

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: P308184

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-5700K**

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: P308184
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: 22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-5700K
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: 1945.0 lumens
Efficiency: N/A
Efficacy: 84.6 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

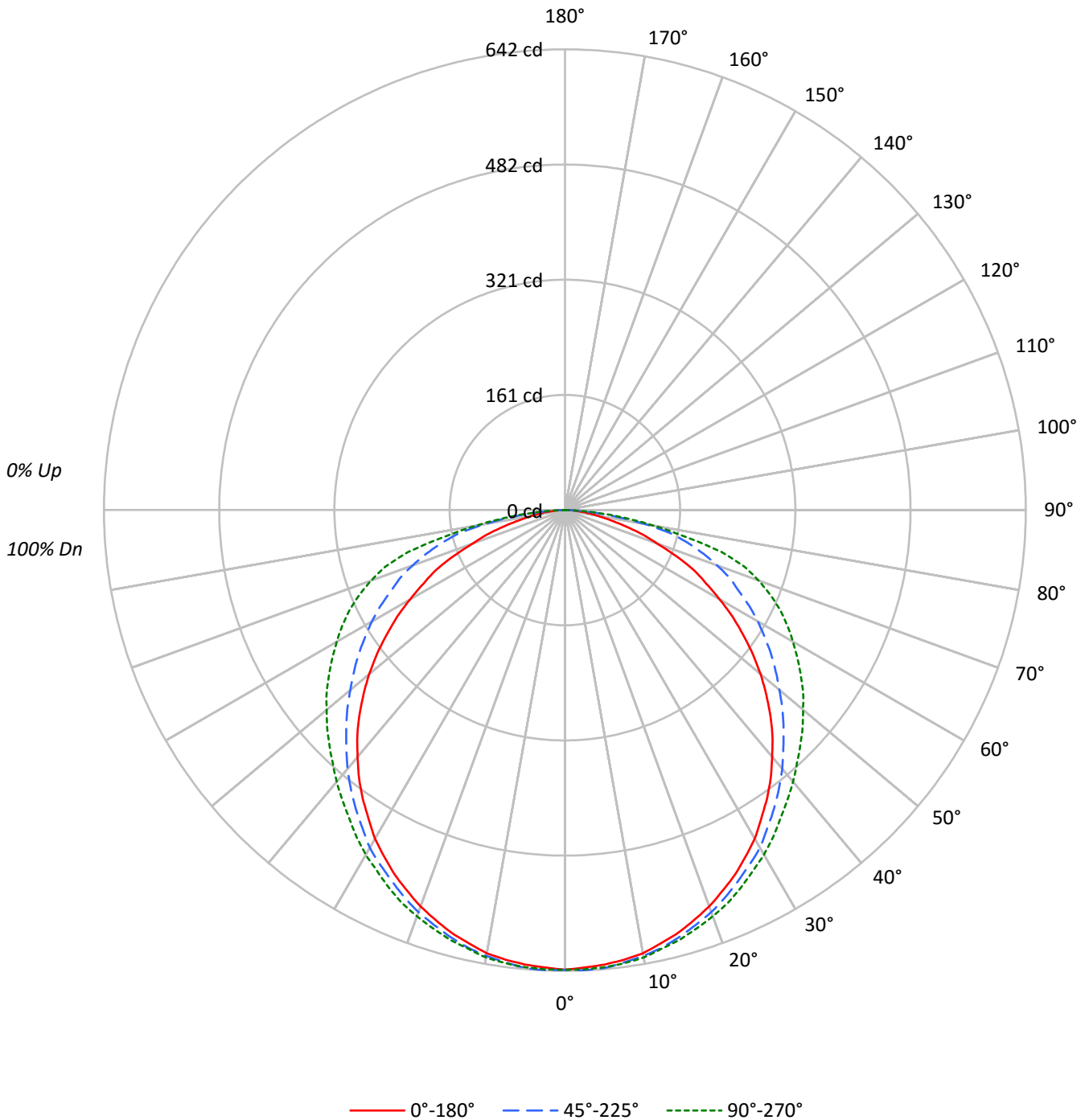
Input Watts (W): 23
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1724	1724	1724
5°	1717	1730	1727
10°	1713	1723	1730
15°	1699	1716	1726
20°	1683	1708	1725
25°	1665	1694	1723
30°	1643	1689	1723
35°	1612	1669	1721
40°	1578	1655	1737
45°	1541	1639	1765
50°	1490	1634	1813
55°	1422	1646	1882
60°	1341	1671	1975
65°	1266	1703	2110
70°	1081	1777	2259
75°	906	1850	2348
80°	742	1787	1959
85°	645	1325	1439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.7	3.1
10°-20°	173.6	8.9
20°-30°	263.1	13.5
30°-40°	317.8	16.3
40°-50°	333.9	17.2
50°-60°	314.1	16.2
60°-70°	261.9	13.5
70°-80°	173.6	8.9
80°-90°	46.2	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°	497.5	25.6
0°-40°	815.2	41.9
0°-60°	1463.3	75.2
0°-90°	1945.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1945.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	640	640	640	640	640	
5°	636	637	640	640	639	60
15°	610	612	616	618	620	172
25°	561	564	570	578	580	258
35°	491	496	508	519	524	307
45°	405	411	431	453	464	312
55°	303	317	351	386	401	271
65°	199	216	268	312	331	193
75°	87	122	178	215	226	95
85°	21	32	43	47	47	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	640.5	640.5	640.5	640.5	640.5
2.5°	638.0	639.2	641.7	641.7	640.5
5°	635.6	636.8	640.5	640.5	639.2
7.5°	631.9	633.1	635.6	638.0	636.8
10°	627.0	628.2	630.7	633.1	633.1
12.5°	618.4	619.6	624.5	625.7	625.7
15°	609.8	612.2	615.9	618.4	619.6
17.5°	598.8	601.2	606.1	611.0	611.0
20°	587.7	590.2	596.3	601.2	602.4
22.5°	574.2	577.9	584.0	590.2	592.6
25°	560.7	564.4	570.5	577.9	580.3
27.5°	544.8	548.4	557.0	565.6	566.8
30°	528.8	532.5	543.5	550.9	554.6
32.5°	509.2	514.1	525.1	536.2	539.9
35°	490.8	495.7	508.0	519.0	523.9
37.5°	471.1	476.1	489.6	503.0	509.2
40°	449.1	455.2	471.1	485.9	494.5
42.5°	428.2	434.3	450.3	469.9	478.5
45°	404.9	411.0	430.7	452.7	463.8
47.5°	380.4	387.7	411.0	438.0	449.1
50°	355.8	364.4	390.2	420.8	433.1
52.5°	330.0	341.1	370.5	403.7	418.4
55°	303.1	316.6	350.9	386.5	401.2
57.5°	277.3	289.6	330.0	368.1	384.0
60°	249.1	265.0	310.4	349.7	366.9
62.5°	222.1	239.3	289.6	331.3	349.7
65°	198.8	215.9	267.5	311.6	331.3
67.5°	168.1	191.4	249.1	290.8	310.4
70°	137.4	169.3	225.8	268.7	287.1
72.5°	114.1	144.8	202.4	245.4	262.6
75°	87.1	121.5	177.9	214.7	225.8
77.5°	65.0	100.6	152.1	170.5	171.8
80°	47.9	77.3	115.3	121.5	126.4
82.5°	33.1	54.0	74.8	82.2	84.7
85°	20.9	31.9	42.9	46.6	46.6
87.5°	11.0	12.3	14.7	14.7	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)