

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: P310510

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CP125-W2A-U-3500K**

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: P310510
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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: 2678.0 lumens
Efficiency: N/A
Efficacy: 126.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

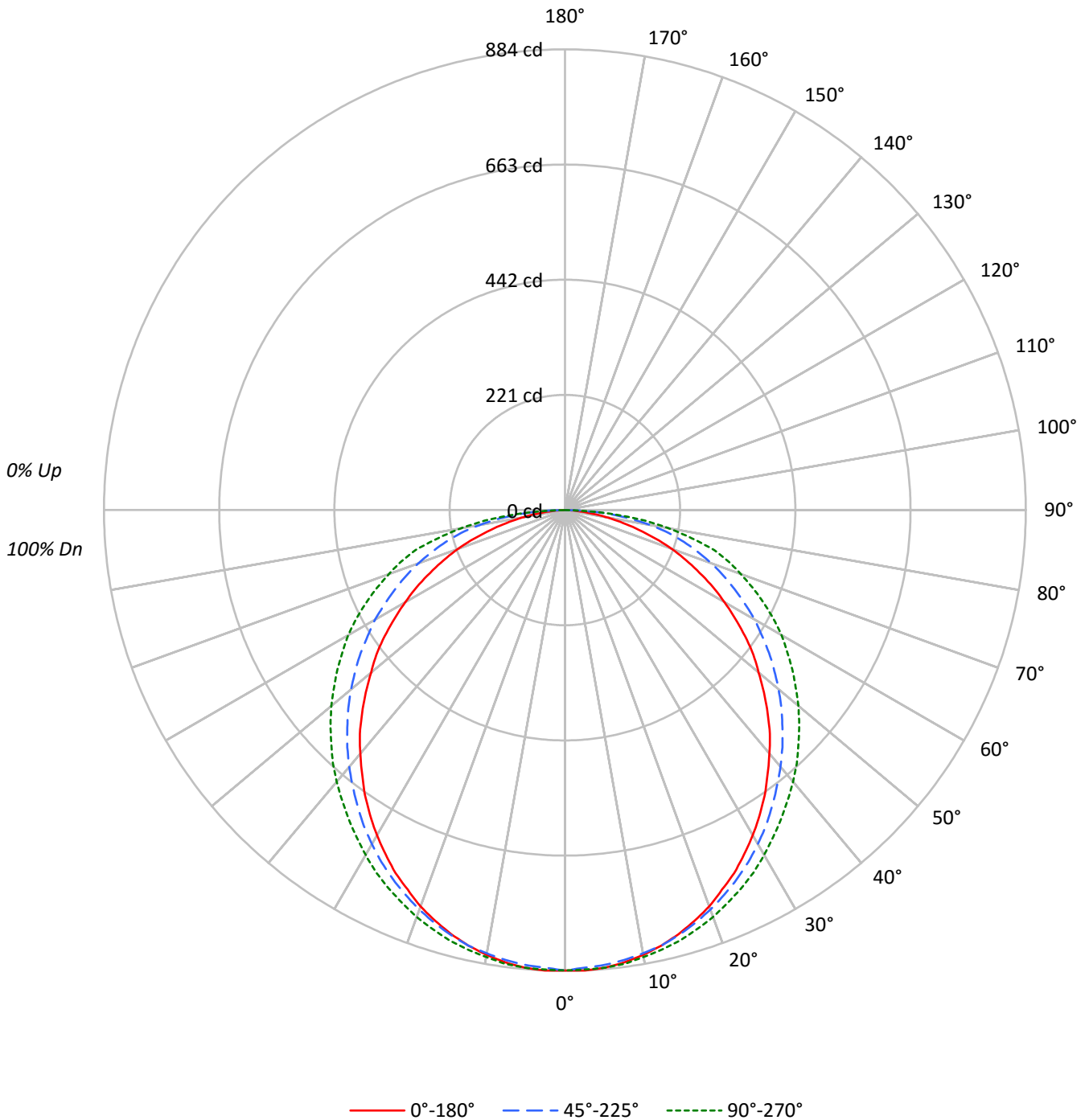
Input Watts (W): 21.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1188	1188	1188
5°	1190	1183	1190
10°	1184	1180	1190
15°	1173	1176	1191
20°	1159	1168	1190
25°	1141	1159	1188
30°	1120	1150	1187
35°	1098	1138	1188
40°	1072	1130	1195
45°	1047	1123	1205
50°	1015	1120	1224
55°	990	1121	1248
60°	952	1131	1291
65°	908	1143	1338
70°	860	1178	1412
75°	767	1228	1543
80°	654	1301	1577
85°	466	1289	1508



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	3.1
10°-20°	239.0	8.9
20°-30°	361.0	13.5
30°-40°	435.1	16.2
40°-50°	456.7	17.1
50°-60°	427.3	16.0
60°-70°	352.9	13.2
70°-80°	240.5	9.0
80°-90°	82.0	3.1
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°	683.6	25.5
0°-40°	1118.6	41.8
0°-60°	2002.7	74.8
0°-90°	2678.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2678.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	883	883	883	883	883	
5°	881	880	876	881	881	84
15°	842	843	844	853	855	237
25°	769	772	781	796	800	354
35°	668	675	693	716	723	418
45°	550	562	590	622	634	424
55°	422	439	478	517	532	377
65°	285	309	359	404	420	283
75°	148	181	236	281	297	157
85°	30	60	84	94	98	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	883.2	883.2	883.2	883.2	883.2
2.5°	884.1	883.2	878.7	883.2	882.3
5°	881.4	880.5	876.1	881.4	881.4
7.5°	875.2	875.2	870.7	877.0	877.9
10°	866.3	866.3	863.6	870.7	870.7
12.5°	855.6	855.6	855.6	862.7	863.6
15°	842.3	843.2	844.1	853.0	854.7
17.5°	826.3	828.1	830.8	841.4	843.2
20°	809.4	811.2	815.7	828.1	830.8
22.5°	788.1	792.6	798.8	813.0	815.7
25°	768.6	772.1	781.0	796.1	800.5
27.5°	744.6	749.9	761.5	777.4	783.7
30°	720.6	725.9	740.1	758.8	764.1
32.5°	694.8	702.8	717.9	737.5	743.7
35°	668.2	675.3	693.0	716.1	723.2
37.5°	638.8	648.6	668.2	693.0	701.9
40°	610.4	621.1	643.3	669.9	680.6
42.5°	582.0	592.6	617.5	647.7	658.4
45°	550.0	561.5	590.0	622.0	633.5
47.5°	518.0	532.2	563.3	597.1	609.5
50°	485.1	501.1	534.9	570.4	584.6
52.5°	455.8	470.9	506.5	544.7	558.0
55°	422.0	438.9	478.0	517.1	532.2
57.5°	387.4	406.1	447.8	490.5	505.6
60°	353.6	374.1	420.3	462.9	479.8
62.5°	320.8	341.2	389.2	433.6	450.5
65°	285.2	309.2	359.0	404.3	420.3
67.5°	251.4	277.2	329.6	374.1	390.1
70°	218.6	243.5	299.4	343.0	359.0
72.5°	183.0	211.5	267.4	312.8	329.6
75°	147.5	181.3	236.3	280.8	296.8
77.5°	114.6	149.3	204.4	240.8	248.8
80°	84.4	119.9	167.9	193.7	203.5
82.5°	54.2	89.7	127.9	146.6	154.6
85°	30.2	59.5	83.5	94.2	97.7
87.5°	12.4	25.8	33.8	38.2	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)