

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: P314173

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CA125-W2A-U-4500K**

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: P314173
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 3115.0 lumens
Efficiency: N/A
Efficacy: 140.9 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

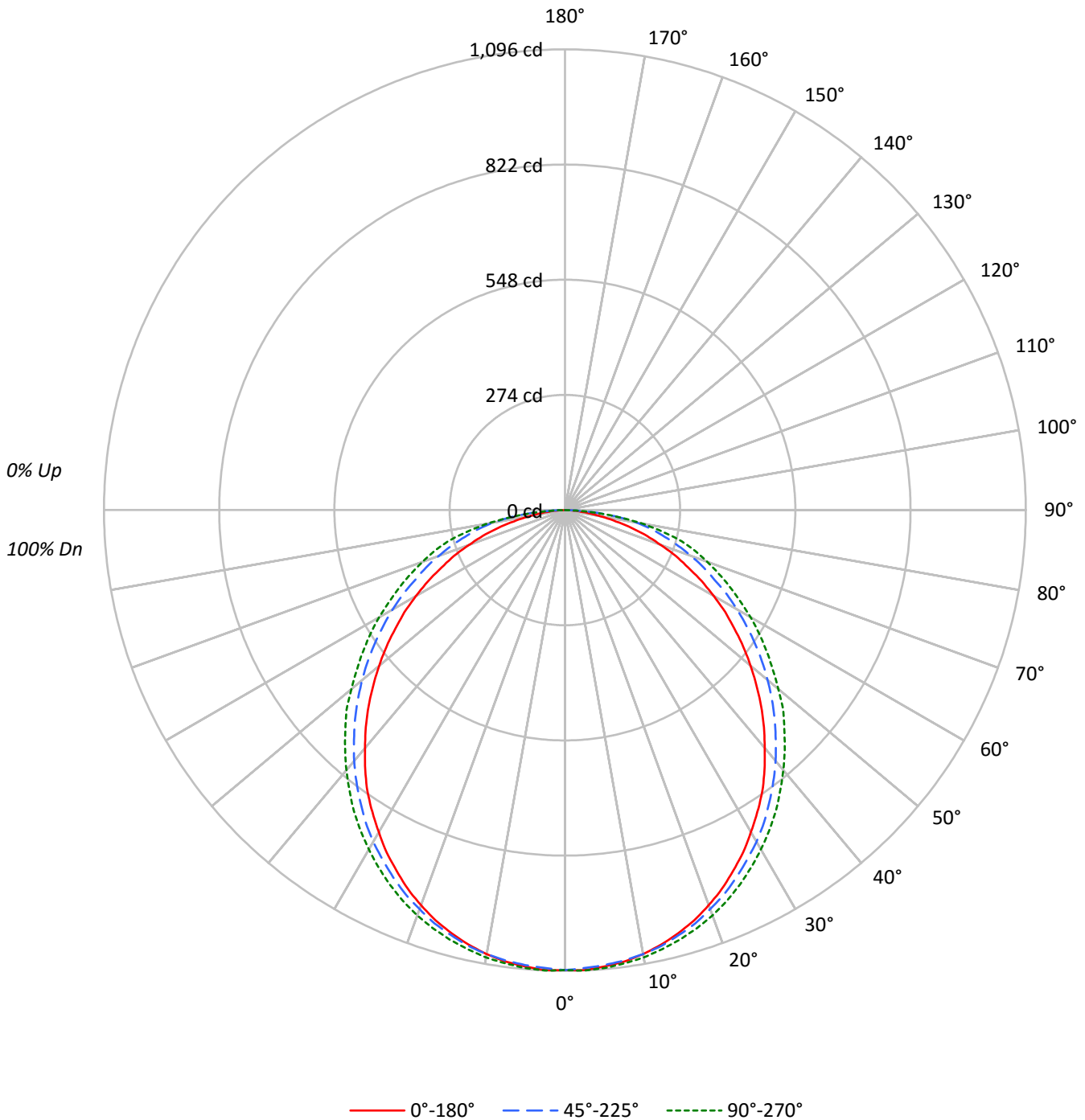
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L83050-S-CA125-W2A-U-4500K

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°	1472	1472	1472
5°	1471	1467	1477
10°	1465	1465	1476
15°	1451	1458	1473
20°	1432	1446	1469
25°	1406	1432	1460
30°	1374	1416	1448
35°	1344	1393	1437
40°	1298	1369	1420
45°	1256	1342	1404
50°	1207	1317	1388
55°	1154	1293	1374
60°	1100	1273	1371
65°	1030	1251	1380
70°	954	1257	1417
75°	854	1281	1497
80°	690	1357	1464
85°	519	1192	1161



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.6	3.3
10°-20°	296.0	9.5
20°-30°	445.0	14.3
30°-40°	530.0	17.0
40°-50°	542.5	17.4
50°-60°	488.4	15.7
60°-70°	383.5	12.3
70°-80°	248.9	8.0
80°-90°	77.0	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°	844.6	27.1
0°-40°	1374.7	44.1
0°-60°	2405.5	77.2
0°-90°	3115.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3115.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1094	1094	1094	1094	1094	
5°	1089	1091	1086	1092	1093	104
15°	1042	1045	1047	1056	1058	294
25°	947	955	965	980	984	436
35°	818	828	848	869	875	510
45°	660	676	706	732	738	509
55°	492	514	551	580	586	441
65°	324	348	393	426	433	322
75°	164	196	246	280	288	174
85°	34	62	77	75	75	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1094.3	1094.3	1094.3	1094.3	1094.3
2.5°	1095.3	1095.3	1090.4	1095.3	1096.3
5°	1089.4	1091.4	1086.4	1092.3	1093.3
7.5°	1083.4	1083.4	1080.5	1086.4	1087.4
10°	1072.6	1073.5	1072.6	1079.5	1080.5
12.5°	1058.7	1060.7	1061.7	1068.6	1069.6
15°	1041.9	1044.8	1046.8	1055.7	1057.7
17.5°	1023.1	1026.0	1031.0	1040.9	1042.9
20°	1000.3	1004.3	1010.2	1023.1	1026.0
22.5°	975.6	979.5	989.4	1001.3	1006.3
25°	946.9	954.8	964.7	980.5	983.5
27.5°	918.2	925.1	938.0	954.8	958.8
30°	884.6	895.4	911.3	928.1	932.1
32.5°	851.9	862.8	881.6	899.4	904.3
35°	818.3	828.2	847.9	868.7	874.7
37.5°	779.7	792.5	814.3	835.1	841.0
40°	739.1	754.9	779.7	801.4	808.4
42.5°	700.5	717.3	742.1	765.8	773.7
45°	660.0	675.8	705.5	732.2	738.1
47.5°	618.4	636.2	667.9	694.6	704.5
50°	576.8	595.6	629.3	657.0	662.9
52.5°	535.3	555.1	590.7	620.4	623.3
55°	491.8	513.5	551.1	579.8	585.7
57.5°	452.2	471.0	511.5	541.2	548.1
60°	408.6	429.4	473.0	500.7	509.6
62.5°	367.1	388.8	434.4	462.1	470.0
65°	323.5	348.3	392.8	425.5	433.4
67.5°	285.9	309.7	357.2	388.8	396.8
70°	242.4	269.1	319.6	352.2	360.2
72.5°	204.8	232.5	283.0	314.6	326.5
75°	164.2	195.9	246.4	280.0	287.9
77.5°	124.7	161.3	212.7	238.5	238.5
80°	89.0	127.6	175.1	187.0	189.0
82.5°	58.4	96.0	129.6	128.6	128.6
85°	33.6	62.3	77.2	75.2	75.2
87.5°	12.9	25.7	27.7	27.7	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)