

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: P311165

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CA08-W2A-U-2700K**

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: P311165
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 2700K 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

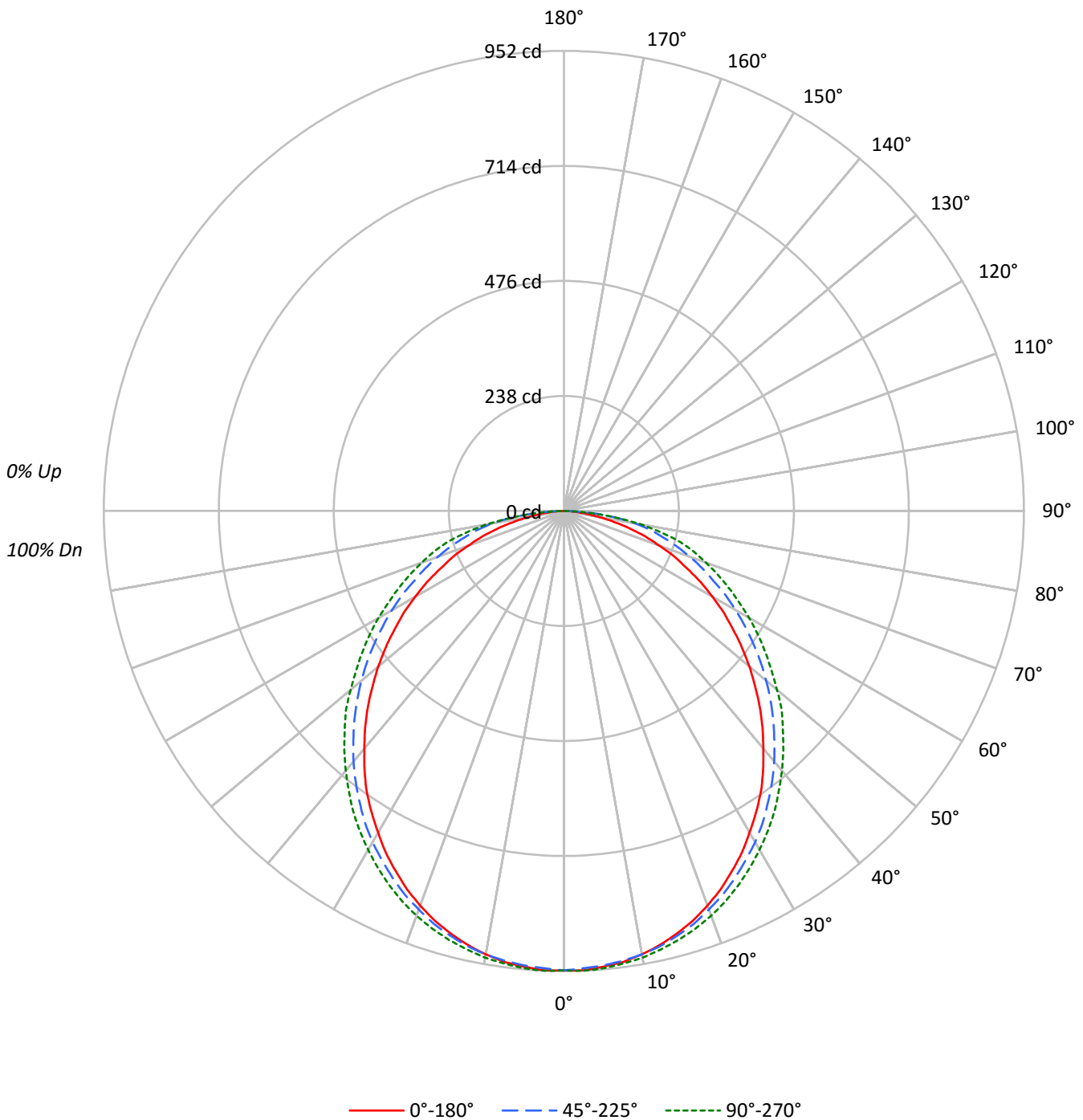
Lumens per Lamp: N/A
Luminaire Lumens: 2706.0 lumens
Efficiency: N/A
Efficacy: 128.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 21.1
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-L82765-S-CA08-W2A-U-2700K

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°	1279	1279	1279
5°	1278	1275	1283
10°	1273	1273	1282
15°	1261	1267	1280
20°	1244	1257	1276
25°	1221	1244	1268
30°	1194	1230	1258
35°	1168	1210	1248
40°	1128	1190	1233
45°	1091	1166	1220
50°	1049	1144	1205
55°	1002	1123	1194
60°	955	1106	1191
65°	895	1086	1199
70°	828	1092	1231
75°	742	1112	1300
80°	600	1179	1272
85°	451	1034	1008



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	3.3
10°-20°	257.2	9.5
20°-30°	386.6	14.3
30°-40°	460.5	17.0
40°-50°	471.3	17.4
50°-60°	424.3	15.7
60°-70°	333.2	12.3
70°-80°	216.2	8.0
80°-90°	66.9	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°	733.7	27.1
0°-40°	1194.2	44.1
0°-60°	2089.7	77.2
0°-90°	2706.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2706.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	951	951	951	951	951	
5°	946	948	944	949	950	90
15°	905	908	909	917	919	255
25°	823	829	838	852	854	379
35°	711	719	737	755	760	443
45°	573	587	613	636	641	442
55°	427	446	479	504	509	383
65°	281	303	341	370	376	280
75°	143	170	214	243	250	151
85°	29	54	67	65	65	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	950.6	950.6	950.6	950.6	950.6
2.5°	951.5	951.5	947.2	951.5	952.4
5°	946.3	948.1	943.8	948.9	949.8
7.5°	941.2	941.2	938.6	943.8	944.6
10°	931.7	932.6	931.7	937.7	938.6
12.5°	919.7	921.4	922.3	928.3	929.1
15°	905.1	907.7	909.4	917.1	918.8
17.5°	888.7	891.3	895.6	904.2	905.9
20°	869.0	872.4	877.6	888.7	891.3
22.5°	847.5	850.9	859.5	869.8	874.1
25°	822.6	829.4	838.0	851.8	854.4
27.5°	797.6	803.7	814.8	829.4	832.9
30°	768.4	777.9	791.6	806.2	809.7
32.5°	740.1	749.5	765.8	781.3	785.6
35°	710.8	719.4	736.6	754.7	759.8
37.5°	677.3	688.5	707.4	725.4	730.6
40°	642.1	655.8	677.3	696.2	702.2
42.5°	608.5	623.2	644.6	665.3	672.1
45°	573.3	587.1	612.8	636.0	641.2
47.5°	537.2	552.7	580.2	603.4	612.0
50°	501.1	517.4	546.7	570.7	575.9
52.5°	465.0	482.2	513.1	538.9	541.5
55°	427.2	446.1	478.8	503.7	508.8
57.5°	392.8	409.1	444.4	470.2	476.2
60°	355.0	373.0	410.9	434.9	442.7
62.5°	318.9	337.8	377.3	401.4	408.3
65°	281.1	302.6	341.2	369.6	376.5
67.5°	248.4	269.0	310.3	337.8	344.7
70°	210.6	233.8	277.6	306.0	312.9
72.5°	177.9	202.0	245.8	273.3	283.6
75°	142.7	170.2	214.0	243.2	250.1
77.5°	108.3	140.1	184.8	207.1	207.1
80°	77.4	110.9	152.1	162.5	164.2
82.5°	50.7	83.4	112.6	111.7	111.7
85°	29.2	54.2	67.0	65.3	65.3
87.5°	11.2	22.3	24.1	24.1	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)