

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: P313363

Luminaire Tested: **24FCZ2-65HE-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: P313363
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-65HE-UNV-L83050-HRP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 4567.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

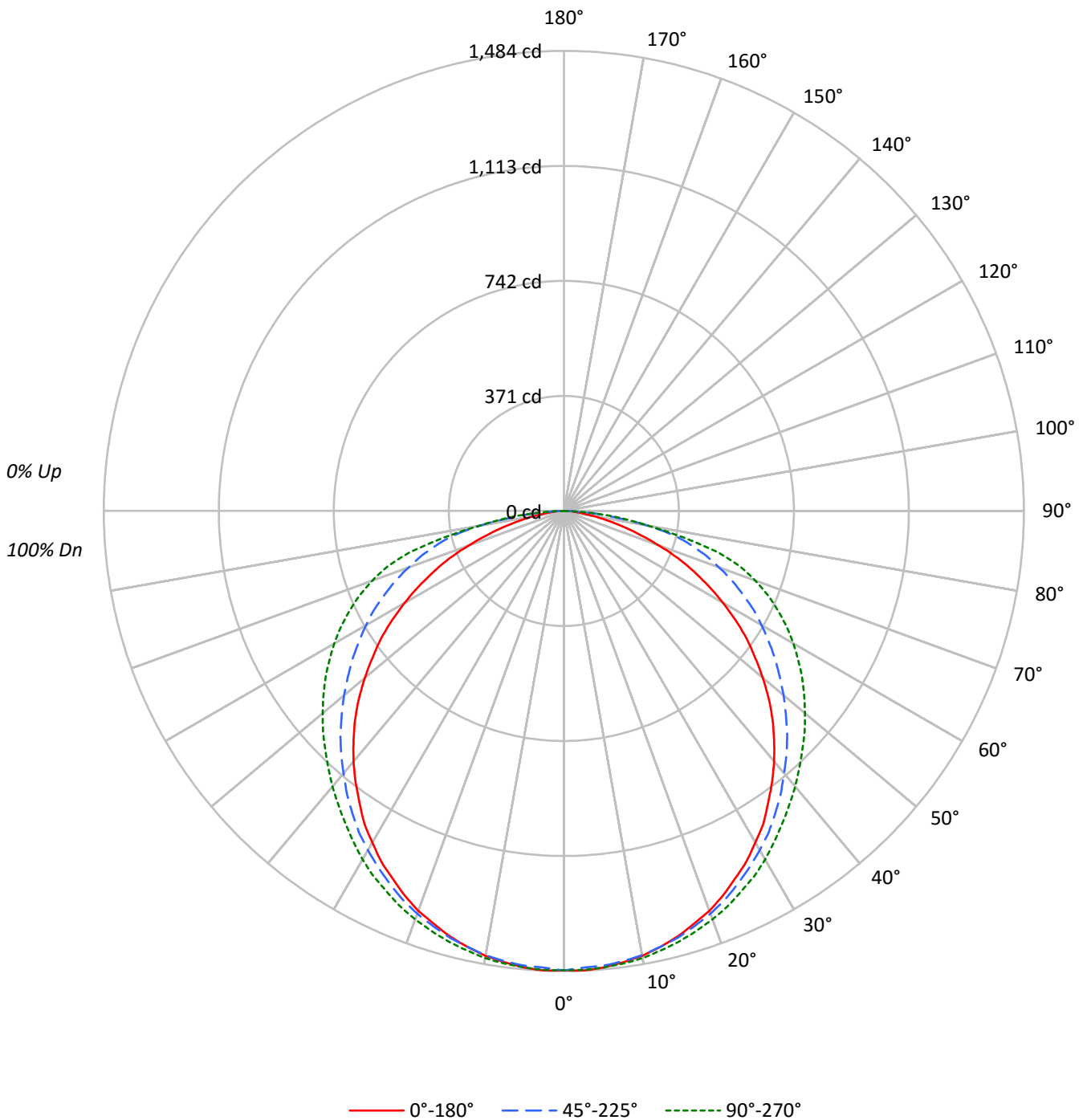
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1994	1994	1994
5°	1996	1988	1996
10°	1990	1988	2001
15°	1979	1984	2003
20°	1966	1979	2007
25°	1942	1970	2010
30°	1919	1963	2017
35°	1887	1953	2019
40°	1854	1941	2038
45°	1812	1939	2070
50°	1753	1937	2125
55°	1691	1951	2202
60°	1595	1981	2300
65°	1473	2027	2429
70°	1286	2098	2587
75°	1044	2207	2674
80°	770	2163	2163
85°	590	1593	1800



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.4	3.1
10°-20°	403.1	8.8
20°-30°	613.7	13.4
30°-40°	745.1	16.3
40°-50°	787.2	17.2
50°-60°	742.8	16.3
60°-70°	617.6	13.5
70°-80°	406.3	8.9
80°-90°	110.7	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°	1157.1	25.3
0°-40°	1902.2	41.7
0°-60°	3432.3	75.2
0°-90°	4567.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4567.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1482	1482	1482	1482	1482	
5°	1478	1478	1472	1478	1478	140
15°	1421	1422	1424	1438	1438	401
25°	1308	1315	1327	1350	1354	603
35°	1149	1162	1189	1220	1229	719
45°	952	971	1019	1069	1088	733
55°	721	751	832	910	939	642
65°	463	516	637	730	763	457
75°	201	292	424	503	514	216
85°	38	84	103	115	117	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1481.8	1481.8	1481.8	1481.8	1481.8
2.5°	1483.7	1481.8	1474.1	1481.8	1481.8
5°	1477.9	1477.9	1472.2	1477.9	1477.9
7.5°	1468.4	1468.4	1464.6	1472.2	1472.2
10°	1456.9	1456.9	1455.0	1464.6	1464.6
12.5°	1439.7	1441.6	1439.7	1451.2	1451.2
15°	1420.6	1422.5	1424.4	1437.8	1437.8
17.5°	1395.7	1399.6	1403.4	1418.7	1420.6
20°	1372.8	1374.7	1382.3	1399.6	1401.5
22.5°	1342.2	1347.9	1357.5	1374.7	1380.4
25°	1307.8	1315.4	1326.9	1349.8	1353.7
27.5°	1275.3	1281.0	1296.3	1321.2	1328.8
30°	1235.1	1244.7	1263.8	1288.7	1298.2
32.5°	1196.9	1206.4	1229.4	1256.2	1263.8
35°	1149.1	1162.5	1189.2	1219.8	1229.4
37.5°	1103.2	1116.6	1149.1	1183.5	1195.0
40°	1055.4	1070.7	1105.1	1145.3	1160.6
42.5°	1003.8	1024.8	1063.0	1107.0	1124.2
45°	952.2	971.3	1019.1	1068.8	1087.9
47.5°	896.7	919.7	971.3	1030.5	1053.5
50°	837.4	866.1	925.4	990.4	1015.2
52.5°	778.2	810.7	877.6	950.2	977.0
55°	720.8	751.4	831.7	910.1	938.8
57.5°	657.7	696.0	783.9	868.0	896.7
60°	592.7	634.8	736.1	824.1	854.6
62.5°	527.7	575.5	690.2	778.2	810.7
65°	462.7	516.2	636.7	730.4	762.9
67.5°	399.6	458.9	587.0	680.7	713.2
70°	326.9	401.5	533.4	625.2	657.7
72.5°	260.0	346.1	481.8	567.9	596.5
75°	200.8	292.5	424.5	502.8	514.3
77.5°	147.2	239.0	365.2	392.0	393.9
80°	99.4	191.2	279.1	275.3	279.1
82.5°	65.0	143.4	175.9	196.9	198.8
85°	38.2	84.1	103.2	114.7	116.6
87.5°	19.1	28.7	36.3	38.2	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)