

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: P311167

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CA08-W2A-U-3500K**

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: P311167
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-L82765-S-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 2880.0 lumens
Efficiency: N/A
Efficacy: 135.8 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

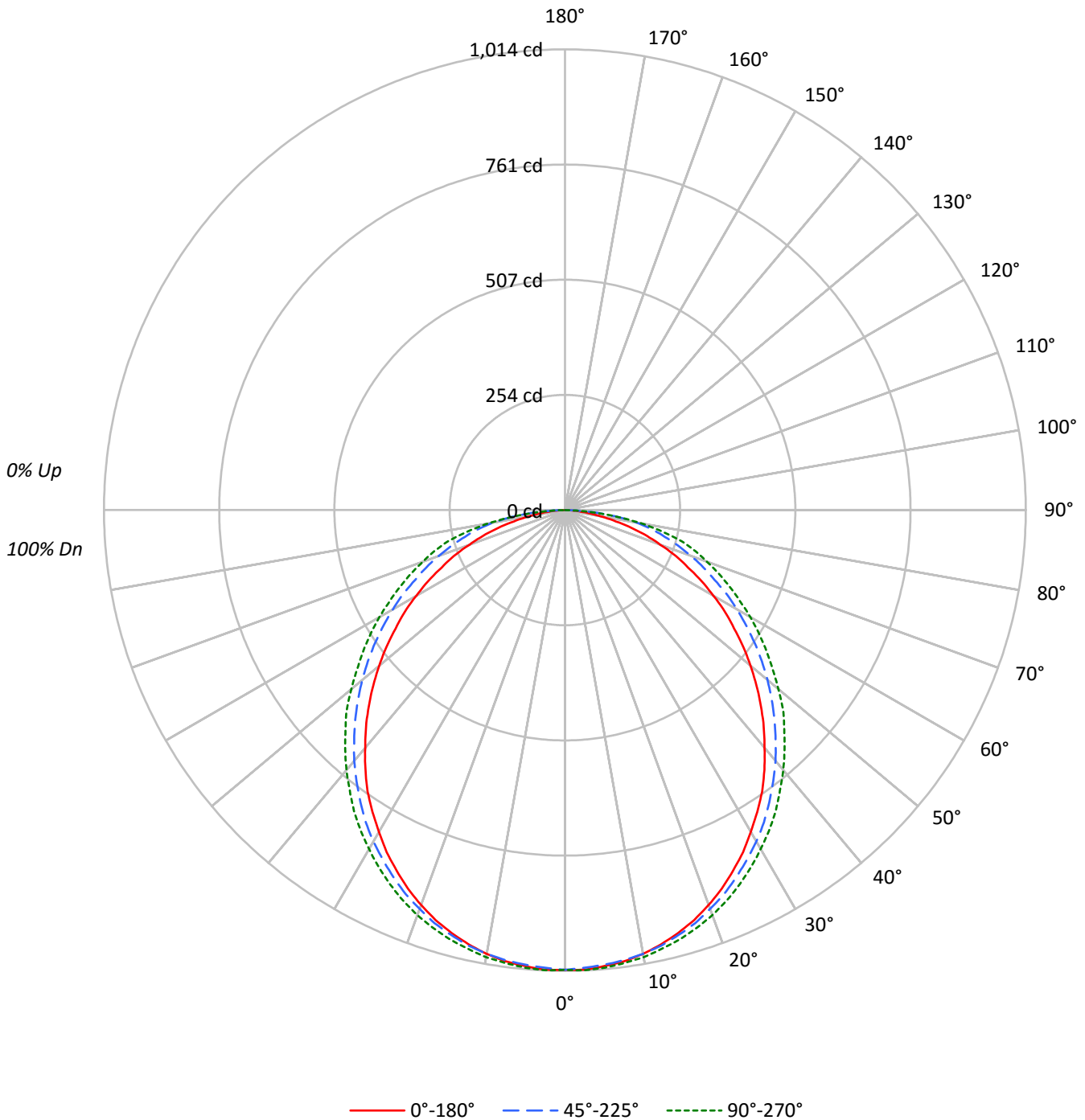
Input Watts (W): 21.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L82765-S-CA08-W2A-U-3500K

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°	1361	1361	1361
5°	1360	1357	1365
10°	1355	1355	1365
15°	1342	1348	1362
20°	1324	1337	1358
25°	1300	1324	1350
30°	1271	1309	1339
35°	1243	1288	1328
40°	1200	1266	1313
45°	1161	1241	1298
50°	1116	1218	1283
55°	1067	1195	1270
60°	1017	1177	1268
65°	952	1156	1276
70°	882	1162	1310
75°	790	1184	1384
80°	638	1254	1354
85°	480	1102	1073



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.8	3.3
10°-20°	273.7	9.5
20°-30°	411.4	14.3
30°-40°	490.1	17.0
40°-50°	501.6	17.4
50°-60°	451.5	15.7
60°-70°	354.6	12.3
70°-80°	230.2	8.0
80°-90°	71.2	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°	780.9	27.1
0°-40°	1271.0	44.1
0°-60°	2224.1	77.2
0°-90°	2880.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2880.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	1007	1009	1004	1010	1011	96
15°	963	966	968	976	978	272
25°	876	883	892	907	909	403
35°	756	766	784	803	809	472
45°	610	625	652	677	682	470
55°	455	475	510	536	542	408
65°	299	322	363	393	401	298
75°	152	181	228	259	266	161
85°	31	58	71	70	70	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1011.8	1011.8	1011.8	1011.8	1011.8
2.5°	1012.7	1012.7	1008.1	1012.7	1013.6
5°	1007.2	1009.0	1004.4	1009.9	1010.8
7.5°	1001.7	1001.7	999.0	1004.4	1005.4
10°	991.6	992.6	991.6	998.0	999.0
12.5°	978.8	980.7	981.6	988.0	988.9
15°	963.3	966.0	967.9	976.1	977.9
17.5°	945.9	948.6	953.2	962.4	964.2
20°	924.9	928.5	934.0	945.9	948.6
22.5°	902.0	905.6	914.8	925.8	930.3
25°	875.5	882.8	891.9	906.6	909.3
27.5°	848.9	855.3	867.2	882.8	886.4
30°	817.8	827.9	842.5	858.1	861.7
32.5°	787.6	797.7	815.1	831.5	836.1
35°	756.5	765.7	784.0	803.2	808.7
37.5°	720.9	732.8	752.9	772.1	777.6
40°	683.4	698.0	720.9	741.0	747.4
42.5°	647.7	663.2	686.1	708.1	715.4
45°	610.2	624.8	652.2	676.9	682.4
47.5°	571.7	588.2	617.5	642.2	651.3
50°	533.3	550.7	581.8	607.4	612.9
52.5°	494.9	513.2	546.1	573.6	576.3
55°	454.7	474.8	509.5	536.1	541.6
57.5°	418.1	435.4	472.9	500.4	506.8
60°	377.8	397.0	437.3	462.9	471.1
62.5°	339.4	359.5	401.6	427.2	434.5
65°	299.1	322.0	363.2	393.4	400.7
67.5°	264.4	286.3	330.2	359.5	366.8
70°	224.1	248.8	295.5	325.7	333.0
72.5°	189.4	215.0	261.6	290.9	301.9
75°	151.9	181.1	227.8	258.9	266.2
77.5°	115.3	149.1	196.7	220.5	220.5
80°	82.3	118.0	161.9	172.9	174.7
82.5°	54.0	88.7	119.8	118.9	118.9
85°	31.1	57.6	71.4	69.5	69.5
87.5°	11.9	23.8	25.6	25.6	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)