

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: P309148

Luminaire Tested: **24FCZ2-30HE-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: P309148
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 2226.0 lumens
Efficiency: N/A
Efficacy: 101.2 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

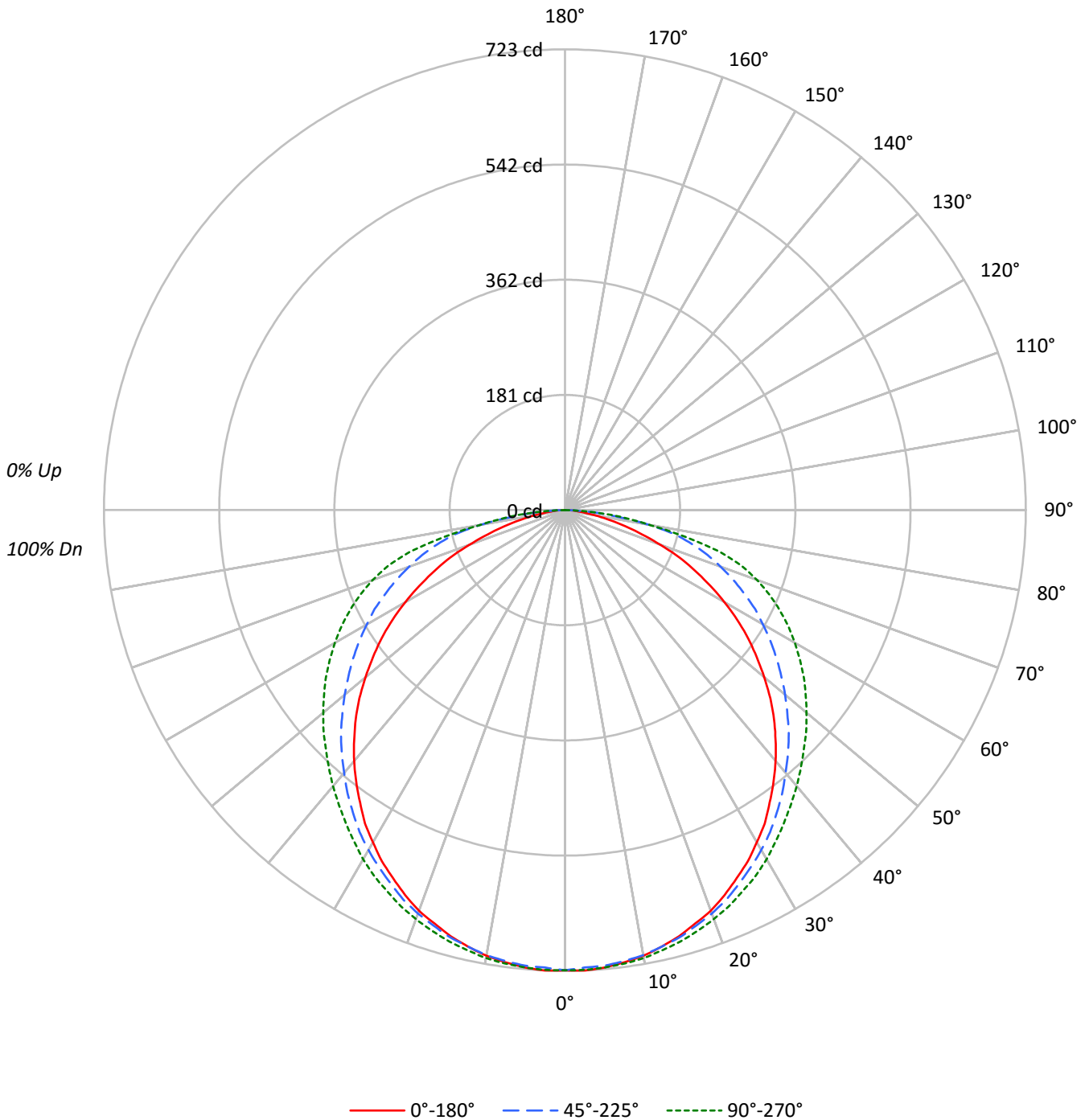
Input Watts (W): 22
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	972	972	972
5°	973	969	973
10°	970	969	975
15°	964	967	976
20°	958	965	978
25°	946	960	980
30°	935	957	983
35°	920	952	984
40°	903	946	994
45°	883	945	1009
50°	854	944	1036
55°	824	951	1073
60°	777	966	1121
65°	718	988	1184
70°	627	1023	1261
75°	509	1076	1303
80°	376	1055	1055
85°	287	777	877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	3.1
10°-20°	196.5	8.8
20°-30°	299.1	13.4
30°-40°	363.2	16.3
40°-50°	383.7	17.2
50°-60°	362.1	16.3
60°-70°	301.0	13.5
70°-80°	198.1	8.9
80°-90°	54.0	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°	564.0	25.3
0°-40°	927.2	41.7
0°-60°	1672.9	75.2
0°-90°	2226.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2226.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	722	722	722	722	722	
5°	720	720	718	720	720	68
15°	692	693	694	701	701	195
25°	637	641	647	658	660	294
35°	560	567	580	595	599	351
45°	464	473	497	521	530	357
55°	351	366	405	444	458	313
65°	226	252	310	356	372	223
75°	98	143	207	245	251	105
85°	19	41	50	56	57	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	722.2	722.2	722.2	722.2	722.2
2.5°	723.2	722.2	718.5	722.2	722.2
5°	720.4	720.4	717.6	720.4	720.4
7.5°	715.7	715.7	713.8	717.6	717.6
10°	710.1	710.1	709.2	713.8	713.8
12.5°	701.7	702.7	701.7	707.3	707.3
15°	692.4	693.3	694.3	700.8	700.8
17.5°	680.3	682.2	684.0	691.5	692.4
20°	669.1	670.0	673.8	682.2	683.1
22.5°	654.2	657.0	661.7	670.0	672.8
25°	637.4	641.2	646.7	657.9	659.8
27.5°	621.6	624.4	631.8	643.9	647.7
30°	602.0	606.7	616.0	628.1	632.8
32.5°	583.4	588.0	599.2	612.3	616.0
35°	560.1	566.6	579.6	594.6	599.2
37.5°	537.7	544.2	560.1	576.9	582.4
40°	514.4	521.9	538.6	558.2	565.7
42.5°	489.3	499.5	518.1	539.6	548.0
45°	464.1	473.4	496.7	520.9	530.3
47.5°	437.1	448.2	473.4	502.3	513.5
50°	408.2	422.2	451.0	482.7	494.8
52.5°	379.3	395.1	427.7	463.2	476.2
55°	351.3	366.2	405.4	443.6	457.6
57.5°	320.6	339.2	382.1	423.1	437.1
60°	288.9	309.4	358.8	401.7	416.6
62.5°	257.2	280.5	336.4	379.3	395.1
65°	225.5	251.6	310.3	356.0	371.8
67.5°	194.8	223.7	286.1	331.8	347.6
70°	159.4	195.7	260.0	304.7	320.6
72.5°	126.7	168.7	234.8	276.8	290.8
75°	97.9	142.6	206.9	245.1	250.7
77.5°	71.8	116.5	178.0	191.0	192.0
80°	48.5	93.2	136.1	134.2	136.1
82.5°	31.7	69.9	85.7	96.0	96.9
85°	18.6	41.0	50.3	55.9	56.8
87.5°	9.3	14.0	17.7	18.6	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)