

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: P311208

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP250-W2A-U-5700K**

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: P311208
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-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 5700K 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: 2854.0 lumens
Efficiency: N/A
Efficacy: 131.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

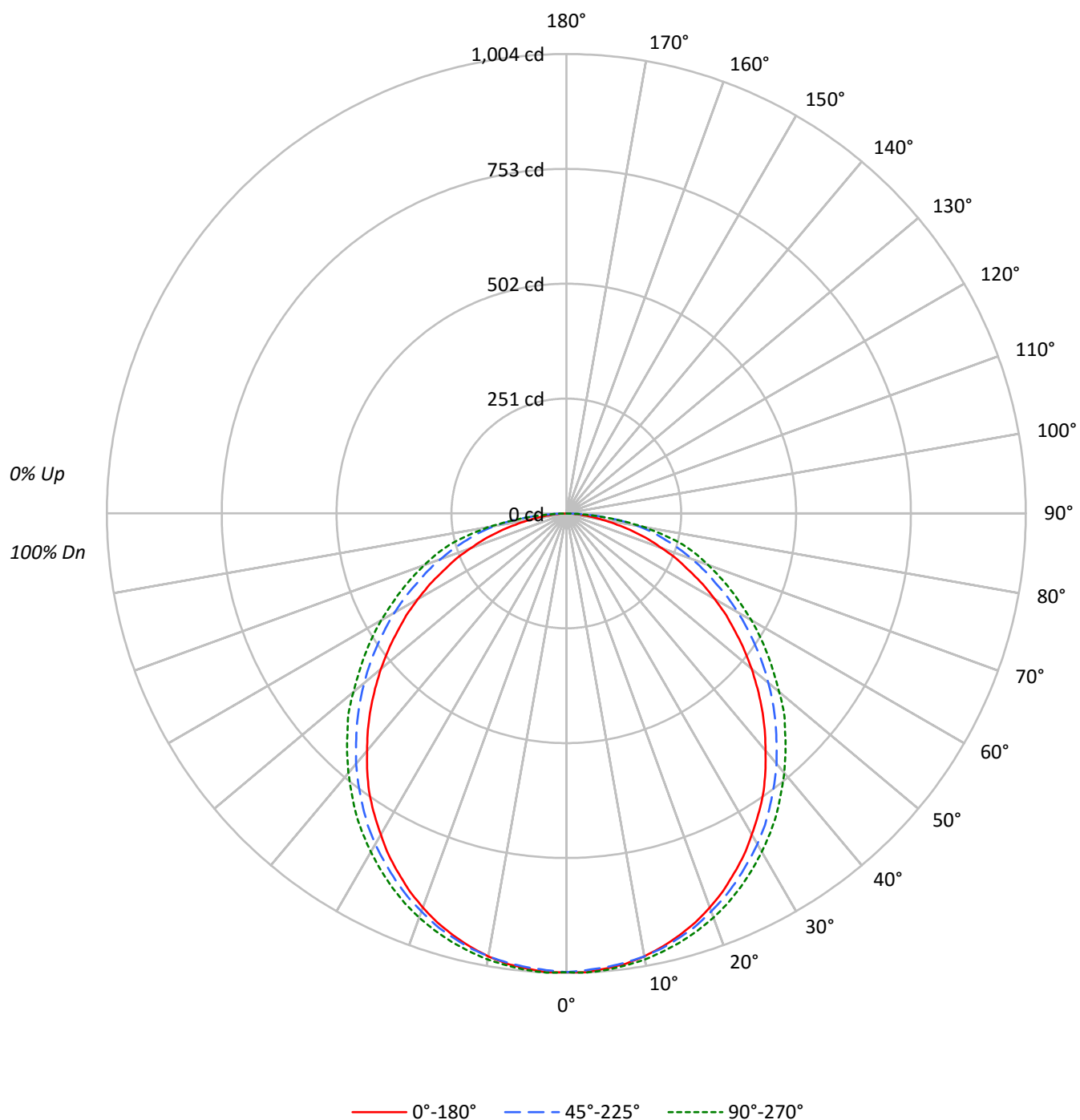
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1349	1349	1349
5°	1348	1344	1353
10°	1343	1343	1352
15°	1330	1336	1350
20°	1312	1325	1346
25°	1288	1312	1338
30°	1259	1297	1327
35°	1231	1276	1316
40°	1189	1255	1301
45°	1151	1230	1287
50°	1106	1207	1271
55°	1057	1184	1259
60°	1008	1166	1256
65°	944	1146	1264
70°	874	1152	1298
75°	782	1173	1371
80°	632	1244	1341
85°	475	1091	1064



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.9	3.3
10°-20°	271.2	9.5
20°-30°	407.7	14.3
30°-40°	485.6	17.0
40°-50°	497.0	17.4
50°-60°	447.5	15.7
60°-70°	351.4	12.3
70°-80°	228.1	8.0
80°-90°	70.5	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°	773.8	27.1
0°-40°	1259.5	44.1
0°-60°	2204.0	77.2
0°-90°	2854.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2854.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1003	1003	1003	1003	1003	
5°	998	1000	995	1001	1002	95
15°	955	957	959	967	969	269
25°	868	875	884	898	901	400
35°	750	759	777	796	801	468
45°	605	619	646	671	676	466
55°	450	470	505	531	537	404
65°	296	319	360	390	397	295
75°	150	180	226	256	264	159
85°	31	57	71	69	69	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1002.6	1002.6	1002.6	1002.6	1002.6
2.5°	1003.5	1003.5	999.0	1003.5	1004.4
5°	998.1	999.9	995.4	1000.8	1001.7
7.5°	992.7	992.7	989.9	995.4	996.3
10°	982.7	983.6	982.7	989.0	989.9
12.5°	970.0	971.8	972.7	979.1	980.0
15°	954.6	957.3	959.1	967.3	969.1
17.5°	937.4	940.1	944.6	953.7	955.5
20°	916.5	920.1	925.6	937.4	940.1
22.5°	893.8	897.5	906.5	917.4	921.9
25°	867.6	874.8	883.9	898.4	901.1
27.5°	841.3	847.6	859.4	874.8	878.4
30°	810.4	820.4	834.9	850.3	854.0
32.5°	780.5	790.5	807.7	824.0	828.6
35°	749.7	758.8	776.9	795.9	801.4
37.5°	714.4	726.1	746.1	765.1	770.6
40°	677.2	691.7	714.4	734.3	740.6
42.5°	641.8	657.2	679.9	701.7	708.9
45°	604.7	619.2	646.4	670.8	676.3
47.5°	566.6	582.9	611.9	636.4	645.5
50°	528.5	545.7	576.6	601.9	607.4
52.5°	490.4	508.6	541.2	568.4	571.1
55°	450.5	470.5	504.9	531.2	536.7
57.5°	414.3	431.5	468.7	495.9	502.2
60°	374.4	393.4	433.3	458.7	466.9
62.5°	336.3	356.3	398.0	423.4	430.6
65°	296.4	319.1	359.9	389.8	397.1
67.5°	262.0	283.7	327.3	356.3	363.5
70°	222.1	246.6	292.8	322.7	330.0
72.5°	187.7	213.0	259.3	288.3	299.2
75°	150.5	179.5	225.7	256.5	263.8
77.5°	114.2	147.8	194.9	218.5	218.5
80°	81.6	116.9	160.5	171.3	173.1
82.5°	53.5	87.9	118.8	117.8	117.8
85°	30.8	57.1	70.7	68.9	68.9
87.5°	11.8	23.6	25.4	25.4	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)