

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: P309721

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP250-W2A-U-5000K**

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: P309721
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-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 5000K 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: 4332.0 lumens
Efficiency: N/A
Efficacy: 80.5 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

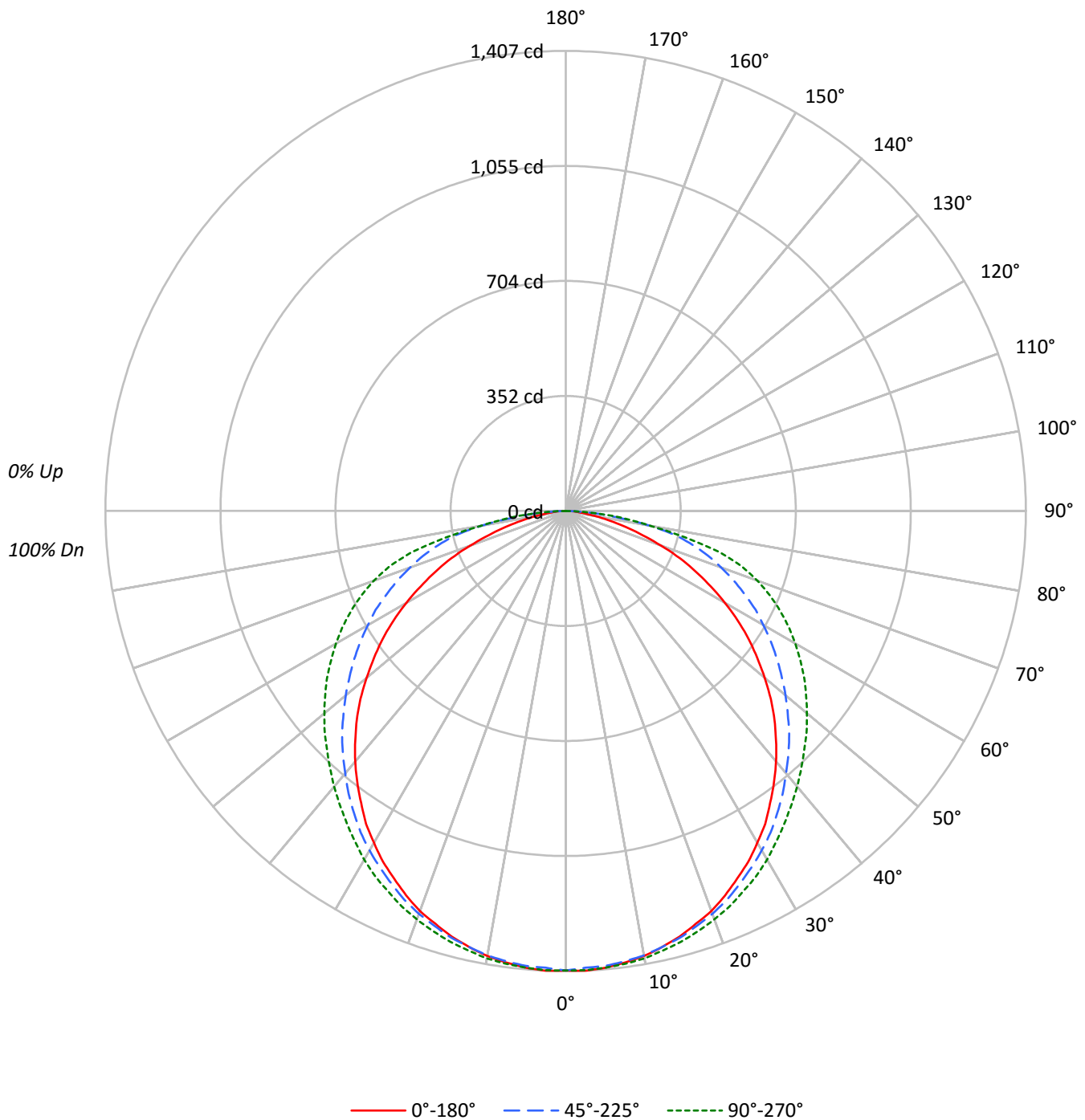
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1891	1891	1891
5°	1893	1886	1893
10°	1888	1886	1898
15°	1877	1882	1900
20°	1864	1877	1903
25°	1842	1868	1906
30°	1820	1863	1913
35°	1790	1853	1915
40°	1758	1841	1933
45°	1719	1839	1964
50°	1663	1837	2016
55°	1604	1851	2089
60°	1513	1879	2182
65°	1397	1923	2304
70°	1220	1991	2454
75°	990	2093	2536
80°	731	2052	2052
85°	560	1511	1707



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.1	3.1
10°-20°	382.3	8.8
20°-30°	582.1	13.4
30°-40°	706.8	16.3
40°-50°	746.7	17.2
50°-60°	704.6	16.3
60°-70°	585.9	13.5
70°-80°	385.4	8.9
80°-90°	105.1	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°	1097.6	25.3
0°-40°	1804.3	41.7
0°-60°	3255.7	75.2
0°-90°	4332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4332.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1402	1402	1396	1402	1402	133
15°	1348	1349	1351	1364	1364	380
25°	1240	1248	1259	1280	1284	572
35°	1090	1103	1128	1157	1166	682
45°	903	921	967	1014	1032	696
55°	684	713	789	863	890	609
65°	439	490	604	693	724	434
75°	190	278	403	477	488	205
85°	36	80	98	109	111	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1405.5	1405.5	1405.5	1405.5	1405.5
2.5°	1407.3	1405.5	1398.3	1405.5	1405.5
5°	1401.9	1401.9	1396.5	1401.9	1401.9
7.5°	1392.8	1392.8	1389.2	1396.5	1396.5
10°	1381.9	1381.9	1380.1	1389.2	1389.2
12.5°	1365.6	1367.4	1365.6	1376.5	1376.5
15°	1347.5	1349.3	1351.1	1363.8	1363.8
17.5°	1323.9	1327.5	1331.2	1345.7	1347.5
20°	1302.1	1304.0	1311.2	1327.5	1329.4
22.5°	1273.1	1278.6	1287.6	1304.0	1309.4
25°	1240.5	1247.7	1258.6	1280.4	1284.0
27.5°	1209.7	1215.1	1229.6	1253.2	1260.4
30°	1171.6	1180.6	1198.8	1222.3	1231.4
32.5°	1135.3	1144.4	1166.1	1191.5	1198.8
35°	1090.0	1102.7	1128.0	1157.1	1166.1
37.5°	1046.4	1059.1	1090.0	1122.6	1133.5
40°	1001.1	1015.6	1048.2	1086.3	1100.8
42.5°	952.1	972.1	1008.3	1050.1	1066.4
45°	903.2	921.3	966.6	1013.8	1031.9
47.5°	850.6	872.3	921.3	977.5	999.3
50°	794.3	821.5	877.8	939.4	963.0
52.5°	738.1	769.0	832.4	901.3	926.7
55°	683.7	712.7	788.9	863.3	890.5
57.5°	623.9	660.1	743.6	823.4	850.6
60°	562.2	602.1	698.2	781.7	810.7
62.5°	500.5	545.9	654.7	738.1	769.0
65°	438.9	489.7	603.9	692.8	723.6
67.5°	379.0	435.3	556.8	645.6	676.5
70°	310.1	380.9	506.0	593.0	623.9
72.5°	246.6	328.3	457.0	538.6	565.8
75°	190.4	277.5	402.6	477.0	487.9
77.5°	139.6	226.7	346.4	371.8	373.6
80°	94.3	181.4	264.8	261.2	264.8
82.5°	61.7	136.0	166.8	186.8	188.6
85°	36.3	79.8	97.9	108.8	110.6
87.5°	18.1	27.2	34.5	36.3	39.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)