

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: 15994

Luminaire Tested: **201IP-S-P-2-T5**

Issue Date: 3/3/2020

**Test Information**

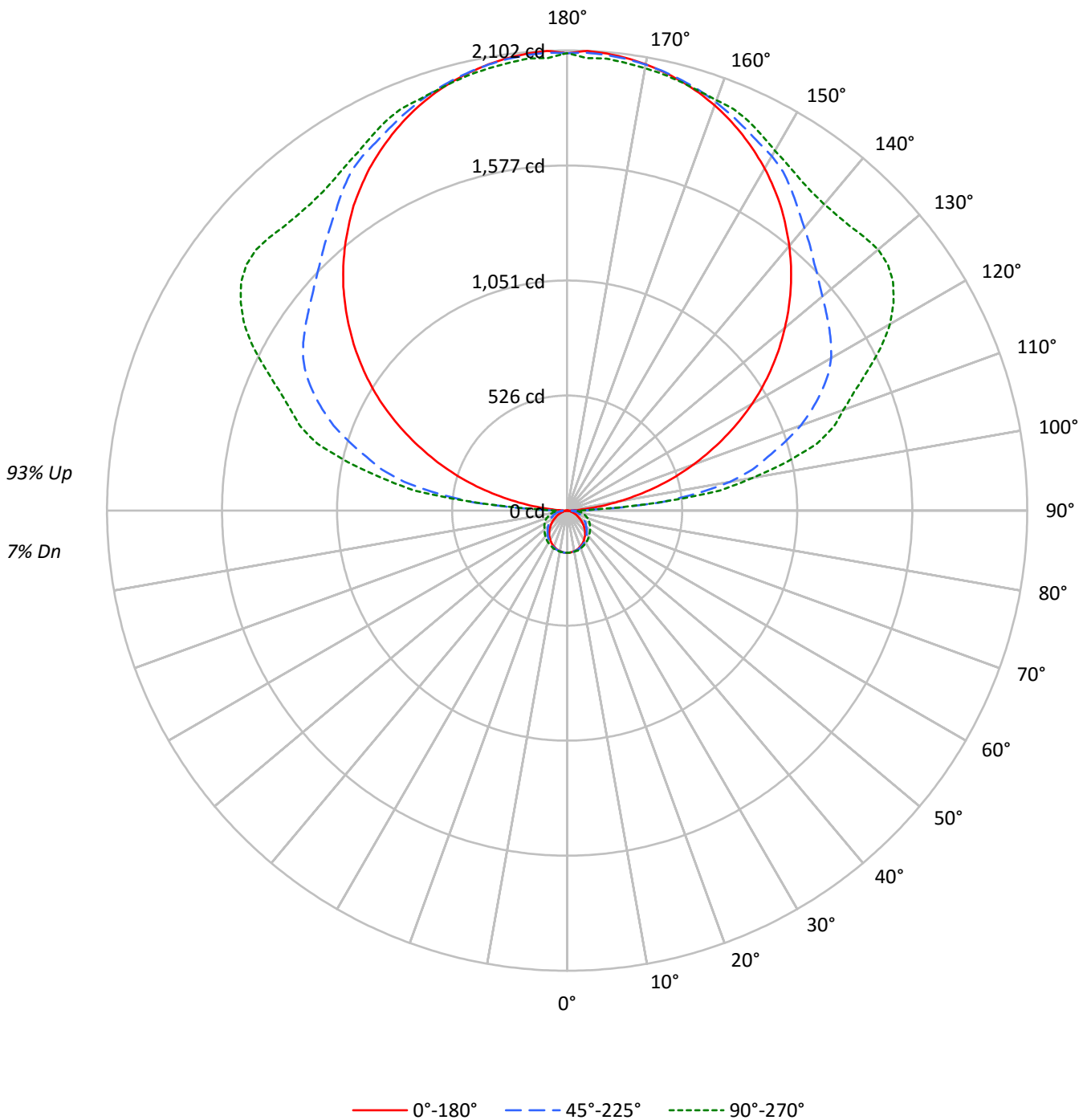
Test Method: LM-41-14  
Report Number: 15994  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: 201IP-S-P-2-T5  
Description: NEORAY DIRECT/INDIRECT SUSPENDED LUMINAIRE SHELL II PERF  
WITH WHITE INTERIOR, DIFFUSE REFLECTOR AND WHITE LENS OVER PERFORATIONS  
Light Source: TWO SYLVANIA 54 WATT T5 LAMPS  
  
FP54/841/HO. LUMEN RATING = 4500 LMS.  
  
Ballast/Driver: ONE SYLVANIA QT2X54/120PHO BALLAST OPERATING AT 120 VAC AND 123 WATTS

**Summary**

Lumens per Lamp: 4500 (2 lamps)  
Luminaire Lumens: 8430.8 lumens  
Efficiency: 93.7%  
Efficacy: 68.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.32 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.88' x L: 4' x H: 0.22')  
CIE Type: Indirect  
  
Input Watts (W): 123  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	91	91	91	91	79	79	79	79	56	56	56	35	35	35	16	16	16	7
1	82	79	75	72	71	68	65	63	48	47	45	30	29	28	14	13	13	5
2	75	68	63	59	65	59	55	51	42	39	37	26	25	24	12	11	11	4
3	68	60	54	49	59	52	47	43	37	34	31	23	21	20	10	10	9	4
4	62	53	46	41	54	46	40	36	33	29	26	21	18	17	9	8	8	3
5	57	47	40	35	49	41	35	30	29	25	22	18	16	14	8	7	7	3
6	52	42	35	30	45	36	30	26	26	22	19	16	14	12	7	6	6	2
7	48	37	30	26	41	33	27	23	23	19	17	15	12	11	7	6	5	2
8	44	34	27	22	38	29	24	20	21	17	15	13	11	9	6	5	4	2
9	41	30	24	20	35	27	21	17	19	15	13	12	10	8	6	5	4	2
10	38	28	21	17	33	24	19	15	17	14	11	11	9	7	5	4	4	1

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	589	589	589
5°	586	579	575
10°	578	566	567
15°	571	554	560
20°	559	539	547
25°	545	526	536
30°	528	504	525
35°	510	488	518
40°	488	468	510
45°	454	448	501
50°	421	429	501
55°	377	419	500
60°	338	399	505
65°	294	396	516
70°	252	385	527
75°	197	380	526
80°	180	353	521
85°	123	314	509



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	18.2	0.2	0.2
10°-20°	52.2	0.6	0.6
20°-30°	78.8	0.9	0.9
30°-40°	94.6	1.1	1.1
40°-50°	97.9	1.2	1.1
50°-60°	91.2	1.1	1.0
60°-70°	77.4	0.9	0.9
70°-80°	58.3	0.7	0.6
80°-90°	33.8	0.4	0.4
90°-100°	364.8	4.3	4.1
100°-110°	916.7	10.9	10.2
110°-120°	1199.1	14.2	13.3
120°-130°	1314.7	15.6	14.6
130°-140°	1256.9	14.9	14.0
140°-150°	1114.7	13.2	12.4
150°-160°	889.5	10.6	9.9
160°-170°	573.8	6.8	6.4
170°-180°	198.3	2.4	2.2
0°-30°	149.1	1.8	1.7
0°-40°	243.7	2.9	2.7
0°-60°	432.8	5.1	4.8
0°-90°	602.2	7.1	6.7
90°-120°	2480.6	29.4	27.6
90°-150°	6166.9	73.1	68.5
90°-180°	7829.0	92.9	87.0
0°-180°	8430.8	100.0	93.7

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	192	192	192	192	192	
5°	192	190	192	190	191	18
15°	183	182	185	186	189	52
25°	166	166	172	175	178	76
35°	142	143	150	159	163	88
45°	111	114	126	139	145	86
55°	76	83	103	120	127	69
65°	46	54	80	102	110	45
75°	20	29	58	79	86	22
85°	6	11	31	50	56	6
90°	0	0	22	44	47	3
95°	79	290	423	413	415	100
105°	428	651	949	1117	1181	450
115°	796	937	1281	1477	1515	787
125°	1143	1211	1460	1707	1818	1021
135°	1446	1497	1597	1761	1833	1114
145°	1700	1733	1787	1839	1851	1063
155°	1894	1904	1925	1955	1962	873
165°	2029	2032	2033	2029	2025	573
175°	2095	2095	2089	2075	2072	199
180°	2089	2089	2089	2089	2089	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	192.5	192.5	192.5	192.5	192.5
2.5°	193.1	191.5	193.1	191.8	192.7
5°	191.8	190.5	192.3	190.5	191.3
7.5°	189.7	189.3	190.2	190.2	191.5
10°	188.1	187.7	189.3	189.7	190.5
12.5°	186.4	185.9	187.2	188.1	189.3
15°	182.9	181.7	185.1	186.3	188.9
17.5°	179.1	179.1	182.9	184.7	185.9
20°	175.3	175.4	178.7	180.9	183.4
22.5°	170.7	171.2	175.0	178.8	180.1
25°	165.7	165.7	171.6	175.4	177.5
27.5°	160.2	160.6	166.6	171.5	173.7
30°	154.3	155.5	160.6	169.1	170.3
32.5°	147.6	149.2	156.0	163.6	167.3
35°	142.0	143.2	150.5	159.0	163.1
37.5°	133.6	135.7	145.4	153.9	158.4
40°	127.8	128.9	138.6	149.2	154.7
42.5°	119.7	121.3	132.8	143.8	149.5
45°	110.8	113.7	126.0	139.1	144.9
47.5°	102.4	105.8	119.7	134.1	140.4
50°	94.4	98.6	113.4	129.0	136.6
52.5°	85.8	91.0	109.1	124.3	131.4
55°	76.2	82.6	102.8	120.5	127.3
57.5°	67.3	75.0	96.9	115.9	123.5
60°	60.6	67.4	89.6	110.4	118.4
62.5°	53.0	61.0	85.0	105.8	114.3
65°	45.5	53.9	80.1	101.5	109.6
67.5°	38.6	47.1	74.1	96.9	104.0
70°	32.4	41.3	68.6	91.0	99.4
72.5°	25.1	35.3	65.2	85.5	92.2
75°	20.1	29.4	58.1	79.2	86.0
77.5°	16.7	25.3	53.8	72.4	78.2
80°	13.4	20.9	44.6	64.4	71.6
82.5°	8.7	15.1	36.7	57.6	64.0
85°	5.7	11.2	31.0	50.5	56.0
87.5°	0.5	6.1	23.9	41.6	48.0
90°	0.5	0.5	21.5	44.3	46.7
92.5°	24.0	142.9	148.8	151.4	118.0
95°	79.2	289.7	423.4	413.4	415.0
97.5°	155.5	393.5	593.9	673.7	703.5
100°	239.9	502.3	755.9	871.4	860.0
102.5°	331.5	542.8	867.3	943.6	1027.1
105°	427.7	650.8	948.7	1117.0	1180.7
107.5°	520.8	728.0	1043.3	1219.1	1278.1
110°	613.3	798.9	1136.0	1296.3	1342.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	704.4	867.3	1211.1	1383.6	1419.4
115°	796.3	937.3	1280.6	1477.2	1515.2
117.5°	886.6	1005.6	1343.9	1560.7	1616.1
120°	976.0	1077.8	1392.9	1627.1	1703.4
122.5°	1060.9	1174.4	1429.1	1688.7	1767.5
125°	1143.1	1211.4	1460.4	1707.2	1818.1
127.5°	1222.5	1306.0	1490.7	1746.4	1846.3
130°	1298.4	1375.2	1522.0	1754.4	1854.4
132.5°	1373.6	1440.6	1557.8	1757.0	1846.0
135°	1445.7	1497.1	1596.7	1761.2	1832.9
137.5°	1513.2	1551.0	1641.8	1770.1	1827.0
140°	1578.9	1609.3	1685.7	1783.6	1826.6
142.5°	1639.7	1664.6	1732.9	1803.4	1834.1
145°	1700.4	1733.0	1786.9	1838.9	1850.6
147.5°	1753.6	1758.2	1835.9	1852.2	1873.9
150°	1805.1	1818.9	1869.6	1894.9	1898.7
152.5°	1850.7	1862.8	1894.9	1927.0	1930.0
155°	1894.5	1903.7	1924.9	1954.8	1962.4
157.5°	1934.2	1941.4	1956.6	1978.4	1985.6
160°	1970.0	1975.4	1985.6	1991.1	1994.9
162.5°	2001.6	2006.7	2012.2	2010.1	2008.4
165°	2028.7	2032.5	2033.4	2029.1	2024.9
167.5°	2050.5	2059.4	2053.1	2048.6	2040.5
170°	2070.3	2067.0	2068.3	2054.5	2051.8
172.5°	2085.1	2085.2	2080.9	2067.9	2061.9
175°	2095.3	2095.3	2088.9	2075.1	2072.1
177.5°	2101.7	2100.8	2093.3	2077.1	2069.1
180°	2089.2	2089.2	2089.2	2089.2	2089.2

(END OF REPORT)