

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: P313813

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-CP250-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: P313813
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-L83050-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB 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: 2761.0 lumens
Efficiency: N/A
Efficacy: 124.9 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

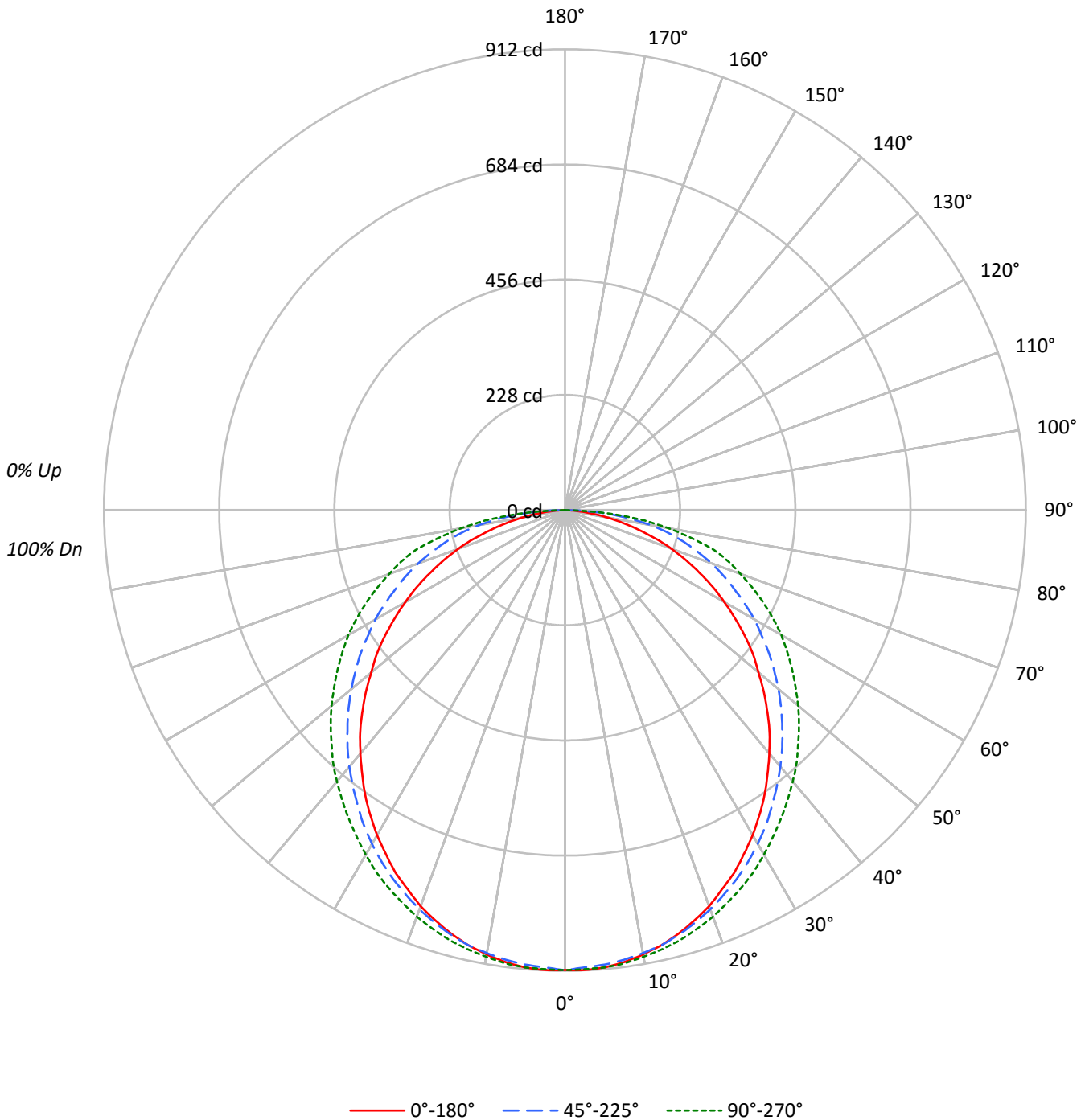
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	1225	1225	1225
5°	1227	1220	1227
10°	1220	1217	1226
15°	1210	1212	1227
20°	1195	1204	1226
25°	1176	1195	1225
30°	1154	1186	1224
35°	1132	1174	1225
40°	1105	1165	1232
45°	1079	1157	1243
50°	1047	1154	1262
55°	1021	1156	1287
60°	981	1166	1331
65°	936	1178	1379
70°	886	1214	1456
75°	791	1267	1591
80°	674	1341	1626
85°	480	1329	1556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	3.1
10°-20°	246.4	8.9
20°-30°	372.2	13.5
30°-40°	448.5	16.2
40°-50°	470.9	17.1
50°-60°	440.5	16.0
60°-70°	363.8	13.2
70°-80°	247.9	9.0
80°-90°	84.5	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°	704.7	25.5
0°-40°	1153.3	41.8
0°-60°	2064.7	74.8
0°-90°	2761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	911	911	911	911	911	
5°	909	908	903	909	909	86
15°	868	869	870	879	881	245
25°	792	796	805	821	825	365
35°	689	696	714	738	746	430
45°	567	579	608	641	653	437
55°	435	452	493	533	549	388
65°	294	319	370	417	433	292
75°	152	187	244	290	306	162
85°	31	61	86	97	101	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	910.6	910.6	910.6	910.6	910.6
2.5°	911.5	910.6	906.0	910.6	909.6
5°	908.7	907.8	903.2	908.7	908.7
7.5°	902.3	902.3	897.7	904.1	905.1
10°	893.1	893.1	890.4	897.7	897.7
12.5°	882.2	882.2	882.2	889.5	890.4
15°	868.4	869.3	870.2	879.4	881.2
17.5°	851.9	853.8	856.5	867.5	869.3
20°	834.5	836.4	840.9	853.8	856.5
22.5°	812.5	817.1	823.5	838.2	840.9
25°	792.4	796.0	805.2	820.8	825.4
27.5°	767.6	773.1	785.1	801.5	808.0
30°	742.9	748.4	763.1	782.3	787.8
32.5°	716.4	724.6	740.2	760.3	766.7
35°	688.9	696.2	714.5	738.3	745.7
37.5°	658.6	668.7	688.9	714.5	723.7
40°	629.3	640.3	663.2	690.7	701.7
42.5°	600.0	611.0	636.7	667.8	678.8
45°	567.0	578.9	608.3	641.2	653.1
47.5°	534.1	548.7	580.8	615.6	628.4
50°	500.2	516.7	551.5	588.1	602.8
52.5°	469.9	485.5	522.1	561.5	575.3
55°	435.1	452.5	492.8	533.1	548.7
57.5°	399.4	418.6	461.7	505.7	521.2
60°	364.6	385.7	433.3	477.3	494.7
62.5°	330.7	351.8	401.2	447.0	464.4
65°	294.1	318.8	370.1	416.8	433.3
67.5°	259.2	285.8	339.9	385.7	402.1
70°	225.3	251.0	308.7	353.6	370.1
72.5°	188.7	218.0	275.7	322.4	339.9
75°	152.1	186.9	243.7	289.5	306.0
77.5°	118.2	153.9	210.7	248.2	256.5
80°	87.0	123.7	173.1	199.7	209.8
82.5°	55.9	92.5	131.9	151.1	159.4
85°	31.1	61.4	86.1	97.1	100.8
87.5°	12.8	26.6	34.8	39.4	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)