

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: P312463

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-HRP-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: P312463
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L83050-HRP-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 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: 1541.0 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

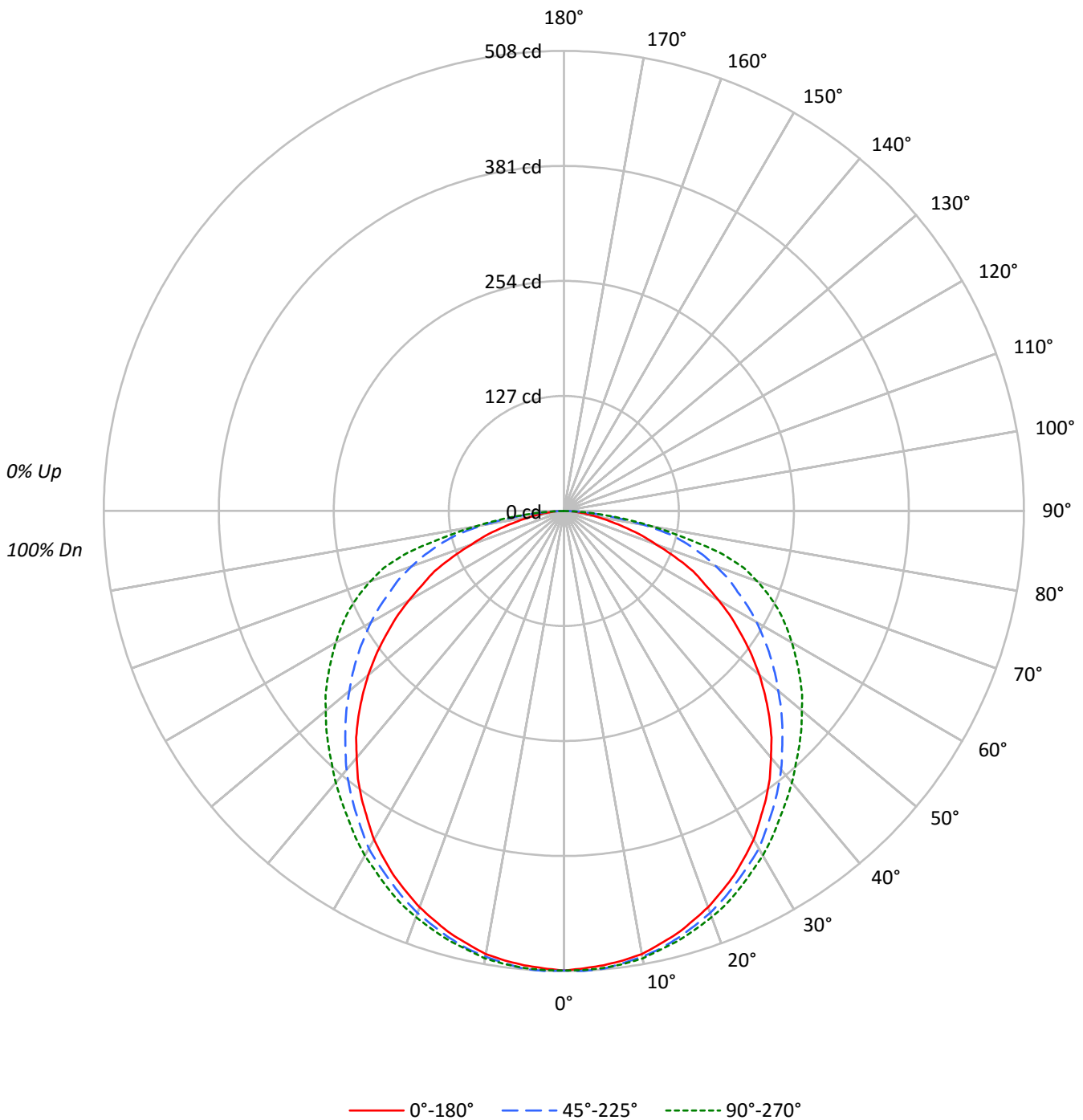
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-20HE-UNV-L83050-HRP-CP250-W2A-U-4500K

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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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°	1365	1365	1365
5°	1360	1371	1368
10°	1357	1365	1371
15°	1346	1360	1368
20°	1333	1353	1367
25°	1319	1342	1365
30°	1302	1338	1365
35°	1277	1322	1364
40°	1250	1311	1376
45°	1221	1298	1399
50°	1180	1294	1436
55°	1126	1304	1491
60°	1062	1323	1565
65°	1003	1349	1671
70°	857	1408	1790
75°	717	1466	1860
80°	587	1416	1551
85°	509	1050	1139



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	3.1
10°-20°	137.6	8.9
20°-30°	208.5	13.5
30°-40°	251.7	16.3
40°-50°	264.5	17.2
50°-60°	248.9	16.2
60°-70°	207.5	13.5
70°-80°	137.5	8.9
80°-90°	36.6	2.4
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°	394.1	25.6
0°-40°	645.9	41.9
0°-60°	1159.3	75.2
0°-90°	1541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1541.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	507	507	507	507	507	
5°	504	504	507	507	506	48
15°	483	485	488	490	491	136
25°	444	447	452	458	460	205
35°	389	393	402	411	415	243
45°	321	326	341	359	368	247
55°	240	251	278	306	318	215
65°	158	171	212	247	262	153
75°	69	96	141	170	179	75
85°	16	25	34	37	37	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	507.4	507.4	507.4	507.4	507.4
2.5°	505.5	506.5	508.4	508.4	507.4
5°	503.5	504.5	507.4	507.4	506.5
7.5°	500.6	501.6	503.5	505.5	504.5
10°	496.7	497.7	499.7	501.6	501.6
12.5°	489.9	490.9	494.8	495.8	495.8
15°	483.1	485.1	488.0	489.9	490.9
17.5°	474.4	476.3	480.2	484.1	484.1
20°	465.6	467.6	472.4	476.3	477.3
22.5°	454.9	457.9	462.7	467.6	469.5
25°	444.2	447.2	452.0	457.9	459.8
27.5°	431.6	434.5	441.3	448.1	449.1
30°	419.0	421.9	430.6	436.5	439.4
32.5°	403.4	407.3	416.1	424.8	427.7
35°	388.8	392.7	402.4	411.2	415.1
37.5°	373.3	377.2	387.9	398.6	403.4
40°	355.8	360.6	373.3	384.9	391.8
42.5°	339.3	344.1	356.8	372.3	379.1
45°	320.8	325.7	341.2	358.7	367.5
47.5°	301.3	307.2	325.7	347.0	355.8
50°	281.9	288.7	309.1	333.4	343.1
52.5°	261.5	270.2	293.6	319.8	331.5
55°	240.1	250.8	278.0	306.2	317.9
57.5°	219.7	229.4	261.5	291.6	304.3
60°	197.3	210.0	245.9	277.0	290.7
62.5°	175.9	189.6	229.4	262.5	277.0
65°	157.5	171.1	211.9	246.9	262.5
67.5°	133.2	151.6	197.3	230.4	245.9
70°	108.9	134.1	178.9	212.9	227.5
72.5°	90.4	114.7	160.4	194.4	208.0
75°	69.0	96.2	141.0	170.1	178.9
77.5°	51.5	79.7	120.5	135.1	136.1
80°	37.9	61.2	91.4	96.2	100.1
82.5°	26.2	42.8	59.3	65.1	67.1
85°	16.5	25.3	34.0	36.9	36.9
87.5°	8.7	9.7	11.7	11.7	11.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)