

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: P312460

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-HRP-CP250-W2A-U-3000K**

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: P312460
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-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3000K 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: 1374.0 lumens
Efficiency: N/A
Efficacy: 82.3 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

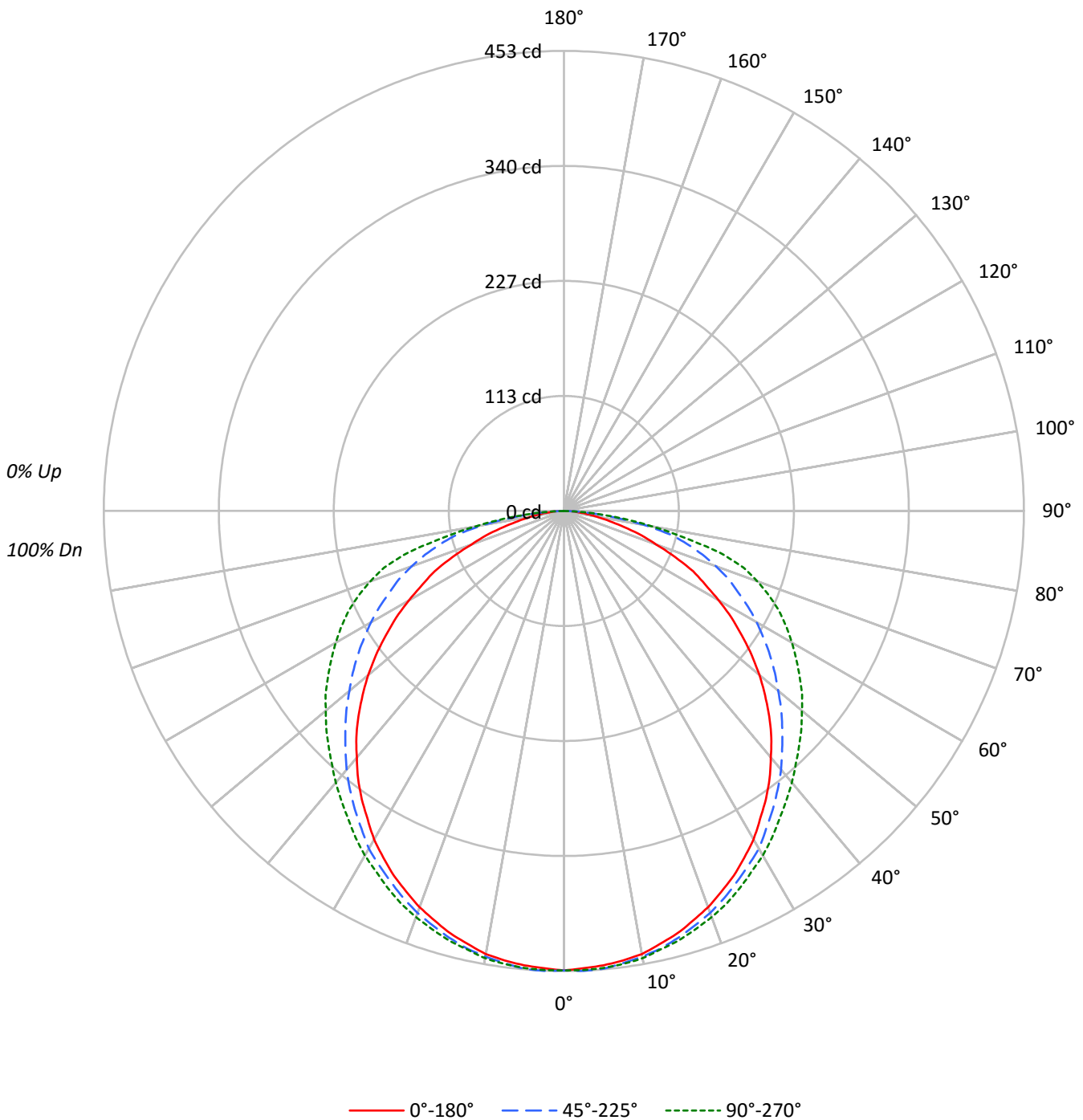
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1217	1217	1217
5°	1213	1222	1220
10°	1210	1217	1222
15°	1200	1212	1219
20°	1189	1206	1219
25°	1176	1197	1217
30°	1161	1193	1217
35°	1139	1179	1216
40°	1114	1169	1227
45°	1088	1158	1247
50°	1052	1154	1281
55°	1004	1163	1330
60°	947	1180	1395
65°	894	1203	1490
70°	764	1255	1596
75°	639	1307	1658
80°	524	1263	1384
85°	454	936	1016



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	3.1
10°-20°	122.7	8.9
20°-30°	185.9	13.5
30°-40°	224.5	16.3
40°-50°	235.9	17.2
50°-60°	221.9	16.2
60°-70°	185.0	13.5
70°-80°	122.6	8.9
80°-90°	32.7	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°	351.4	25.6
0°-40°	575.9	41.9
0°-60°	1033.7	75.2
0°-90°	1374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1374.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	452	452	452	452	452	
5°	449	450	452	452	452	43
15°	431	432	435	437	438	121
25°	396	399	403	408	410	182
35°	347	350	359	367	370	217
45°	286	290	304	320	328	220
55°	214	224	248	273	283	192
65°	140	152	189	220	234	137
75°	62	86	126	152	160	67
85°	15	22	30	33	33	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	452.4	452.4	452.4	452.4	452.4
2.5°	450.7	451.6	453.3	453.3	452.4
5°	449.0	449.8	452.4	452.4	451.6
7.5°	446.4	447.2	449.0	450.7	449.8
10°	442.9	443.8	445.5	447.2	447.2
12.5°	436.8	437.7	441.2	442.0	442.0
15°	430.8	432.5	435.1	436.8	437.7
17.5°	423.0	424.7	428.2	431.6	431.6
20°	415.2	416.9	421.2	424.7	425.6
22.5°	405.6	408.2	412.6	416.9	418.6
25°	396.1	398.7	403.0	408.2	410.0
27.5°	384.8	387.4	393.5	399.6	400.4
30°	373.6	376.2	384.0	389.2	391.8
32.5°	359.7	363.2	371.0	378.8	381.4
35°	346.7	350.2	358.8	366.6	370.1
37.5°	332.8	336.3	345.8	355.4	359.7
40°	317.2	321.6	332.8	343.2	349.3
42.5°	302.5	306.8	318.1	332.0	338.0
45°	286.0	290.4	304.2	319.8	327.6
47.5°	268.7	273.9	290.4	309.4	317.2
50°	251.4	257.4	275.6	297.3	306.0
52.5°	233.2	241.0	261.8	285.2	295.6
55°	214.1	223.6	247.9	273.0	283.4
57.5°	195.9	204.6	233.2	260.0	271.3
60°	175.9	187.2	219.3	247.0	259.2
62.5°	156.9	169.0	204.6	234.0	247.0
65°	140.4	152.5	189.0	220.2	234.0
67.5°	118.7	135.2	175.9	205.4	219.3
70°	97.1	119.6	159.5	189.8	202.8
72.5°	80.6	102.3	143.0	173.3	185.5
75°	61.5	85.8	125.7	151.7	159.5
77.5°	45.9	71.1	107.5	120.5	121.3
80°	33.8	54.6	81.5	85.8	89.3
82.5°	23.4	38.1	52.9	58.1	59.8
85°	14.7	22.5	30.3	32.9	32.9
87.5°	7.8	8.7	10.4	10.4	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)