

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P644199

Luminaire Tested: CRQ4DIP-SR4F0-100D150U840-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644199
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-100D150U840-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1500 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

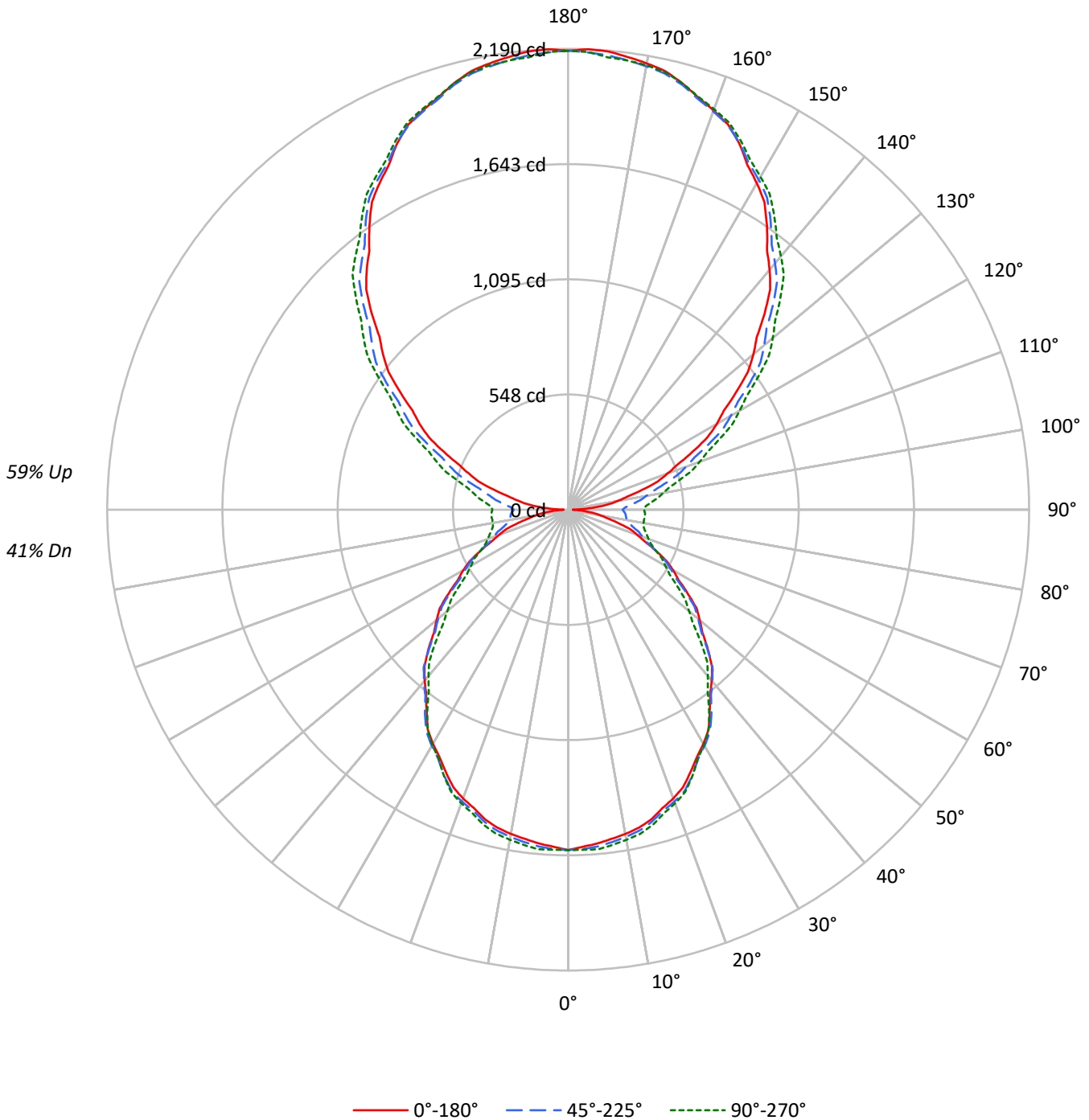
Lumens per Lamp: N/A
Luminaire Lumens: 10611.5 lumens
Efficiency: N/A
Efficacy: 135.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 78.5
Input Voltage (V): 120
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: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	50	30	10	0														
RCR																																						
0	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41																				
1	95	90	86	83	86	82	79	76	68	65	63	54	52	50	41	40	39	33																				
2	86	79	73	67	78	72	67	62	59	55	52	47	44	42	36	34	33	27																				
3	79	69	62	56	71	63	57	52	52	47	43	42	38	35	32	30	28	23																				
4	72	61	53	47	65	56	49	44	46	41	37	37	33	30	29	26	24	20																				
5	66	54	46	40	60	50	43	37	41	36	32	33	29	26	26	23	21	17																				
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	21	18	15																				
7	56	44	36	31	51	40	33	29	34	28	24	27	23	20	21	18	16	14																				
8	52	40	32	27	47	37	30	25	31	25	22	25	21	18	20	17	15	12																				
9	49	36	29	24	44	34	27	22	28	23	19	23	19	16	18	15	13	11																				
10	45	33	26	21	41	31	24	20	26	21	17	21	17	15	17	14	12	10																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26118	26118	26118
5°	25624	23060	22345
10°	25286	20547	19302
15°	24916	18401	16883
20°	24346	16509	14767
25°	23586	14718	12868
30°	22840	13052	11170
35°	21829	11506	9587
40°	20883	10036	8127
45°	19792	8628	6782
50°	18638	7352	5563
55°	17415	6175	4605
60°	16248	5112	3854
65°	14809	4221	3307
70°	13429	3509	2949
75°	11744	3058	2775
80°	9812	2830	2738
85°	7154	2843	2844

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19792 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.8	1.4
10°-20°	433.6	4.1
20°-30°	640.4	6.0
30°-40°	737.2	6.9
40°-50°	715.6	6.7
50°-60°	604.9	5.7
60°-70°	461.1	4.3
70°-80°	336.7	3.2
80°-90°	269.4	2.5
90°-100°	310.1	2.9
100°-110°	493.2	4.6
110°-120°	725.5	6.8
120°-130°	938.1	8.8
130°-140°	1061.1	10.0
140°-150°	1048.4	9.9
150°-160°	886.8	8.4
160°-170°	590.4	5.6
170°-180°	206.5	1.9
0°-30°	1226.7	11.6
0°-40°	1963.9	18.5
0°-60°	3284.4	31.0
0°-90°	4351.5	41.0
90°-120°	1528.8	14.4
90°-150°	4576.4	43.1
90°-180°	6260.0	59.0
0°-180°	10611.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1618	1618	1618	1618	1618	
5°	1592	1622	1606	1609	1620	151
15°	1524	1551	1535	1540	1551	429
25°	1375	1402	1394	1387	1396	634
35°	1172	1197	1186	1168	1168	734
45°	939	955	934	904	891	724
55°	692	710	681	642	631	621
65°	457	473	460	458	458	454
75°	247	265	318	363	376	264
85°	75	145	274	346	366	80
90°	23	122	258	335	360	20
95°	127	172	305	379	395	128
105°	363	382	472	537	548	387
115°	653	680	736	780	792	648
125°	975	1009	1056	1093	1102	873
135°	1320	1349	1375	1410	1426	1017
145°	1646	1666	1676	1688	1706	1028
155°	1922	1933	1924	1927	1938	882
165°	2098	2107	2091	2084	2098	591
175°	2186	2195	2167	2158	2158	207
180°	2181	2181	2181	2181	2181	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1617.6	1617.6	1617.6	1617.6	1617.6
2.5°	1603.0	1626.2	1614.0	1615.8	1617.6
5°	1592.5	1621.5	1606.2	1608.7	1619.9
7.5°	1577.8	1606.5	1593.4	1594.1	1607.1
10°	1565.0	1591.9	1578.8	1581.3	1592.5
12.5°	1548.6	1577.2	1562.3	1566.7	1577.8
15°	1523.9	1550.8	1535.4	1540.2	1551.3
17.5°	1487.4	1513.8	1499.7	1501.3	1512.5
20°	1459.9	1484.6	1476.0	1473.9	1485.1
22.5°	1427.0	1453.4	1446.7	1439.2	1452.2
25°	1375.4	1402.3	1393.7	1387.0	1396.0
27.5°	1324.2	1348.9	1335.7	1326.2	1332.9
30°	1284.0	1308.7	1295.5	1284.2	1290.9
32.5°	1240.2	1266.6	1251.6	1238.4	1241.5
35°	1172.1	1196.7	1185.9	1167.5	1167.5
37.5°	1107.6	1128.3	1114.1	1092.5	1087.5
40°	1060.1	1082.6	1064.7	1039.4	1032.7
42.5°	1010.8	1033.2	1015.4	986.3	976.0
45°	939.0	954.8	934.5	904.5	891.0
47.5°	865.0	883.0	855.9	822.1	806.1
50°	815.7	833.6	806.6	767.3	749.4
52.5°	768.1	784.3	755.4	714.4	700.1
55°	692.3	710.3	680.9	641.9	630.8
57.5°	621.4	639.0	607.8	581.7	571.1
60°	575.8	591.5	562.2	541.7	532.8
62.5°	524.6	542.1	516.5	507.2	501.9
65°	456.9	472.8	459.5	457.7	457.8
67.5°	393.4	407.0	406.2	420.5	425.6
70°	349.6	363.1	375.2	398.8	405.7
72.5°	309.4	323.0	351.6	382.6	391.3
75°	246.8	264.9	318.5	362.9	376.5
77.5°	191.9	212.8	295.4	350.5	366.8
80°	155.4	187.1	284.7	345.2	363.4
82.5°	122.5	165.0	277.6	345.5	363.6
85°	75.4	145.4	273.8	346.0	366.3
87.5°	37.5	131.3	267.3	342.2	365.3
90°	23.1	122.2	258.2	335.0	359.9
92.5°	61.9	135.8	273.2	348.0	367.5
95°	127.0	172.3	305.0	379.2	395.0
97.5°	191.8	221.9	345.4	414.6	430.0
100°	238.1	261.0	377.0	444.3	457.8
102.5°	288.1	305.6	414.2	477.8	493.2
105°	363.2	381.5	472.2	537.1	548.4
107.5°	446.6	466.2	543.1	604.4	616.1
110°	502.2	527.2	595.0	650.8	664.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	563.3	588.3	648.7	700.8	714.4
115°	652.7	680.0	736.2	780.4	791.8
117.5°	746.3	775.3	826.5	868.0	878.9
120°	814.8	842.1	891.4	931.0	940.0
122.5°	876.0	906.8	956.2	995.8	1004.8
125°	974.6	1008.6	1055.7	1093.0	1102.1
127.5°	1076.1	1109.1	1152.5	1190.3	1202.1
130°	1148.3	1177.8	1215.5	1255.2	1268.8
132.5°	1215.1	1244.5	1278.5	1318.2	1333.6
135°	1319.7	1349.1	1375.3	1410.4	1426.2
137.5°	1420.2	1448.7	1468.8	1496.6	1516.5
140°	1488.7	1513.6	1528.1	1554.0	1572.1
142.5°	1551.7	1576.6	1587.4	1609.5	1627.6
145°	1646.2	1666.5	1676.3	1688.3	1706.4
147.5°	1734.6	1754.5	1758.7	1769.1	1780.5
150°	1792.0	1810.1	1810.6	1815.4	1826.8
152.5°	1845.8	1862.0	1856.9	1859.9	1873.1
155°	1921.7	1933.0	1924.0	1926.6	1937.9
157.5°	1981.9	1993.2	1979.1	1983.5	1992.5
160°	2018.9	2030.3	2014.3	2016.8	2025.9
162.5°	2054.1	2061.8	2047.6	2044.7	2057.4
165°	2097.7	2106.7	2090.7	2084.1	2097.7
167.5°	2134.7	2143.8	2122.7	2115.6	2129.1
170°	2153.2	2162.3	2139.3	2130.4	2144.0
172.5°	2169.9	2178.9	2154.1	2143.3	2153.2
175°	2185.6	2194.7	2167.1	2157.9	2157.9
177.5°	2190.3	2195.7	2175.4	2166.4	2177.3
180°	2181.0	2181.0	2181.0	2181.0	2181.0

(END OF REPORT)