

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: P309146

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CA08-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: P309146
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 2214.0 lumens
Efficiency: N/A
Efficacy: 102.0 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

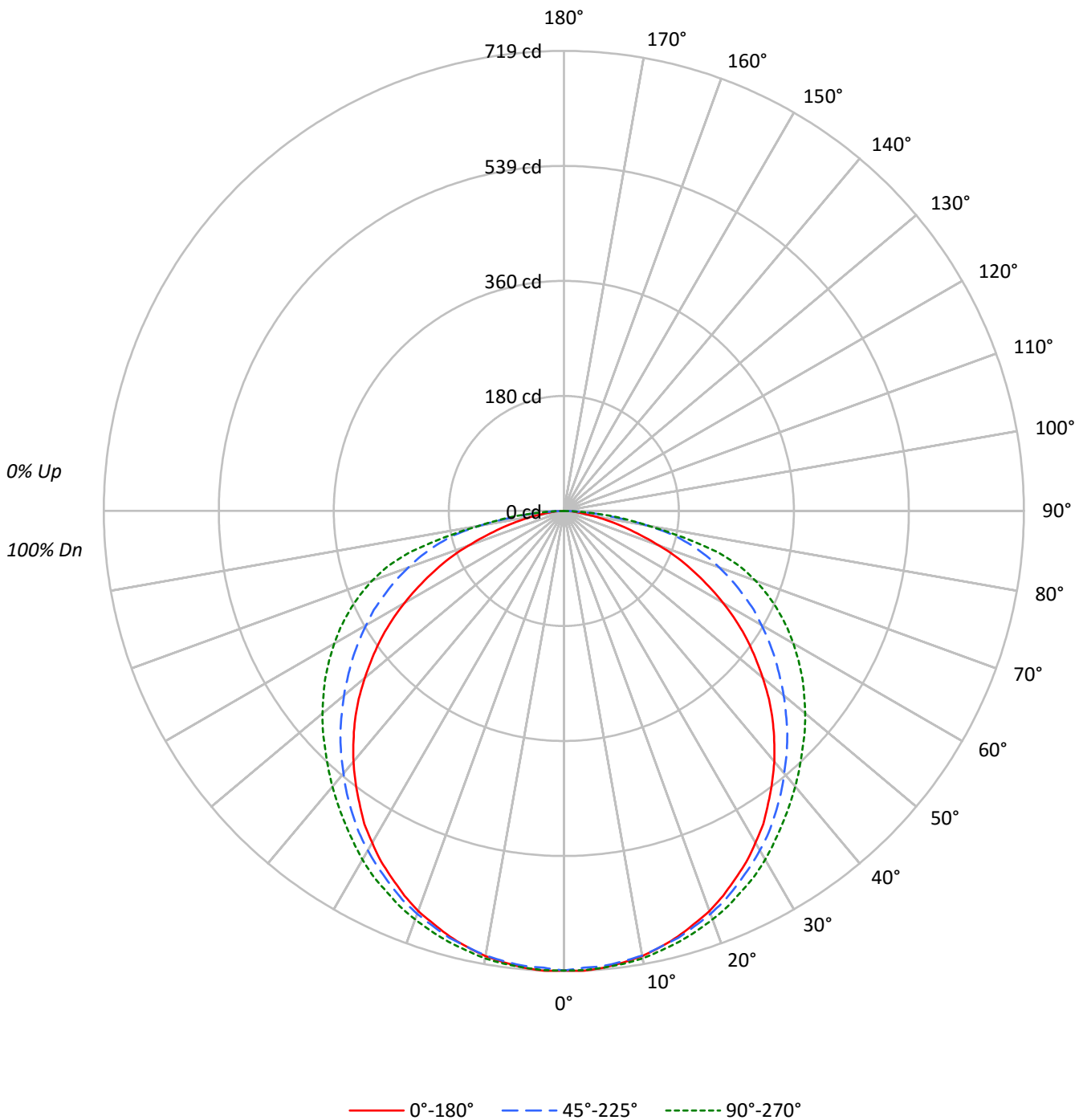
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	966	966	966
5°	968	964	968
10°	965	964	970
15°	959	962	971
20°	953	959	973
25°	941	955	974
30°	930	952	978
35°	915	947	979
40°	899	941	988
45°	878	940	1004
50°	850	939	1030
55°	820	946	1068
60°	773	960	1115
65°	714	983	1177
70°	624	1017	1254
75°	506	1070	1296
80°	373	1048	1048
85°	286	773	872



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	3.1
10°-20°	195.4	8.8
20°-30°	297.5	13.4
30°-40°	361.2	16.3
40°-50°	381.6	17.2
50°-60°	360.1	16.3
60°-70°	299.4	13.5
70°-80°	197.0	8.9
80°-90°	53.7	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°	560.9	25.3
0°-40°	922.2	41.7
0°-60°	1663.9	75.2
0°-90°	2214.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2214.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	716	716	714	716	716	68
15°	689	690	690	697	697	194
25°	634	638	643	654	656	292
35°	557	564	576	591	596	349
45°	462	471	494	518	527	355
55°	349	364	403	441	455	311
65°	224	250	309	354	370	222
75°	97	142	206	244	249	105
85°	18	41	50	56	56	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718.3	718.3	718.3	718.3	718.3
2.5°	719.3	718.3	714.6	718.3	718.3
5°	716.5	716.5	713.7	716.5	716.5
7.5°	711.8	711.8	710.0	713.7	713.7
10°	706.3	706.3	705.4	710.0	710.0
12.5°	697.9	698.9	697.9	703.5	703.5
15°	688.7	689.6	690.5	697.0	697.0
17.5°	676.6	678.5	680.3	687.7	688.7
20°	665.5	666.4	670.1	678.5	679.4
22.5°	650.7	653.5	658.1	666.4	669.2
25°	634.0	637.7	643.3	654.4	656.2
27.5°	618.2	621.0	628.4	640.5	644.2
30°	598.8	603.4	612.7	624.7	629.4
32.5°	580.2	584.9	596.0	609.0	612.7
35°	557.1	563.5	576.5	591.4	596.0
37.5°	534.8	541.3	557.1	573.7	579.3
40°	511.6	519.1	535.7	555.2	562.6
42.5°	486.6	496.8	515.3	536.7	545.0
45°	461.6	470.9	494.0	518.1	527.4
47.5°	434.7	445.8	470.9	499.6	510.7
50°	406.0	419.9	448.6	480.1	492.2
52.5°	377.2	393.0	425.4	460.7	473.6
55°	349.4	364.3	403.2	441.2	455.1
57.5°	318.8	337.4	380.0	420.8	434.7
60°	287.3	307.7	356.8	399.5	414.3
62.5°	255.8	279.0	334.6	377.2	393.0
65°	224.3	250.3	308.7	354.1	369.8
67.5°	193.7	222.5	284.6	330.0	345.7
70°	158.5	194.6	258.6	303.1	318.8
72.5°	126.1	167.8	233.6	275.3	289.2
75°	97.3	141.8	205.8	243.8	249.3
77.5°	71.4	115.9	177.0	190.0	190.9
80°	48.2	92.7	135.3	133.5	135.3
82.5°	31.5	69.5	85.3	95.5	96.4
85°	18.5	40.8	50.1	55.6	56.5
87.5°	9.3	13.9	17.6	18.5	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)