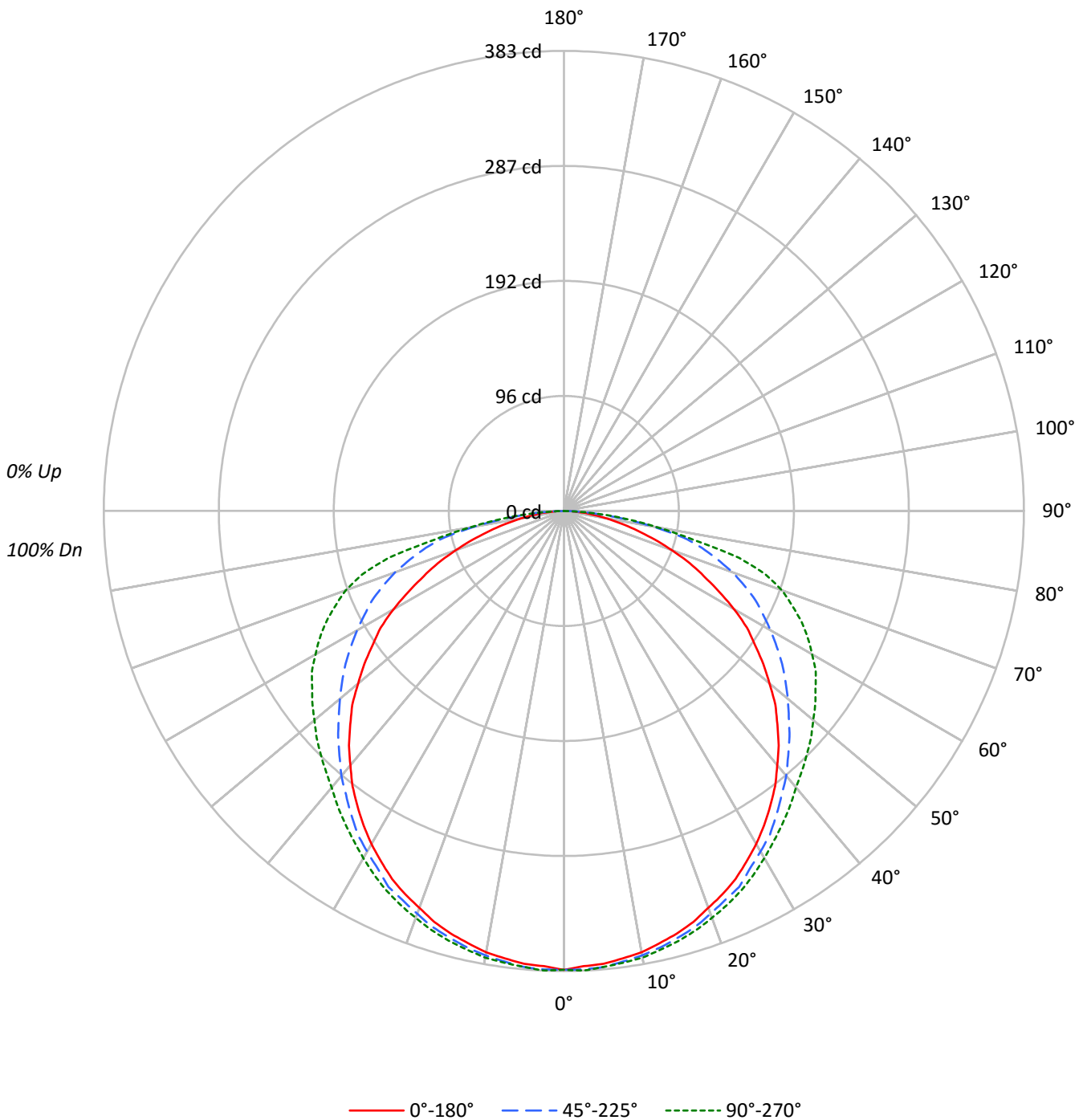
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	1028	1028	1028
5°	1022	1029	1029
10°	1019	1027	1032
15°	1014	1024	1032
20°	1007	1022	1032
25°	1004	1025	1036
30°	995	1017	1037
35°	985	1014	1043
40°	971	1012	1056
45°	957	1011	1090
50°	936	1019	1135
55°	911	1041	1200
60°	881	1069	1285
65°	820	1122	1390
70°	753	1175	1520
75°	660	1237	1572
80°	569	1178	1234
85°	497	855	939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.1	3.0
10°-20°	103.7	8.5
20°-30°	158.3	13.0
30°-40°	193.3	15.9
40°-50°	206.6	17.0
50°-60°	199.5	16.4
60°-70°	171.7	14.1
70°-80°	116.2	9.6
80°-90°	30.7	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°	298.1	24.5
0°-40°	491.4	40.4
0°-60°	897.5	73.8
0°-90°	1216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1216.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	382	382	382	382	382	
5°	378	379	381	381	381	36
15°	364	365	368	369	370	103
25°	338	340	345	347	349	156
35°	300	302	309	315	318	188
45°	251	256	266	279	286	194
55°	194	200	222	244	256	174
65°	129	141	176	204	218	128
75°	64	84	119	143	151	68
85°	16	22	28	29	30	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	382.0	382.0	382.0	382.0	382.0
2.5°	379.3	380.2	382.0	382.0	382.9
5°	378.4	379.3	381.1	381.1	381.1
7.5°	375.7	376.6	378.4	379.3	379.3
10°	373.0	373.9	375.7	376.6	377.5
12.5°	368.5	369.4	372.1	373.9	373.9
15°	364.1	365.0	367.7	369.4	370.3
17.5°	358.7	360.5	363.2	365.0	365.9
20°	351.6	353.3	356.9	359.6	360.5
22.5°	345.3	347.1	350.7	353.3	355.1
25°	338.1	339.9	345.3	347.1	348.9
27.5°	329.2	331.0	335.5	339.0	341.7
30°	320.2	322.0	327.4	331.9	333.7
32.5°	310.4	313.1	319.3	322.9	325.6
35°	299.7	302.4	308.6	314.9	317.6
37.5°	288.9	291.6	297.9	305.9	309.5
40°	276.4	280.0	288.0	298.8	300.6
42.5°	264.8	269.3	276.4	288.9	293.4
45°	251.4	255.8	265.7	279.1	286.3
47.5°	238.8	243.3	254.0	270.1	279.1
50°	223.6	229.9	243.3	262.1	271.0
52.5°	209.3	214.7	232.6	253.2	263.9
55°	194.1	200.4	221.8	244.2	255.8
57.5°	180.7	186.1	210.2	235.3	248.7
60°	163.7	170.9	198.6	225.4	238.8
62.5°	145.8	156.5	187.0	214.7	229.0
65°	128.8	141.3	176.2	204.0	218.3
67.5°	113.6	127.0	162.8	192.3	205.7
70°	95.7	112.7	149.4	178.0	193.2
72.5°	79.6	98.4	134.2	162.8	176.2
75°	63.5	84.1	119.0	143.1	151.2
77.5°	49.2	68.9	102.0	109.1	110.0
80°	36.7	54.6	76.0	76.9	79.6
82.5°	25.0	38.5	49.2	53.7	54.6
85°	16.1	22.4	27.7	28.6	30.4
87.5°	7.2	8.1	9.8	8.9	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)