

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: P314187

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CP250-W2A-U-4000K**

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: P314187
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-L83050-S-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 4000K 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: 2874.0 lumens
Efficiency: N/A
Efficacy: 133.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

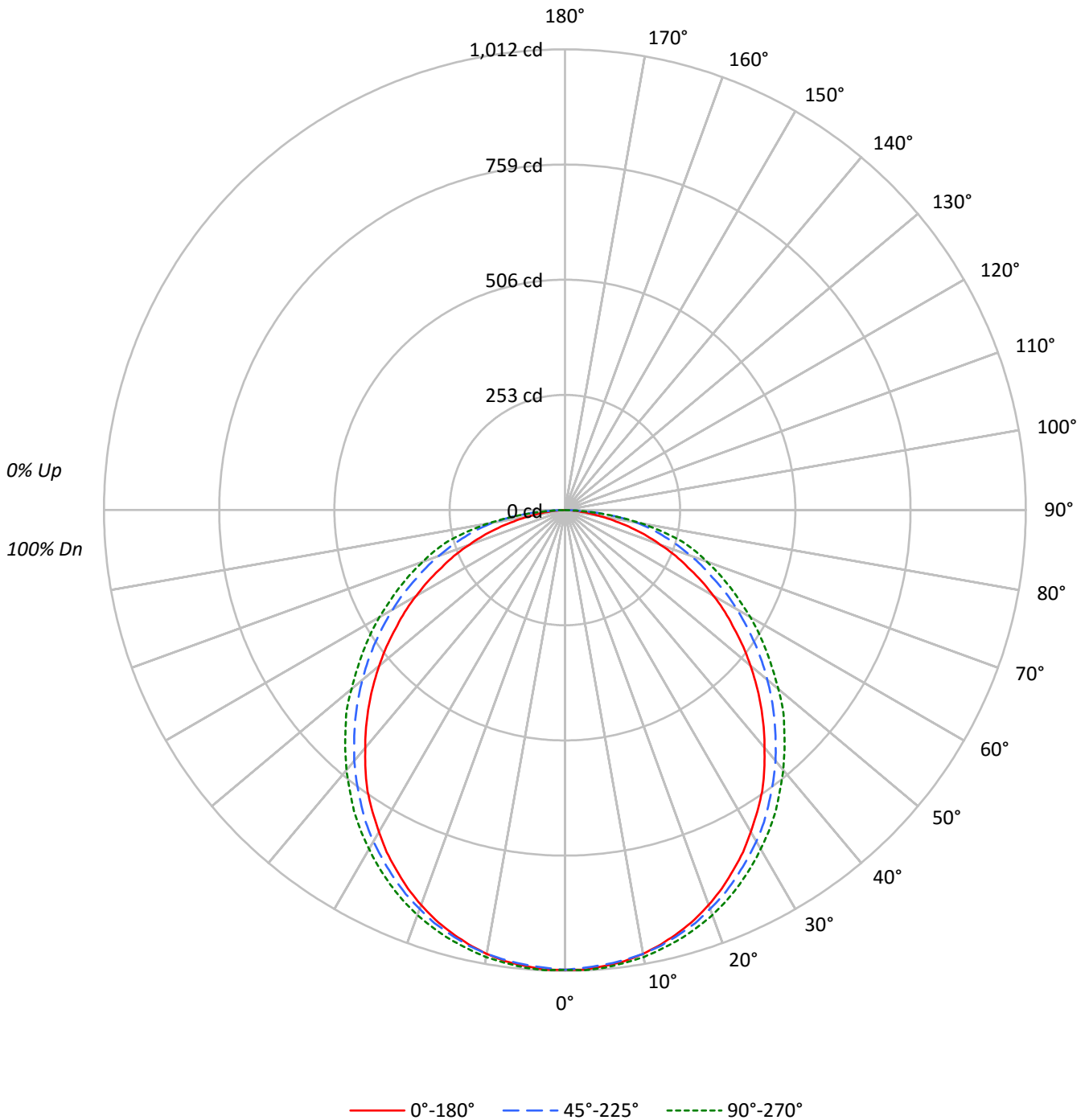
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L83050-S-CP250-W2A-U-4000K

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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1359	1359	1359
5°	1358	1354	1362
10°	1352	1352	1362
15°	1339	1345	1359
20°	1321	1335	1356
25°	1297	1321	1347
30°	1268	1306	1336
35°	1240	1285	1326
40°	1198	1264	1310
45°	1159	1239	1296
50°	1114	1215	1280
55°	1064	1193	1268
60°	1014	1174	1265
65°	950	1154	1273
70°	880	1160	1307
75°	788	1182	1381
80°	637	1252	1351
85°	479	1099	1071



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	3.3
10°-20°	273.1	9.5
20°-30°	410.6	14.3
30°-40°	489.0	17.0
40°-50°	500.5	17.4
50°-60°	450.6	15.7
60°-70°	353.9	12.3
70°-80°	229.7	8.0
80°-90°	71.0	2.5
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°	779.3	27.1
0°-40°	1268.3	44.1
0°-60°	2219.4	77.2
0°-90°	2874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2874.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1010	1010	1010	1010	1010	
5°	1005	1007	1002	1008	1009	96
15°	961	964	966	974	976	271
25°	874	881	890	905	907	402
35°	755	764	782	802	807	471
45°	609	624	651	676	681	469
55°	454	474	508	535	540	407
65°	298	321	362	392	400	297
75°	152	181	227	258	266	160
85°	31	58	71	69	69	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1009.7	1009.7	1009.7	1009.7	1009.7
2.5°	1010.6	1010.6	1006.0	1010.6	1011.5
5°	1005.1	1006.9	1002.4	1007.8	1008.7
7.5°	999.6	999.6	996.9	1002.4	1003.3
10°	989.6	990.5	989.6	996.0	996.9
12.5°	976.8	978.6	979.5	985.9	986.8
15°	961.3	964.0	965.8	974.1	975.9
17.5°	943.9	946.7	951.2	960.4	962.2
20°	922.9	926.6	932.1	943.9	946.7
22.5°	900.1	903.8	912.9	923.8	928.4
25°	873.6	880.9	890.1	904.7	907.4
27.5°	847.2	853.6	865.4	880.9	884.6
30°	816.1	826.2	840.8	856.3	859.9
32.5°	786.0	796.0	813.4	829.8	834.4
35°	755.0	764.1	782.3	801.5	807.0
37.5°	719.4	731.2	751.3	770.5	776.0
40°	681.9	696.5	719.4	739.4	745.8
42.5°	646.3	661.8	684.7	706.6	713.9
45°	608.9	623.5	650.9	675.5	681.0
47.5°	570.6	587.0	616.2	640.8	650.0
50°	532.2	549.6	580.6	606.2	611.6
52.5°	493.9	512.1	545.0	572.4	575.1
55°	453.7	473.8	508.5	535.0	540.4
57.5°	417.2	434.5	472.0	499.4	505.7
60°	377.0	396.2	436.4	461.9	470.1
62.5°	338.7	358.8	400.8	426.3	433.6
65°	298.5	321.3	362.4	392.5	399.8
67.5°	263.8	285.7	329.6	358.8	366.1
70°	223.7	248.3	294.9	325.0	332.3
72.5°	189.0	214.5	261.1	290.3	301.3
75°	151.5	180.8	227.3	258.3	265.7
77.5°	115.0	148.8	196.3	220.0	220.0
80°	82.2	117.8	161.6	172.5	174.4
82.5°	53.9	88.6	119.6	118.7	118.7
85°	31.0	57.5	71.2	69.4	69.4
87.5°	11.9	23.7	25.6	25.6	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)