

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: P309722

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP250-W2A-U-5500K**

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: P309722
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-L82765-HRP-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 5500K 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: 4374.0 lumens
Efficiency: N/A
Efficacy: 80.8 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

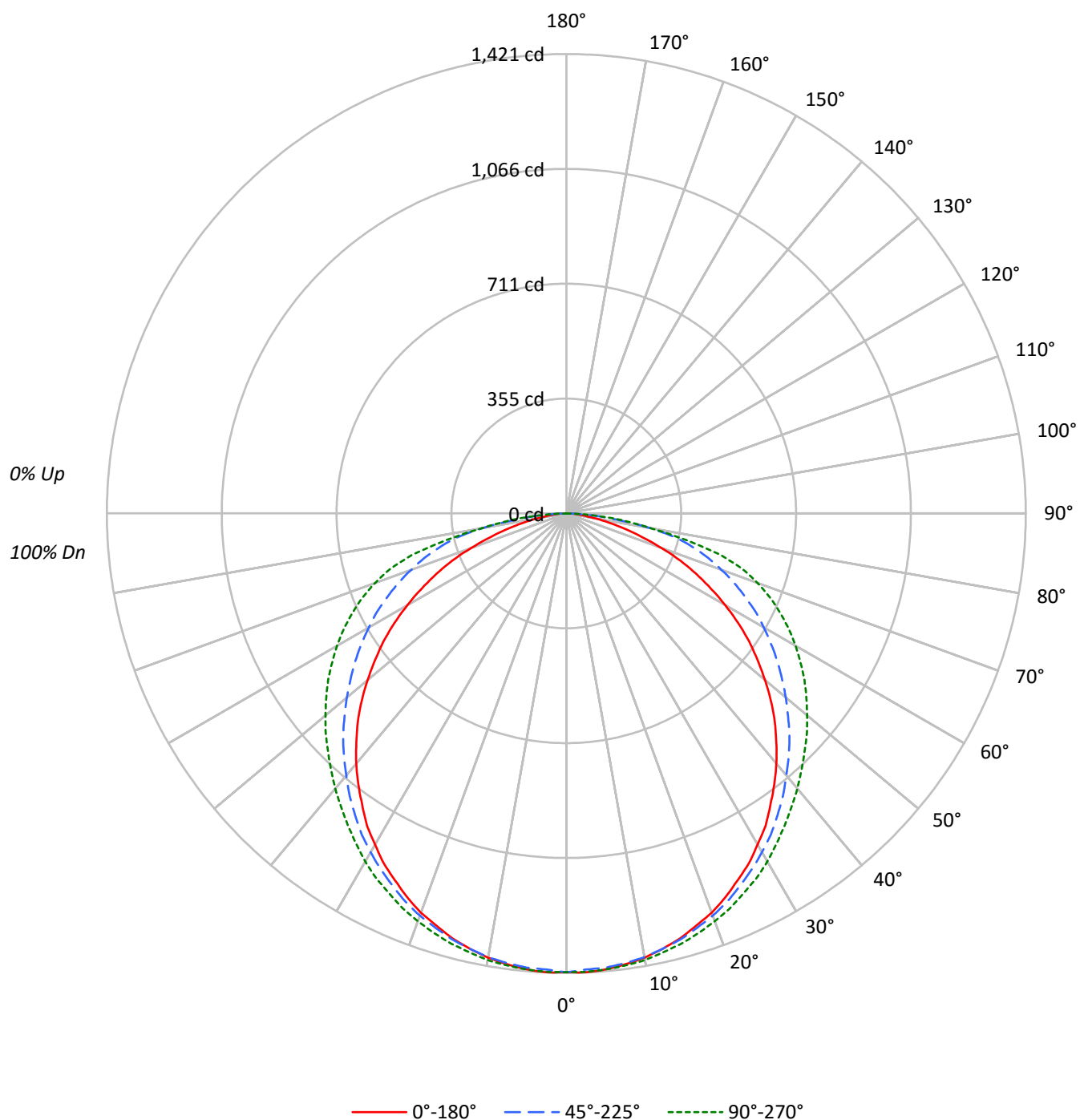
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1909	1909	1909
5°	1912	1904	1912
10°	1906	1904	1916
15°	1895	1900	1918
20°	1883	1896	1922
25°	1859	1887	1925
30°	1838	1881	1932
35°	1808	1871	1934
40°	1775	1859	1952
45°	1735	1857	1983
50°	1679	1855	2035
55°	1619	1869	2109
60°	1528	1897	2203
65°	1411	1941	2326
70°	1232	2010	2478
75°	1000	2113	2561
80°	738	2071	2071
85°	565	1527	1724



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.4	3.1
10°-20°	386.1	8.8
20°-30°	587.7	13.4
30°-40°	713.6	16.3
40°-50°	753.9	17.2
50°-60°	711.4	16.3
60°-70°	591.5	13.5
70°-80°	389.2	8.9
80°-90°	106.1	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°	1108.2	25.3
0°-40°	1821.8	41.7
0°-60°	3287.2	75.2
0°-90°	4374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4374.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1419	1419	1419	1419	1419	
5°	1416	1416	1410	1416	1416	134
15°	1361	1362	1364	1377	1377	384
25°	1252	1260	1271	1293	1296	578
35°	1100	1113	1139	1168	1177	689
45°	912	930	976	1024	1042	702
55°	690	720	797	872	899	615
65°	443	494	610	700	731	438
75°	192	280	406	482	493	207
85°	37	81	99	110	112	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1419.1	1419.1	1419.1	1419.1	1419.1
2.5°	1421.0	1419.1	1411.8	1419.1	1419.1
5°	1415.5	1415.5	1410.0	1415.5	1415.5
7.5°	1406.3	1406.3	1402.7	1410.0	1410.0
10°	1395.3	1395.3	1393.5	1402.7	1402.7
12.5°	1378.9	1380.7	1378.9	1389.8	1389.8
15°	1360.6	1362.4	1364.2	1377.0	1377.0
17.5°	1336.7	1340.4	1344.1	1358.7	1360.6
20°	1314.8	1316.6	1323.9	1340.4	1342.2
22.5°	1285.5	1291.0	1300.1	1316.6	1322.1
25°	1252.5	1259.8	1270.8	1292.8	1296.5
27.5°	1221.4	1226.9	1241.5	1265.3	1272.7
30°	1182.9	1192.1	1210.4	1234.2	1243.4
32.5°	1146.3	1155.5	1177.4	1203.1	1210.4
35°	1100.5	1113.3	1139.0	1168.3	1177.4
37.5°	1056.6	1069.4	1100.5	1133.5	1144.5
40°	1010.8	1025.4	1058.4	1096.9	1111.5
42.5°	961.4	981.5	1018.1	1060.2	1076.7
45°	911.9	930.2	976.0	1023.6	1041.9
47.5°	858.8	880.8	930.2	987.0	1009.0
50°	802.0	829.5	886.3	948.5	972.3
52.5°	745.3	776.4	840.5	910.1	935.7
55°	690.3	719.6	796.6	871.6	899.1
57.5°	629.9	666.5	750.8	831.3	858.8
60°	567.7	607.9	705.0	789.2	818.5
62.5°	505.4	551.2	661.0	745.3	776.4
65°	443.1	494.4	609.8	699.5	730.6
67.5°	382.7	439.5	562.2	651.9	683.0
70°	313.1	384.5	510.9	598.8	629.9
72.5°	249.0	331.4	461.5	543.9	571.3
75°	192.3	280.2	406.5	481.6	492.6
77.5°	141.0	228.9	349.8	375.4	377.2
80°	95.2	183.1	267.3	263.7	267.3
82.5°	62.3	137.3	168.5	188.6	190.4
85°	36.6	80.6	98.9	109.9	111.7
87.5°	18.3	27.5	34.8	36.6	40.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)