

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: P309175

Luminaire Tested: **24FCZ2-30HE-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: P309175
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L82765-HRP-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 6500K 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: 2083.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

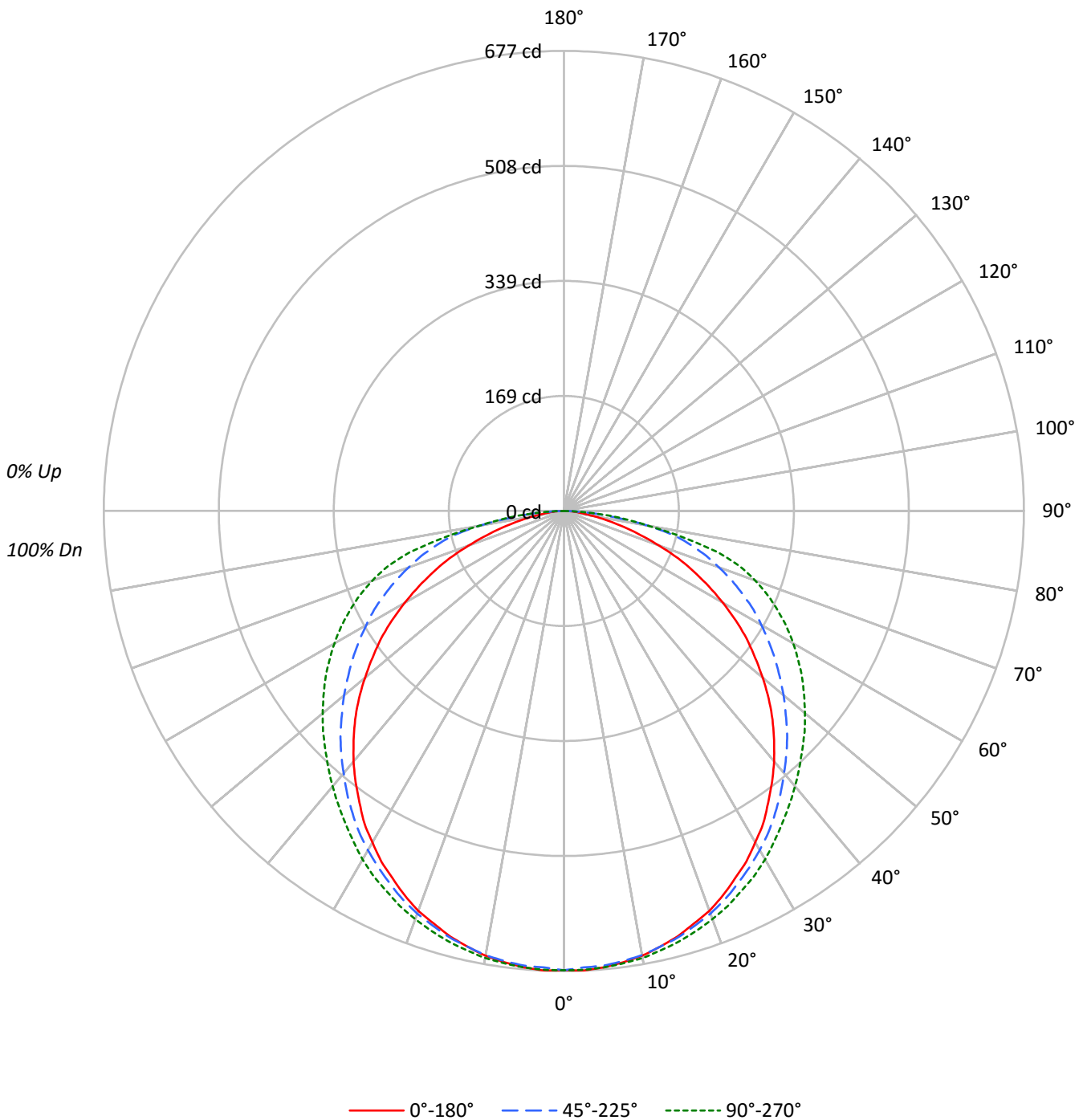
Input Watts (W): 22
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	909	909	909
5°	910	907	910
10°	908	907	913
15°	902	905	913
20°	896	903	915
25°	886	898	917
30°	875	896	920
35°	861	891	921
40°	846	885	930
45°	826	884	944
50°	800	884	969
55°	771	890	1004
60°	727	903	1049
65°	672	925	1108
70°	587	957	1180
75°	476	1006	1220
80°	351	986	986
85°	269	727	821



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.0	3.1
10°-20°	183.8	8.8
20°-30°	279.9	13.4
30°-40°	339.8	16.3
40°-50°	359.1	17.2
50°-60°	338.8	16.3
60°-70°	281.7	13.5
70°-80°	185.3	8.9
80°-90°	50.5	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°	527.8	25.3
0°-40°	867.6	41.7
0°-60°	1565.5	75.2
0°-90°	2083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2083.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	674	674	672	674	674	64
15°	648	649	650	656	656	183
25°	596	600	605	616	617	275
35°	524	530	542	556	561	328
45°	434	443	465	488	496	334
55°	329	343	379	415	428	293
65°	211	236	290	333	348	209
75°	92	133	194	229	235	99
85°	17	38	47	52	53	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	675.8	675.8	675.8	675.8	675.8
2.5°	676.7	675.8	672.3	675.8	675.8
5°	674.1	674.1	671.5	674.1	674.1
7.5°	669.7	669.7	668.0	671.5	671.5
10°	664.5	664.5	663.6	668.0	668.0
12.5°	656.6	657.5	656.6	661.9	661.9
15°	647.9	648.8	649.7	655.8	655.8
17.5°	636.6	638.3	640.1	647.1	647.9
20°	626.1	627.0	630.5	638.3	639.2
22.5°	612.2	614.8	619.1	627.0	629.6
25°	596.5	600.0	605.2	615.7	617.4
27.5°	581.7	584.3	591.2	602.6	606.1
30°	563.3	567.7	576.4	587.8	592.1
32.5°	545.9	550.3	560.7	572.9	576.4
35°	524.1	530.2	542.4	556.4	560.7
37.5°	503.2	509.3	524.1	539.8	545.0
40°	481.4	488.3	504.0	522.4	529.3
42.5°	457.8	467.4	484.9	504.9	512.8
45°	434.3	443.0	464.8	487.5	496.2
47.5°	409.0	419.5	443.0	470.0	480.5
50°	382.0	395.0	422.1	451.7	463.1
52.5°	354.9	369.7	400.3	433.4	445.6
55°	328.8	342.7	379.3	415.1	428.2
57.5°	300.0	317.4	357.5	395.9	409.0
60°	270.3	289.5	335.7	375.8	389.8
62.5°	240.7	262.5	314.8	354.9	369.7
65°	211.0	235.5	290.4	333.1	347.9
67.5°	182.3	209.3	267.7	310.4	325.3
70°	149.1	183.1	243.3	285.2	300.0
72.5°	118.6	157.8	219.8	259.0	272.1
75°	91.6	133.4	193.6	229.3	234.6
77.5°	67.1	109.0	166.6	178.8	179.6
80°	45.3	87.2	127.3	125.6	127.3
82.5°	29.6	65.4	80.2	89.8	90.7
85°	17.4	38.4	47.1	52.3	53.2
87.5°	8.7	13.1	16.6	17.4	19.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)