

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: P312637

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-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: P312637
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L83050-RDP-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1432.0 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

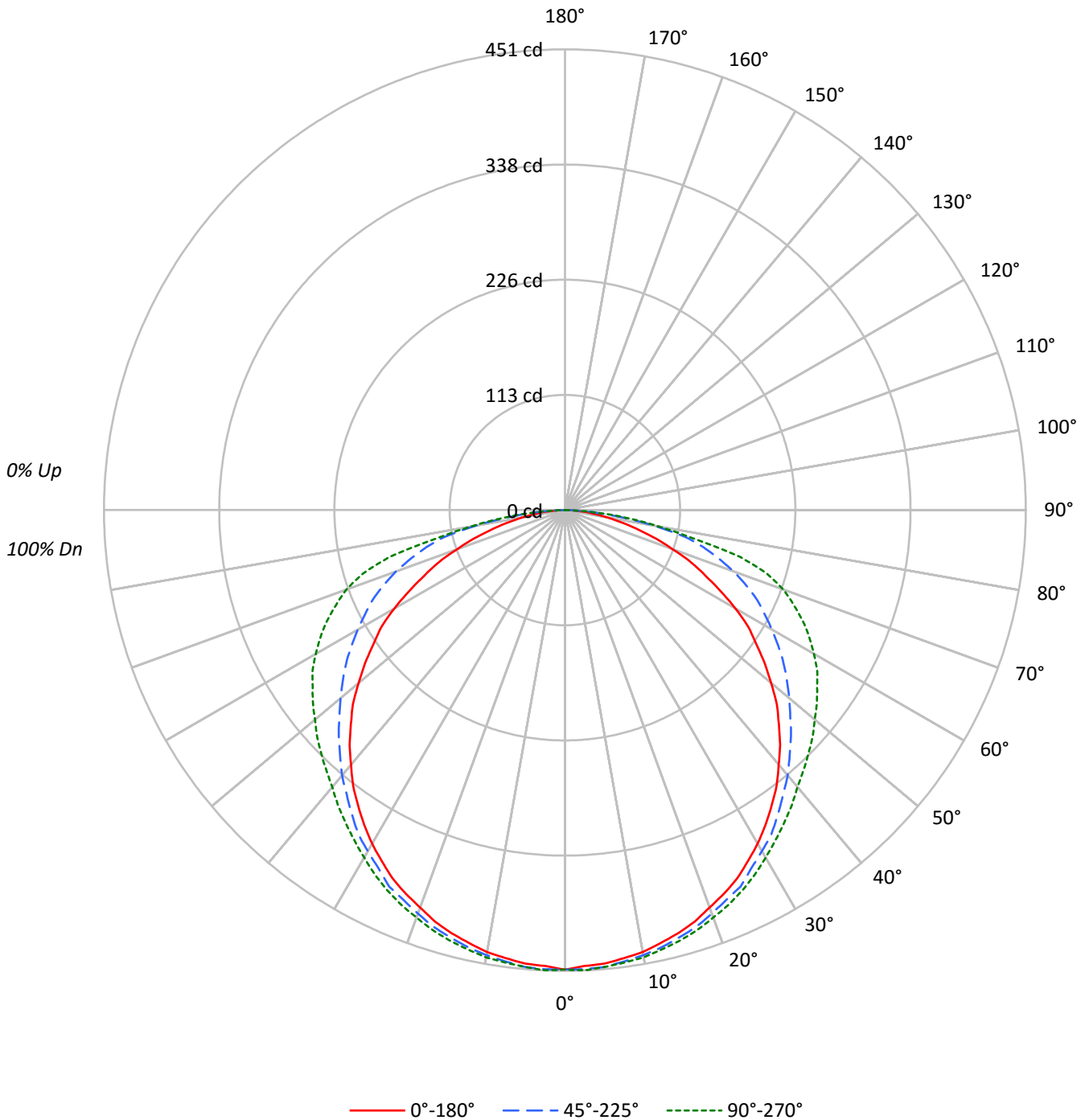
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1210	1210	1210
5°	1204	1212	1212
10°	1200	1209	1215
15°	1194	1206	1215
20°	1186	1204	1216
25°	1182	1207	1220
30°	1172	1198	1221
35°	1159	1194	1229
40°	1143	1192	1244
45°	1126	1191	1283
50°	1103	1199	1336
55°	1072	1226	1414
60°	1038	1259	1514
65°	966	1321	1636
70°	887	1384	1790
75°	778	1457	1851
80°	669	1387	1454
85°	587	1010	1105



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.6	3.0
10°-20°	122.2	8.5
20°-30°	186.4	13.0
30°-40°	227.6	15.9
40°-50°	243.3	17.0
50°-60°	234.9	16.4
60°-70°	202.2	14.1
70°-80°	136.8	9.6
80°-90°	36.1	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°	351.1	24.5
0°-40°	578.7	40.4
0°-60°	1056.9	73.8
0°-90°	1432.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1432.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	450	450	450	450	450	
5°	446	447	449	449	449	42
15°	429	430	433	435	436	121
25°	398	400	407	409	411	183
35°	353	356	363	371	374	221
45°	296	301	313	329	337	228
55°	229	236	261	288	301	205
65°	152	166	208	240	257	151
75°	75	99	140	168	178	80
85°	19	26	33	34	36	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	449.8	449.8	449.8	449.8	449.8
2.5°	446.7	447.7	449.8	449.8	450.9
5°	445.6	446.7	448.8	448.8	448.8
7.5°	442.4	443.5	445.6	446.7	446.7
10°	439.3	440.3	442.4	443.5	444.5
12.5°	434.0	435.1	438.2	440.3	440.3
15°	428.7	429.8	433.0	435.1	436.1
17.5°	422.4	424.5	427.7	429.8	430.9
20°	414.0	416.1	420.3	423.5	424.5
22.5°	406.6	408.7	412.9	416.1	418.2
25°	398.2	400.3	406.6	408.7	410.8
27.5°	387.7	389.8	395.0	399.3	402.4
30°	377.1	379.2	385.6	390.8	392.9
32.5°	365.5	368.7	376.1	380.3	383.4
35°	352.9	356.1	363.4	370.8	374.0
37.5°	340.3	343.4	350.8	360.3	364.5
40°	325.5	329.7	339.2	351.8	354.0
42.5°	311.8	317.1	325.5	340.3	345.5
45°	296.0	301.3	312.9	328.7	337.1
47.5°	281.3	286.5	299.2	318.1	328.7
50°	263.4	270.7	286.5	308.7	319.2
52.5°	246.5	252.8	273.9	298.1	310.8
55°	228.6	236.0	261.3	287.6	301.3
57.5°	212.8	219.1	247.6	277.1	292.9
60°	192.8	201.2	233.9	265.5	281.3
62.5°	171.7	184.4	220.2	252.8	269.7
65°	151.7	166.4	207.5	240.2	257.0
67.5°	133.8	149.6	191.7	226.5	242.3
70°	112.7	132.7	175.9	209.6	227.5
72.5°	93.8	115.9	158.0	191.7	207.5
75°	74.8	99.0	140.1	168.5	178.0
77.5°	57.9	81.1	120.1	128.5	129.6
80°	43.2	64.3	89.5	90.6	93.8
82.5°	29.5	45.3	57.9	63.2	64.3
85°	19.0	26.3	32.7	33.7	35.8
87.5°	8.4	9.5	11.6	10.5	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)