

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: P308183

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-5500K**

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: P308183
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-5500K
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: 1941.0 lumens
Efficiency: N/A
Efficacy: 84.4 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

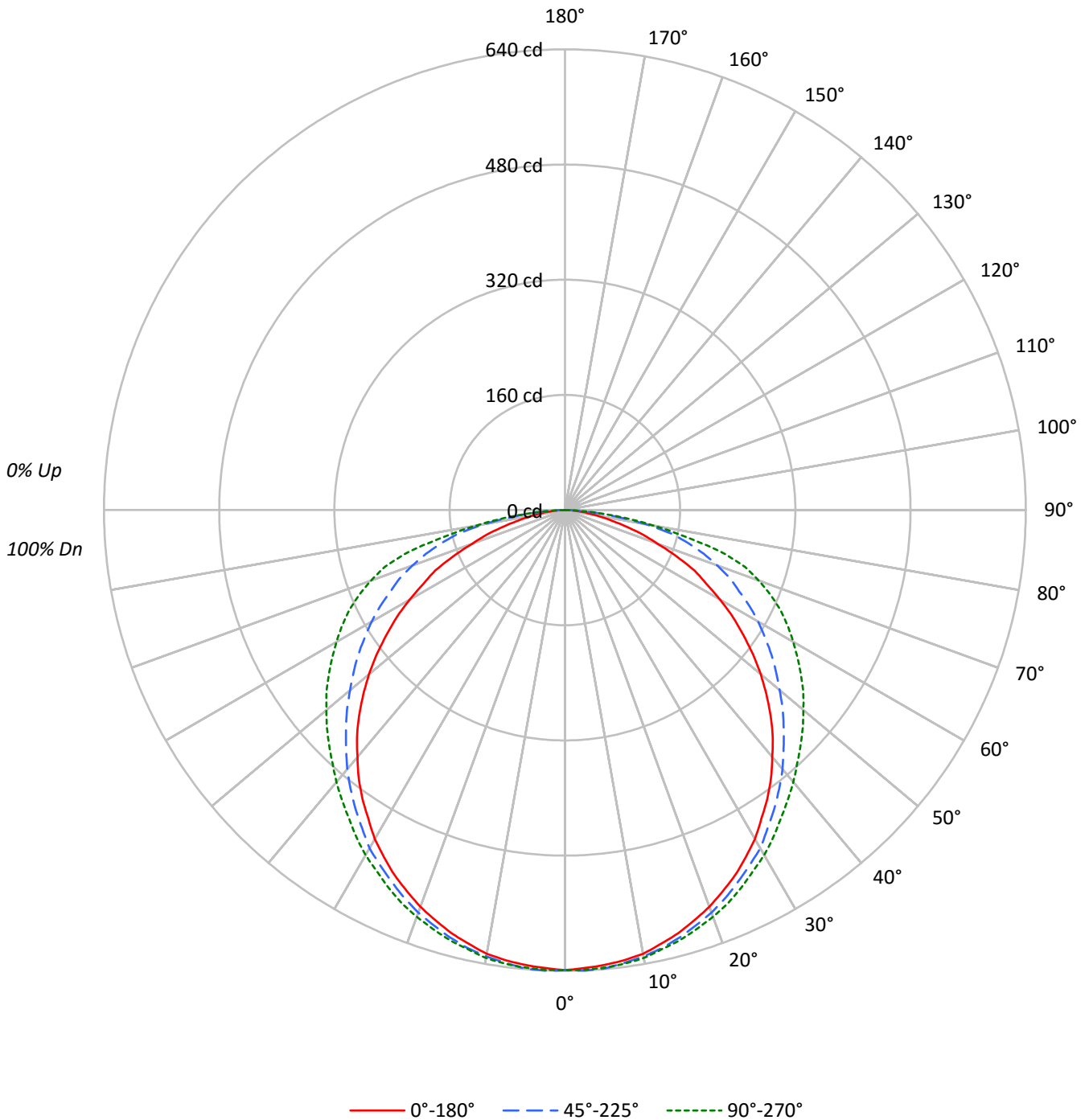
Input Watts (W): 23
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1720	1720	1720
5°	1713	1726	1723
10°	1710	1720	1726
15°	1695	1712	1723
20°	1680	1704	1722
25°	1662	1691	1720
30°	1640	1685	1720
35°	1609	1665	1717
40°	1574	1652	1733
45°	1538	1636	1761
50°	1487	1630	1809
55°	1419	1643	1879
60°	1338	1667	1970
65°	1263	1699	2105
70°	1079	1773	2254
75°	904	1845	2342
80°	741	1784	1954
85°	642	1325	1436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	3.1
10°-20°	173.3	8.9
20°-30°	262.6	13.5
30°-40°	317.1	16.3
40°-50°	333.2	17.2
50°-60°	313.5	16.2
60°-70°	261.4	13.5
70°-80°	173.2	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°	496.5	25.6
0°-40°	813.6	41.9
0°-60°	1460.3	75.2
0°-90°	1941.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1941.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	639	639	639	639	639	
5°	634	636	639	639	638	60
15°	608	611	615	617	618	172
25°	560	563	569	577	579	258
35°	490	495	507	518	523	306
45°	404	410	430	452	463	311
55°	302	316	350	386	400	271
65°	198	216	267	311	331	193
75°	87	121	178	214	225	94
85°	21	32	43	46	46	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	639.1	639.1	639.1	639.1	639.1
2.5°	636.7	637.9	640.4	640.4	639.1
5°	634.3	635.5	639.1	639.1	637.9
7.5°	630.6	631.8	634.3	636.7	635.5
10°	625.7	626.9	629.4	631.8	631.8
12.5°	617.1	618.3	623.2	624.5	624.5
15°	608.5	611.0	614.7	617.1	618.3
17.5°	597.5	600.0	604.9	609.8	609.8
20°	586.5	588.9	595.1	600.0	601.2
22.5°	573.0	576.7	582.8	588.9	591.4
25°	559.6	563.2	569.4	576.7	579.2
27.5°	543.6	547.3	555.9	564.5	565.7
30°	527.7	531.4	542.4	549.8	553.4
32.5°	508.1	513.0	524.1	535.1	538.7
35°	489.8	494.7	506.9	517.9	522.8
37.5°	470.2	475.1	488.5	502.0	508.1
40°	448.1	454.3	470.2	484.9	493.4
42.5°	427.3	433.4	449.4	469.0	477.5
45°	404.1	410.2	429.8	451.8	462.8
47.5°	379.6	386.9	410.2	437.1	448.1
50°	355.1	363.7	389.4	420.0	432.2
52.5°	329.4	340.4	369.8	402.8	417.5
55°	302.4	315.9	350.2	385.7	400.4
57.5°	276.7	289.0	329.4	367.3	383.2
60°	248.6	264.5	309.8	349.0	366.1
62.5°	221.6	238.8	289.0	330.6	349.0
65°	198.4	215.5	266.9	311.0	330.6
67.5°	167.7	191.0	248.6	290.2	309.8
70°	137.1	169.0	225.3	268.1	286.5
72.5°	113.9	144.5	202.0	244.9	262.0
75°	86.9	121.2	177.5	214.3	225.3
77.5°	64.9	100.4	151.8	170.2	171.4
80°	47.8	77.1	115.1	121.2	126.1
82.5°	33.1	53.9	74.7	82.0	84.5
85°	20.8	31.8	42.9	46.5	46.5
87.5°	11.0	12.2	14.7	14.7	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)