

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: P311249

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP250-W2A-U-4000K**

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: P311249
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: 24FCZ2-30-UNV-L82765-S-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4000K 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: 2700.0 lumens
Efficiency: N/A
Efficacy: 113.9 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

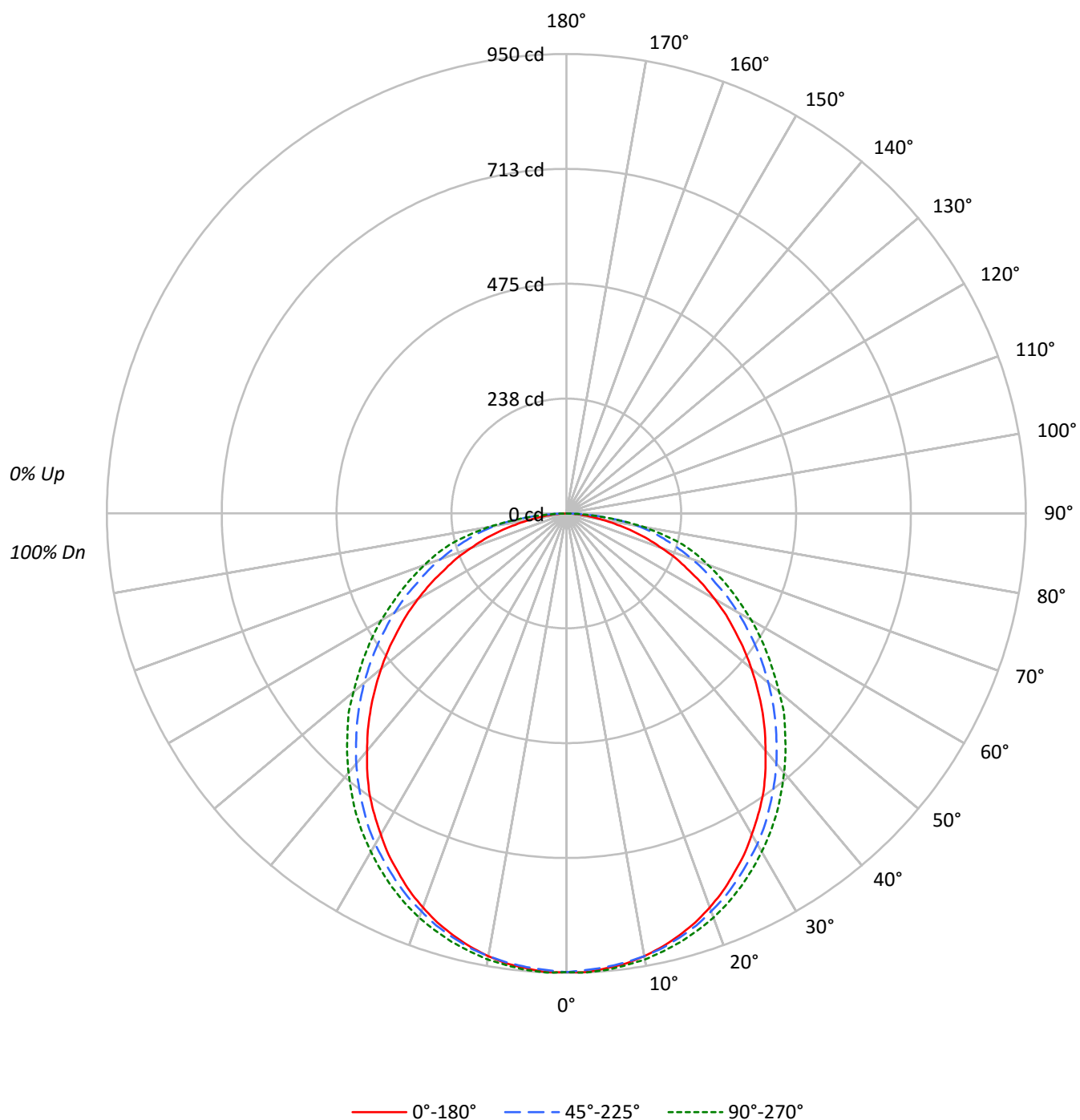
Input Watts (W): 23.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	1276	1276	1276
5°	1275	1272	1280
10°	1270	1270	1279
15°	1258	1264	1277
20°	1242	1254	1273
25°	1218	1241	1266
30°	1191	1227	1255
35°	1165	1207	1245
40°	1125	1187	1231
45°	1088	1164	1217
50°	1047	1142	1203
55°	1000	1121	1191
60°	953	1103	1189
65°	893	1084	1196
70°	827	1090	1228
75°	740	1110	1298
80°	598	1176	1269
85°	451	1033	1007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.8	3.3
10°-20°	256.6	9.5
20°-30°	385.7	14.3
30°-40°	459.4	17.0
40°-50°	470.2	17.4
50°-60°	423.3	15.7
60°-70°	332.4	12.3
70°-80°	215.8	8.0
80°-90°	66.7	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°	732.1	27.1
0°-40°	1191.5	44.1
0°-60°	2085.0	77.2
0°-90°	2700.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2700.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	948	948	948	948	948	
5°	944	946	942	947	948	90
15°	903	906	907	915	917	255
25°	821	828	836	850	852	378
35°	709	718	735	753	758	442
45°	572	586	612	635	640	441
55°	426	445	478	503	508	382
65°	280	302	340	369	376	279
75°	142	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°	948.5	948.5	948.5	948.5	948.5
2.5°	949.4	949.4	945.1	949.4	950.2
5°	944.2	946.0	941.7	946.8	947.7
7.5°	939.1	939.1	936.5	941.7	942.5
10°	929.7	930.5	929.7	935.7	936.5
12.5°	917.7	919.4	920.2	926.2	927.1
15°	903.1	905.6	907.4	915.1	916.8
17.5°	886.8	889.4	893.6	902.2	903.9
20°	867.1	870.5	875.6	886.8	889.4
22.5°	845.6	849.0	857.6	867.9	872.2
25°	820.7	827.6	836.2	849.9	852.5
27.5°	795.9	801.9	813.0	827.6	831.0
30°	766.7	776.1	789.9	804.4	807.9
32.5°	738.4	747.8	764.1	779.6	783.9
35°	709.3	717.8	735.0	753.0	758.1
37.5°	675.8	687.0	705.8	723.8	729.0
40°	640.6	654.4	675.8	694.7	700.7
42.5°	607.2	621.8	643.2	663.8	670.7
45°	572.0	585.8	611.5	634.6	639.8
47.5°	536.0	551.4	578.9	602.0	610.6
50°	500.0	516.3	545.4	569.5	574.6
52.5°	464.0	481.1	512.0	537.7	540.3
55°	426.2	445.1	477.7	502.6	507.7
57.5°	391.9	408.2	443.4	469.1	475.1
60°	354.2	372.2	409.9	434.0	441.7
62.5°	318.2	337.0	376.5	400.5	407.4
65°	280.4	301.9	340.5	368.8	375.6
67.5°	247.9	268.4	309.6	337.0	343.9
70°	210.1	233.3	277.0	305.3	312.2
72.5°	177.5	201.5	245.3	272.7	283.0
75°	142.4	169.8	213.5	242.7	249.6
77.5°	108.1	139.8	184.4	206.7	206.7
80°	77.2	110.6	151.8	162.1	163.8
82.5°	50.6	83.2	112.3	111.5	111.5
85°	29.2	54.0	66.9	65.2	65.2
87.5°	11.1	22.3	24.0	24.0	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)