

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: P309184

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CP250-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: P309184
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-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
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: 2066.0 lumens
Efficiency: N/A
Efficacy: 93.9 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

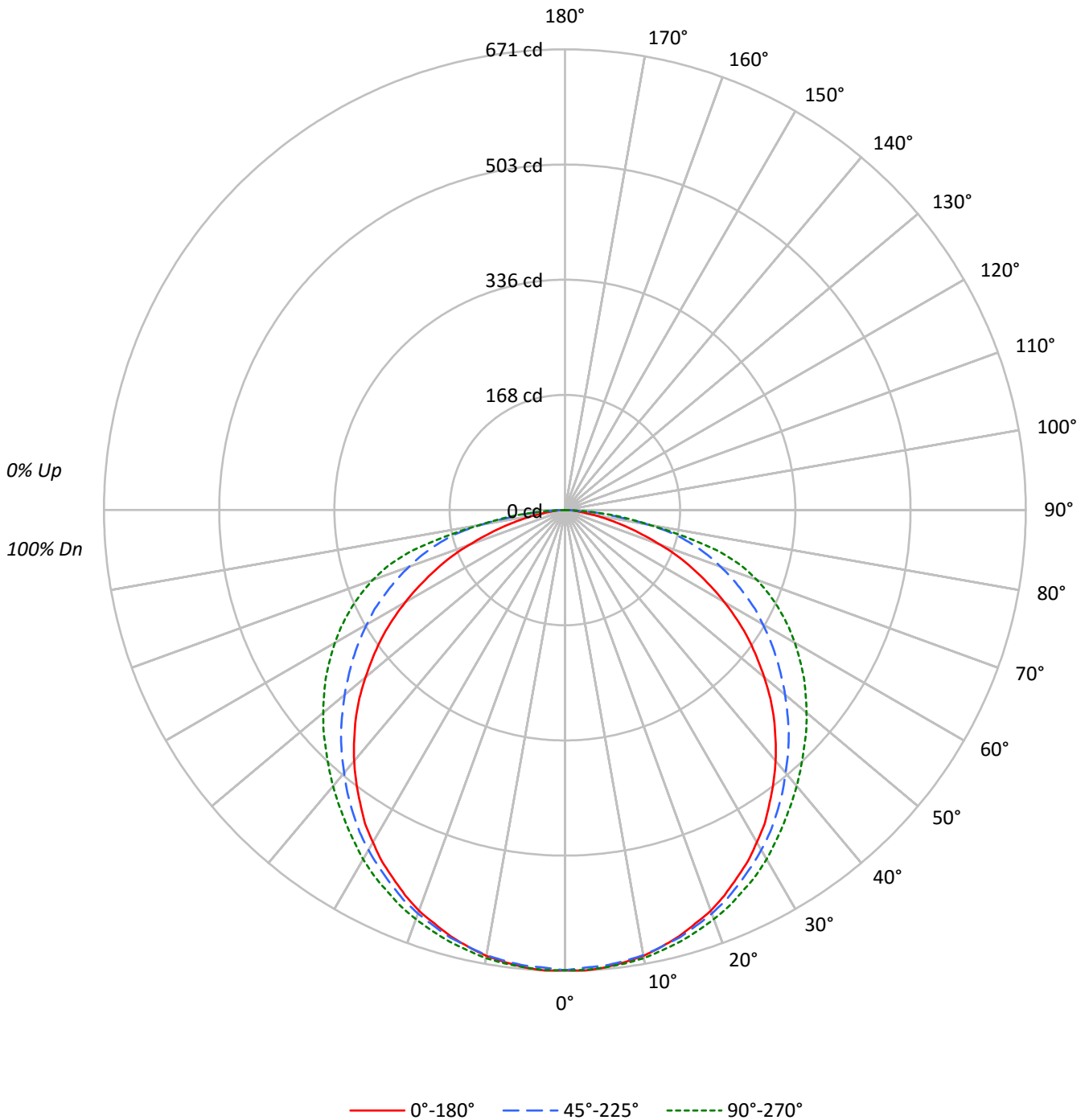
Input Watts (W): 22
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	902	902	902
5°	903	900	903
10°	900	899	905
15°	895	898	906
20°	889	895	908
25°	878	891	909
30°	868	888	912
35°	854	884	913
40°	839	878	922
45°	820	877	936
50°	793	876	961
55°	765	882	996
60°	721	896	1040
65°	666	917	1099
70°	582	949	1170
75°	472	998	1210
80°	349	979	979
85°	267	721	815



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.5	3.1
10°-20°	182.3	8.8
20°-30°	277.6	13.4
30°-40°	337.1	16.3
40°-50°	356.1	17.2
50°-60°	336.0	16.3
60°-70°	279.4	13.5
70°-80°	183.8	8.9
80°-90°	50.1	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°	523.5	25.3
0°-40°	860.5	41.7
0°-60°	1552.7	75.2
0°-90°	2066.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2066.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	670	670	670	670	670	
5°	669	669	666	669	669	64
15°	643	644	644	650	650	181
25°	592	595	600	611	612	273
35°	520	526	538	552	556	325
45°	431	439	461	484	492	332
55°	326	340	376	412	425	290
65°	209	234	288	330	345	207
75°	91	132	192	228	233	98
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°	670.3	670.3	670.3	670.3	670.3
2.5°	671.2	670.3	666.9	670.3	670.3
5°	668.6	668.6	666.0	668.6	668.6
7.5°	664.3	664.3	662.5	666.0	666.0
10°	659.1	659.1	658.2	662.5	662.5
12.5°	651.3	652.2	651.3	656.5	656.5
15°	642.6	643.5	644.4	650.4	650.4
17.5°	631.4	633.1	634.9	641.8	642.6
20°	621.0	621.9	625.3	633.1	634.0
22.5°	607.2	609.8	614.1	621.9	624.5
25°	591.6	595.1	600.3	610.6	612.4
27.5°	576.9	579.5	586.4	597.7	601.1
30°	558.7	563.1	571.7	583.0	587.3
32.5°	541.4	545.8	556.1	568.3	571.7
35°	519.8	525.9	538.0	551.8	556.1
37.5°	499.1	505.1	519.8	535.4	540.6
40°	477.4	484.4	499.9	518.1	525.0
42.5°	454.1	463.6	480.9	500.8	508.6
45°	430.7	439.4	461.0	483.5	492.1
47.5°	405.6	416.0	439.4	466.2	476.6
50°	378.8	391.8	418.6	448.0	459.3
52.5°	352.0	366.7	397.0	429.9	442.0
55°	326.1	339.9	376.2	411.7	424.7
57.5°	297.5	314.8	354.6	392.7	405.6
60°	268.1	287.2	333.0	372.8	386.6
62.5°	238.7	260.3	312.2	352.0	366.7
65°	209.3	233.5	288.0	330.4	345.1
67.5°	180.8	207.6	265.5	307.9	322.6
70°	147.9	181.6	241.3	282.8	297.5
72.5°	117.6	156.6	218.0	256.9	269.9
75°	90.8	132.3	192.0	227.5	232.7
77.5°	66.6	108.1	165.2	177.3	178.2
80°	45.0	86.5	126.3	124.5	126.3
82.5°	29.4	64.9	79.6	89.1	90.0
85°	17.3	38.1	46.7	51.9	52.8
87.5°	8.6	13.0	16.4	17.3	19.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)