

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: P308152

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-3500K**

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: P308152
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 1948.0 lumens
Efficiency: N/A
Efficacy: 86.6 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

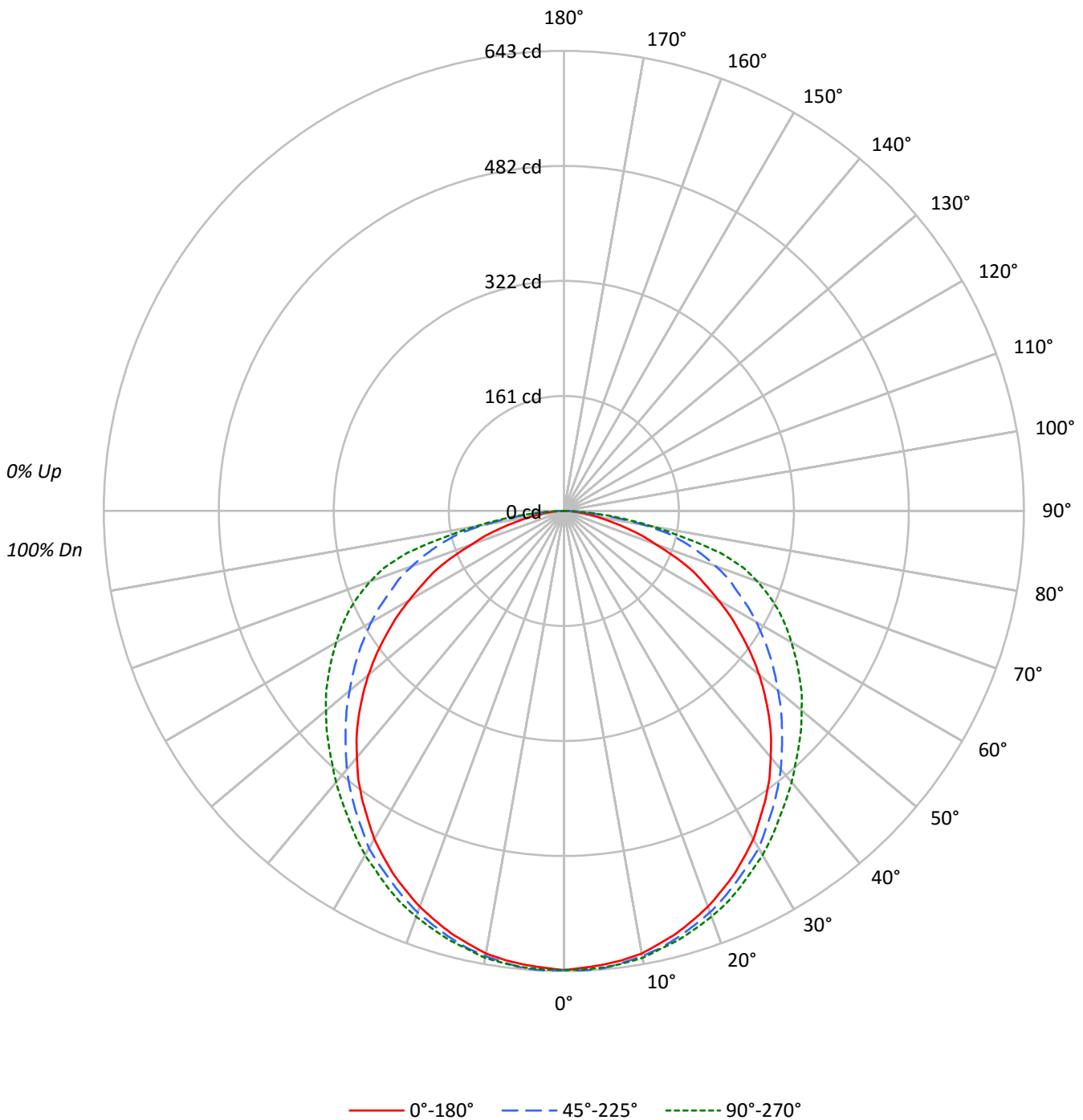
Input Watts (W): 22.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1726	1726	1726
5°	1719	1733	1729
10°	1716	1726	1733
15°	1701	1719	1729
20°	1686	1710	1728
25°	1667	1697	1726
30°	1646	1692	1726
35°	1615	1671	1724
40°	1580	1658	1740
45°	1543	1641	1768
50°	1492	1636	1816
55°	1424	1649	1885
60°	1343	1673	1977
65°	1268	1706	2113
70°	1083	1779	2262
75°	907	1853	2351
80°	742	1790	1962
85°	645	1328	1442



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.8	3.1
10°-20°	173.9	8.9
20°-30°	263.6	13.5
30°-40°	318.2	16.3
40°-50°	334.4	17.2
50°-60°	314.6	16.2
60°-70°	262.3	13.5
70°-80°	173.8	8.9
80°-90°	46.3	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°	498.2	25.6
0°-40°	816.5	41.9
0°-60°	1465.5	75.2
0°-90°	1948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	636	638	642	642	640	60
15°	611	613	617	619	621	172
25°	562	565	571	579	581	259
35°	492	496	509	520	525	307
45°	406	412	431	453	464	312
55°	304	317	351	387	402	272
65°	199	216	268	312	332	194
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°	641.5	641.5	641.5	641.5	641.5
2.5°	639.0	640.2	642.7	642.7	641.5
5°	636.5	637.8	641.5	641.5	640.2
7.5°	632.9	634.1	636.5	639.0	637.8
10°	627.9	629.2	631.6	634.1	634.1
12.5°	619.3	620.6	625.5	626.7	626.7
15°	610.7	613.2	616.9	619.3	620.6
17.5°	599.7	602.1	607.0	612.0	612.0
20°	588.6	591.1	597.2	602.1	603.4
22.5°	575.1	578.8	584.9	591.1	593.5
25°	561.6	565.3	571.4	578.8	581.2
27.5°	545.6	549.3	557.9	566.5	567.7
30°	529.6	533.3	544.4	551.7	555.4
32.5°	510.0	514.9	525.9	537.0	540.7
35°	491.5	496.5	508.7	519.8	524.7
37.5°	471.9	476.8	490.3	503.8	510.0
40°	449.8	455.9	471.9	486.6	495.2
42.5°	428.9	435.0	451.0	470.6	479.2
45°	405.5	411.7	431.3	453.4	464.5
47.5°	380.9	388.3	411.7	438.7	449.8
50°	356.4	365.0	390.8	421.5	433.8
52.5°	330.6	341.6	371.1	404.3	419.0
55°	303.5	317.0	351.4	387.1	401.8
57.5°	277.7	290.0	330.6	368.7	384.6
60°	249.5	265.4	310.9	350.2	367.4
62.5°	222.4	239.6	290.0	331.8	350.2
65°	199.1	216.3	267.9	312.1	331.8
67.5°	168.4	191.7	249.5	291.2	310.9
70°	137.6	169.6	226.1	269.1	287.5
72.5°	114.3	145.0	202.8	245.8	263.0
75°	87.2	121.7	178.2	215.0	226.1
77.5°	65.1	100.8	152.4	170.8	172.0
80°	47.9	77.4	115.5	121.7	126.6
82.5°	33.2	54.1	75.0	82.3	84.8
85°	20.9	31.9	43.0	46.7	46.7
87.5°	11.1	12.3	14.7	14.7	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)