

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: P311173

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-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: P311173
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-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 3083.0 lumens
Efficiency: N/A
Efficacy: 140.1 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

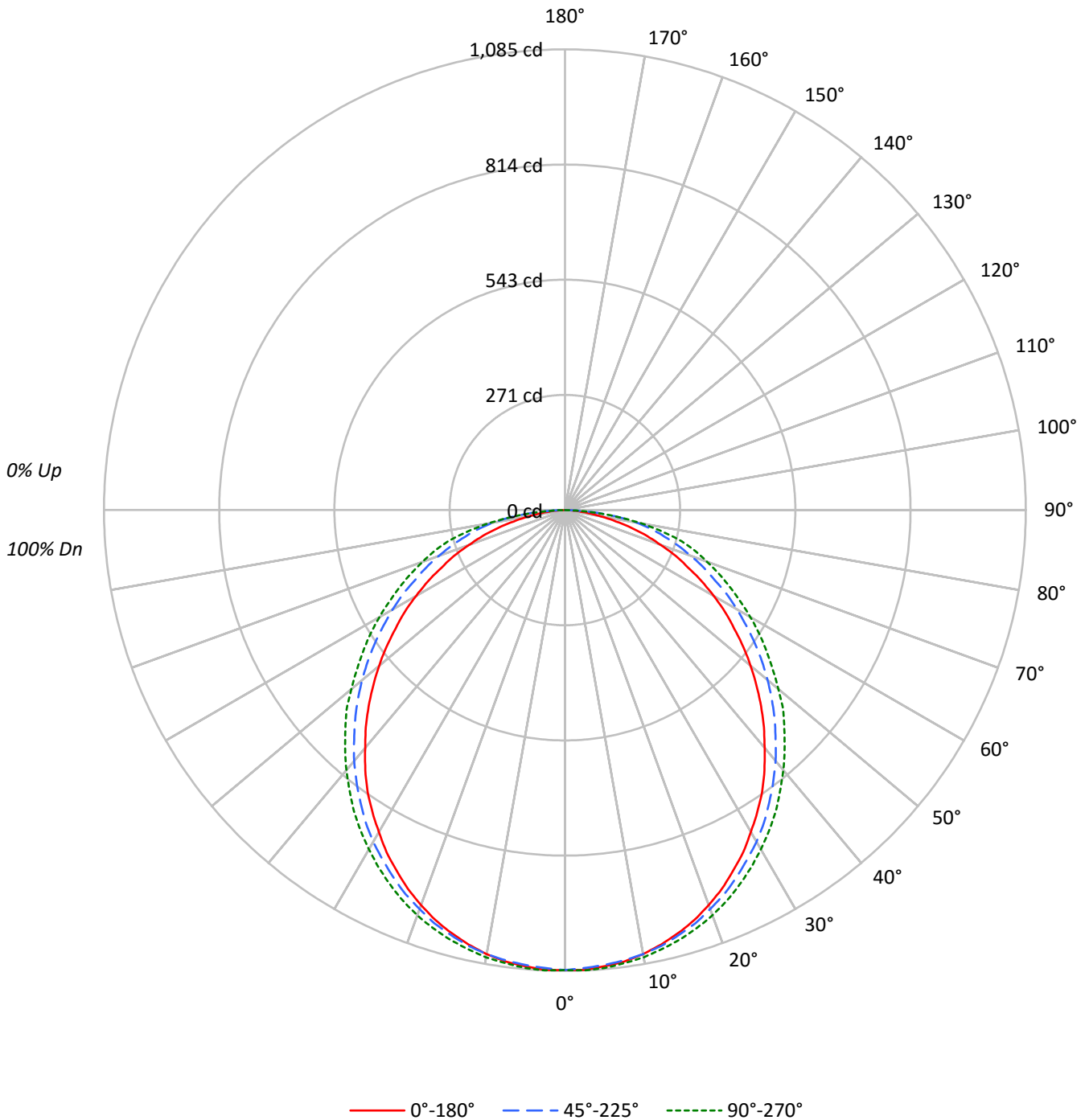
Input Watts (W): 22
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L82765-S-CA08-W2A-U-6500K

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°	1457	1457	1457
5°	1456	1452	1462
10°	1450	1450	1461
15°	1436	1443	1458
20°	1418	1432	1454
25°	1391	1417	1445
30°	1360	1401	1433
35°	1330	1378	1422
40°	1285	1355	1405
45°	1243	1329	1390
50°	1195	1304	1373
55°	1142	1280	1360
60°	1088	1260	1357
65°	1019	1238	1365
70°	944	1244	1402
75°	845	1267	1482
80°	683	1343	1449
85°	514	1179	1149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.5	3.3
10°-20°	293.0	9.5
20°-30°	440.4	14.3
30°-40°	524.6	17.0
40°-50°	536.9	17.4
50°-60°	483.4	15.7
60°-70°	379.6	12.3
70°-80°	246.4	8.0
80°-90°	76.2	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°	835.9	27.1
0°-40°	1360.5	44.1
0°-60°	2380.8	77.2
0°-90°	3083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3083.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1083	1083	1083	1083	1083	
5°	1078	1080	1075	1081	1082	102
15°	1031	1034	1036	1045	1047	291
25°	937	945	955	970	973	432
35°	810	820	839	860	866	505
45°	653	669	698	725	730	504
55°	487	508	546	574	580	436
65°	320	345	389	421	429	319
75°	163	194	244	277	285	172
85°	33	62	76	74	74	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1083.1	1083.1	1083.1	1083.1	1083.1
2.5°	1084.1	1084.1	1079.2	1084.1	1085.0
5°	1078.2	1080.1	1075.2	1081.1	1082.1
7.5°	1072.3	1072.3	1069.4	1075.2	1076.2
10°	1061.5	1062.5	1061.5	1068.4	1069.4
12.5°	1047.8	1049.8	1050.8	1057.6	1058.6
15°	1031.2	1034.1	1036.1	1044.9	1046.8
17.5°	1012.6	1015.5	1020.4	1030.2	1032.2
20°	990.0	994.0	999.8	1012.6	1015.5
22.5°	965.6	969.5	979.3	991.0	995.9
25°	937.2	945.0	954.8	970.5	973.4
27.5°	908.8	915.6	928.4	945.0	948.9
30°	875.5	886.2	901.9	918.6	922.5
32.5°	843.2	853.9	872.5	890.2	895.1
35°	809.9	819.7	839.2	859.8	865.7
37.5°	771.7	784.4	805.9	826.5	832.4
40°	731.5	747.2	771.7	793.2	800.1
42.5°	693.3	710.0	734.5	758.0	765.8
45°	653.2	668.8	698.2	724.7	730.5
47.5°	612.0	629.7	661.0	687.5	697.2
50°	570.9	589.5	622.8	650.2	656.1
52.5°	529.8	549.4	584.6	614.0	616.9
55°	486.7	508.2	545.5	573.9	579.7
57.5°	447.5	466.1	506.3	535.7	542.5
60°	404.4	425.0	468.1	495.5	504.3
62.5°	363.3	384.9	429.9	457.3	465.2
65°	320.2	344.7	388.8	421.1	428.9
67.5°	283.0	306.5	353.5	384.9	392.7
70°	239.9	266.4	316.3	348.6	356.5
72.5°	202.7	230.1	280.1	311.4	323.2
75°	162.6	193.9	243.8	277.1	285.0
77.5°	123.4	159.6	210.5	236.0	236.0
80°	88.1	126.3	173.3	185.1	187.0
82.5°	57.8	95.0	128.3	127.3	127.3
85°	33.3	61.7	76.4	74.4	74.4
87.5°	12.7	25.5	27.4	27.4	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)