

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: P308098

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP250-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: P308098
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-L82765-HRP-CP250-W2A-U-3500K
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: 1370.0 lumens
Efficiency: N/A
Efficacy: 81.5 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

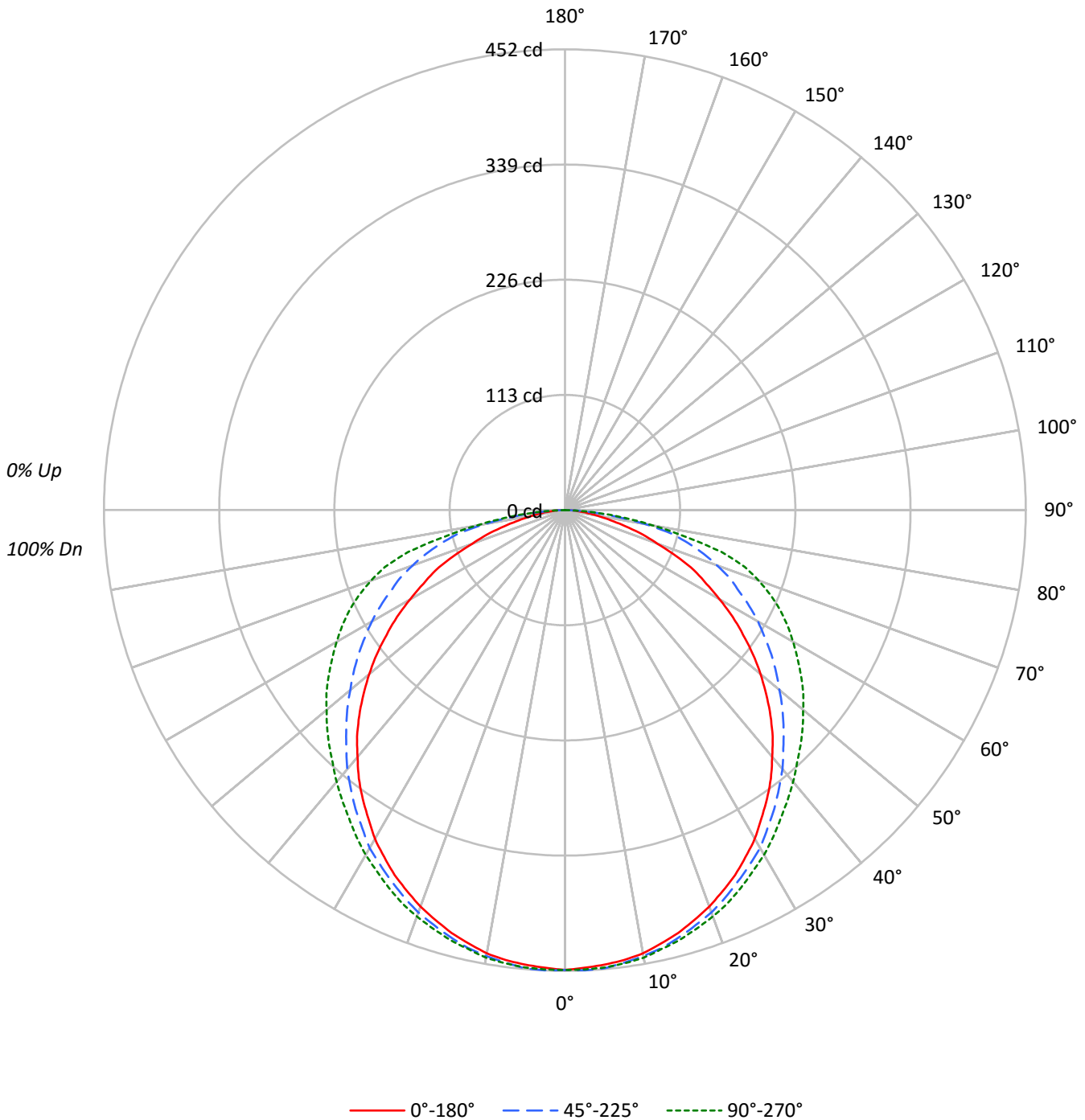
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1214	1214	1214
5°	1209	1219	1216
10°	1207	1214	1218
15°	1197	1209	1216
20°	1186	1203	1215
25°	1173	1193	1214
30°	1157	1190	1214
35°	1136	1175	1212
40°	1111	1166	1224
45°	1085	1154	1243
50°	1049	1150	1277
55°	1002	1160	1326
60°	944	1176	1391
65°	891	1200	1486
70°	762	1251	1591
75°	638	1303	1653
80°	522	1258	1379
85°	454	932	1013



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.8	3.1
10°-20°	122.3	8.9
20°-30°	185.4	13.5
30°-40°	223.8	16.3
40°-50°	235.2	17.2
50°-60°	221.3	16.2
60°-70°	184.5	13.5
70°-80°	122.2	8.9
80°-90°	32.6	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°	350.4	25.6
0°-40°	574.2	41.9
0°-60°	1030.7	75.2
0°-90°	1370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	451	451	451	451	451	
5°	448	448	451	451	450	43
15°	430	431	434	436	436	121
25°	395	398	402	407	409	182
35°	346	349	358	366	369	216
45°	285	290	303	319	327	220
55°	214	223	247	272	283	191
65°	140	152	188	220	233	136
75°	61	86	125	151	159	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°	451.1	451.1	451.1	451.1	451.1
2.5°	449.4	450.3	452.0	452.0	451.1
5°	447.7	448.5	451.1	451.1	450.3
7.5°	445.1	445.9	447.7	449.4	448.5
10°	441.6	442.5	444.2	445.9	445.9
12.5°	435.6	436.4	439.9	440.8	440.8
15°	429.5	431.2	433.8	435.6	436.4
17.5°	421.7	423.5	426.9	430.4	430.4
20°	414.0	415.7	420.0	423.5	424.3
22.5°	404.5	407.1	411.4	415.7	417.4
25°	395.0	397.5	401.9	407.1	408.8
27.5°	383.7	386.3	392.4	398.4	399.3
30°	372.5	375.1	382.9	388.0	390.6
32.5°	358.7	362.1	369.9	377.7	380.3
35°	345.7	349.1	357.8	365.6	369.0
37.5°	331.9	335.3	344.8	354.3	358.7
40°	316.3	320.6	331.9	342.2	348.3
42.5°	301.6	305.9	317.2	331.0	337.0
45°	285.2	289.5	303.3	318.9	326.7
47.5°	267.9	273.1	289.5	308.5	316.3
50°	250.6	256.7	274.8	296.4	305.1
52.5°	232.5	240.3	261.0	284.3	294.7
55°	213.5	223.0	247.2	272.2	282.6
57.5°	195.3	204.0	232.5	259.3	270.5
60°	175.4	186.7	218.6	246.3	258.4
62.5°	156.4	168.5	204.0	233.3	246.3
65°	140.0	152.1	188.4	219.5	233.3
67.5°	118.4	134.8	175.4	204.8	218.6
70°	96.8	119.3	159.0	189.3	202.2
72.5°	80.4	102.0	142.6	172.8	184.9
75°	61.4	85.6	125.3	151.2	159.0
77.5°	45.8	70.9	107.2	120.1	121.0
80°	33.7	54.4	81.2	85.6	89.0
82.5°	23.3	38.0	52.7	57.9	59.6
85°	14.7	22.5	30.2	32.8	32.8
87.5°	7.8	8.6	10.4	10.4	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)