

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: P309193

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CA08-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: P309193
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: 24FCZ2-30-UNV-L82765-HRP-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 2199.0 lumens
Efficiency: N/A
Efficacy: 90.1 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

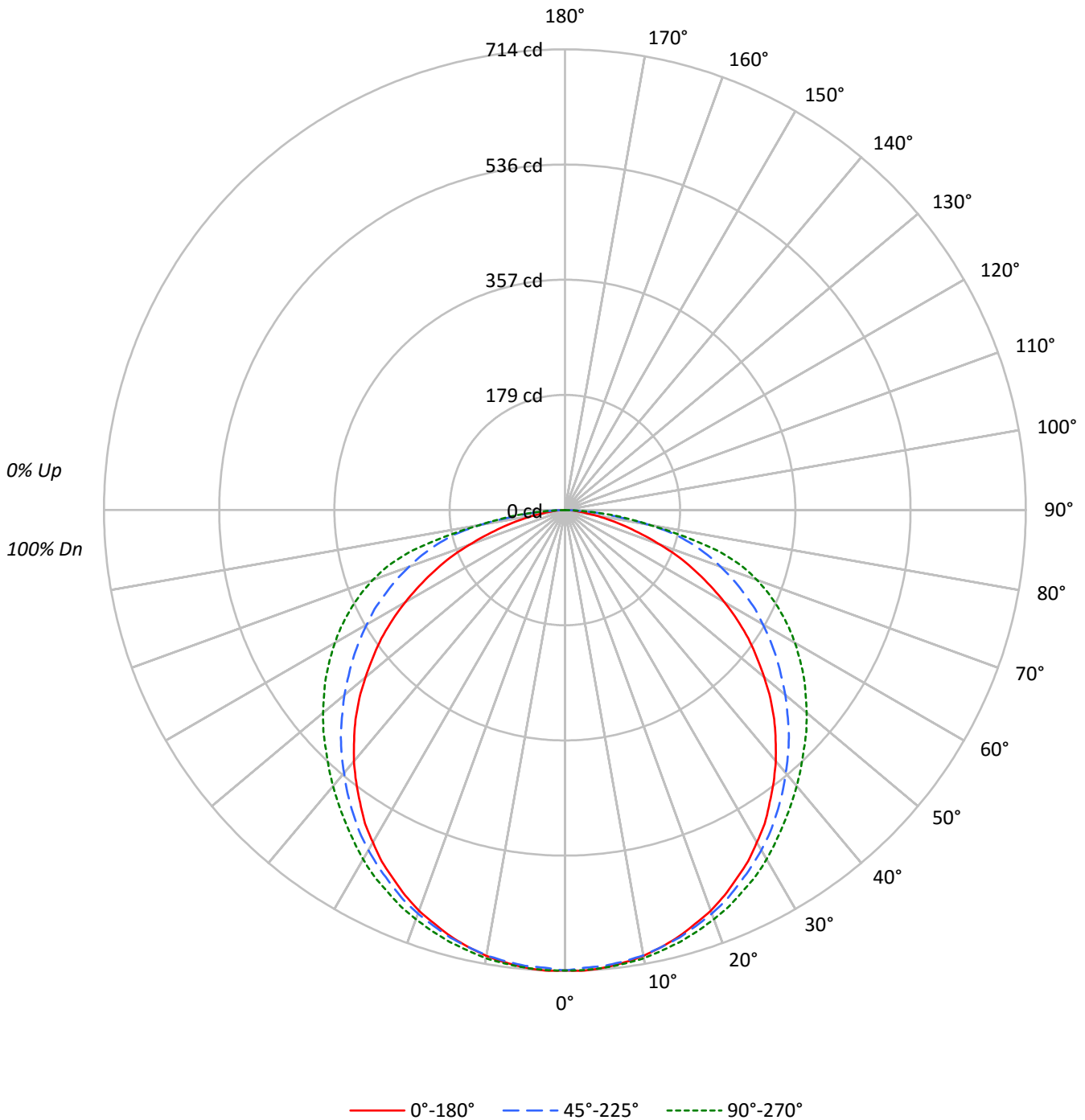
Input Watts (W): 24.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	960	960	960
5°	961	957	961
10°	958	957	963
15°	953	955	964
20°	946	953	966
25°	935	949	968
30°	924	945	971
35°	909	941	972
40°	893	935	981
45°	872	934	997
50°	844	933	1023
55°	814	939	1060
60°	768	954	1107
65°	709	976	1169
70°	619	1010	1246
75°	503	1063	1287
80°	371	1041	1041
85°	284	767	868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.6	3.1
10°-20°	194.1	8.8
20°-30°	295.5	13.4
30°-40°	358.8	16.3
40°-50°	379.0	17.2
50°-60°	357.7	16.3
60°-70°	297.4	13.5
70°-80°	195.6	8.9
80°-90°	53.3	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°	557.1	25.3
0°-40°	915.9	41.7
0°-60°	1652.6	75.2
0°-90°	2199.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2199.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	714	714	714	714	714	
5°	712	712	709	712	712	68
15°	684	685	686	692	692	193
25°	630	633	639	650	652	290
35°	553	560	573	587	592	346
45°	458	468	491	515	524	353
55°	347	362	400	438	452	309
65°	223	249	307	352	367	220
75°	97	141	204	242	248	104
85°	18	40	50	55	56	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	713.5	713.5	713.5	713.5	713.5
2.5°	714.4	713.5	709.8	713.5	713.5
5°	711.6	711.6	708.9	711.6	711.6
7.5°	707.0	707.0	705.2	708.9	708.9
10°	701.5	701.5	700.6	705.2	705.2
12.5°	693.2	694.1	693.2	698.7	698.7
15°	684.0	684.9	685.8	692.3	692.3
17.5°	672.0	673.9	675.7	683.1	684.0
20°	661.0	661.9	665.6	673.9	674.8
22.5°	646.3	649.0	653.6	661.9	664.7
25°	629.7	633.4	638.9	649.9	651.8
27.5°	614.0	616.8	624.2	636.1	639.8
30°	594.7	599.3	608.5	620.5	625.1
32.5°	576.3	580.9	591.9	604.8	608.5
35°	553.3	559.7	572.6	587.3	591.9
37.5°	531.2	537.6	553.3	569.9	575.4
40°	508.2	515.5	532.1	551.4	558.8
42.5°	483.3	493.4	511.9	533.0	541.3
45°	458.5	467.7	490.7	514.6	523.8
47.5°	431.8	442.8	467.7	496.2	507.3
50°	403.2	417.0	445.6	476.9	488.8
52.5°	374.7	390.3	422.6	457.5	470.4
55°	347.1	361.8	400.5	438.2	452.0
57.5°	316.7	335.1	377.4	418.0	431.8
60°	285.4	305.6	354.4	396.8	411.5
62.5°	254.1	277.1	332.3	374.7	390.3
65°	222.8	248.6	306.6	351.7	367.3
67.5°	192.4	220.9	282.6	327.7	343.4
70°	157.4	193.3	256.8	301.0	316.7
72.5°	125.2	166.6	232.0	273.4	287.2
75°	96.7	140.9	204.4	242.1	247.6
77.5°	70.9	115.1	175.8	188.7	189.6
80°	47.9	92.1	134.4	132.6	134.4
82.5°	31.3	69.0	84.7	94.8	95.7
85°	18.4	40.5	49.7	55.2	56.2
87.5°	9.2	13.8	17.5	18.4	20.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)