

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: P911198

Luminaire Tested: DFN2DIP-PN3F0-050D050US850-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P911198
REPORT IS A COMBINATION OF REPORTS P899544 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-050D050US850-RLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

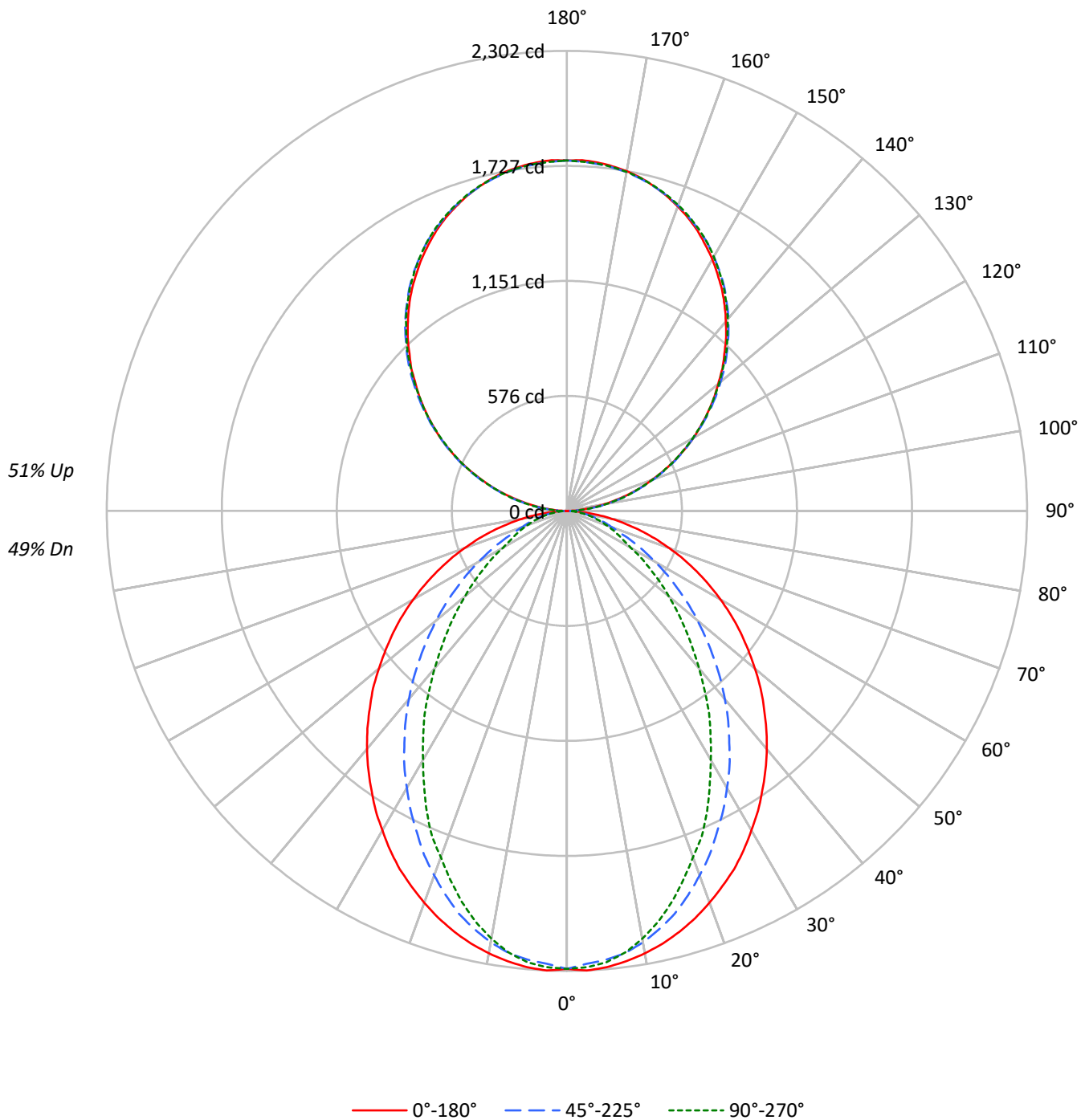
Lumens per Lamp: N/A
Luminaire Lumens: 9620.6 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 82.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P911198

CATALOG NUMBER: DFN2DIP-PN3F0-050D050US850-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P911198

CATALOG NUMBER: DFN2DIP-PN3F0-050D050US850-RLLFLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55
1	98	94	90	87	90	87	84	81	73	71	69	61	59	58	50	49	48
2	90	83	77	72	82	76	71	67	65	61	58	54	51	49	44	42	41
3	82	73	66	60	75	68	61	57	58	53	49	48	45	42	40	37	35
4	75	65	57	51	69	60	54	48	51	46	42	43	40	36	36	33	31
5	69	58	50	44	64	54	47	42	46	41	37	39	35	32	32	29	27
6	64	52	44	39	59	49	42	37	42	36	32	35	31	28	30	26	24
7	59	47	40	34	55	44	37	32	38	33	29	32	28	25	27	24	22
8	55	43	36	30	51	40	33	29	35	29	26	30	26	23	25	22	20
9	51	39	32	27	47	37	30	26	32	27	23	27	23	20	23	20	18
10	48	36	29	24	44	34	28	23	30	24	21	25	21	19	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2679	2679	2679
5°	2682	2635	2652
10°	2654	2581	2565
15°	2615	2494	2430
20°	2566	2375	2266
25°	2514	2241	2107
30°	2446	2105	1906
35°	2379	1958	1729
40°	2311	1806	1527
45°	2232	1638	1343
50°	2151	1469	1164
55°	2065	1288	992
60°	1966	1099	815
65°	1852	908	733
70°	1713	729	661
75°	1539	638	599
80°	1287	530	516
85°	875	345	381

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2232 cd/sqm

TEST NUMBER: P911198

CATALOG NUMBER: DFN2DIP-PN3F0-050D050US850-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.8	2.2
10°-20°	589.6	6.1
20°-30°	827.8	8.6
30°-40°	902.4	9.4
40°-50°	829.4	8.6
50°-60°	651.3	6.8
60°-70°	424.0	4.4
70°-80°	218.2	2.3
80°-90°	60.7	0.6
90°-100°	108.5	1.1
100°-110°	344.8	3.6
110°-120°	590.1	6.1
120°-130°	776.0	8.1
130°-140°	871.0	9.1
140°-150°	854.2	8.9
150°-160°	716.5	7.4
160°-170°	475.2	4.9
170°-180°	166.1	1.7
0°-30°	1632.2	17.0
0°-40°	2534.6	26.3
0°-60°	4015.3	41.7
0°-90°	4718.3	49.0
90°-120°	1043.4	10.8
90°-150°	3544.6	36.8
90°-180°	4902.0	51.0
0°-180°	9620.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2292	2292	2292	2292	2292	
5°	2292	2281	2254	2273	2267	217
15°	2180	2157	2086	2047	2026	614
25°	1979	1912	1775	1690	1659	910
35°	1705	1599	1417	1286	1240	1067
45°	1394	1255	1037	890	840	1076
55°	1060	898	674	550	510	947
65°	716	548	361	290	284	709
75°	382	236	166	151	149	404
85°	89	46	39	39	39	102
90°	2	19	52	49	50	9
95°	77	92	95	95	92	86
105°	318	322	326	328	328	336
115°	592	601	598	596	592	586
125°	861	874	870	866	864	770
135°	1114	1130	1134	1132	1128	861
145°	1352	1363	1371	1373	1367	845
155°	1546	1551	1555	1563	1558	712
165°	1682	1681	1681	1691	1684	475
175°	1751	1746	1743	1754	1745	166
180°	1754	1754	1754	1754	1754	

TEST NUMBER: P911198

CATALOG NUMBER: DFN2DIP-PN3F0-050D050US850-RLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2291.7	2291.7	2291.7	2291.7	2291.7
2.5°	2302.1	2291.7	2268.9	2289.8	2285.5
5°	2291.7	2281.4	2254.4	2273.0	2266.9
7.5°	2273.0	2260.7	2231.6	2239.8	2229.4
10°	2248.2	2233.6	2192.3	2185.9	2173.5
12.5°	2217.1	2198.5	2142.4	2130.1	2107.1
15°	2179.7	2156.9	2086.5	2047.1	2026.4
17.5°	2136.2	2103.0	2015.8	1970.2	1937.0
20°	2086.5	2044.9	1941.2	1889.5	1843.7
22.5°	2032.6	1984.8	1864.5	1794.0	1763.0
25°	1978.6	1912.1	1775.3	1690.3	1659.1
27.5°	1914.4	1843.7	1692.3	1594.9	1547.2
30°	1845.9	1767.0	1601.1	1495.4	1439.3
32.5°	1779.5	1684.0	1514.1	1389.6	1337.7
35°	1704.9	1599.1	1416.6	1285.9	1240.2
37.5°	1632.2	1518.1	1325.4	1182.1	1130.4
40°	1555.5	1431.2	1229.8	1082.6	1028.7
42.5°	1476.7	1344.0	1134.5	980.9	929.2
45°	1393.8	1254.7	1037.0	889.6	839.8
47.5°	1314.9	1167.8	943.8	796.4	750.8
50°	1227.9	1080.6	852.5	709.2	665.8
52.5°	1142.7	987.1	765.3	628.5	589.1
55°	1059.8	898.0	673.9	549.6	510.3
57.5°	974.8	808.9	593.2	477.1	443.8
60°	887.6	721.7	508.0	402.5	369.2
62.5°	802.7	636.8	435.5	336.0	319.5
65°	715.5	547.5	360.9	290.4	284.1
67.5°	632.6	464.6	290.4	255.1	248.9
70°	545.5	383.7	240.5	219.8	211.5
72.5°	462.6	309.0	201.2	184.6	180.4
75°	381.6	236.3	165.9	151.4	149.4
77.5°	300.8	167.9	130.8	122.3	118.1
80°	226.0	120.3	99.5	91.3	91.3
82.5°	157.6	81.0	68.4	64.2	64.2
85°	89.2	45.6	39.4	39.4	39.4
87.5°	33.3	16.5	16.5	14.5	14.5
90°	1.6	19.1	51.8	48.7	50.2
92.5°	32.8	44.4	46.0	47.6	47.6
95°	77.2	92.0	94.6	94.6	92.0
97.5°	128.4	142.2	148.1	148.1	148.1
100°	187.6	199.8	204.1	204.1	202.5
102.5°	250.1	259.1	264.8	266.5	264.8
105°	318.3	322.5	325.7	328.3	328.3
107.5°	385.9	392.3	392.3	393.4	385.9
110°	451.5	460.0	460.0	460.0	455.7

TEST NUMBER: P911198

CATALOG NUMBER: DFN2DIP-PN3F0-050D050US850-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	522.3	531.3	529.8	525.6	522.3
115°	592.1	600.6	598.0	596.4	592.1
117.5°	661.4	673.1	665.6	661.4	657.2
120°	731.2	742.8	731.2	731.2	726.4
122.5°	794.6	809.5	802.0	797.8	794.6
125°	861.2	874.4	870.2	865.5	863.9
127.5°	926.2	942.6	936.9	930.5	926.2
130°	987.1	1006.1	1003.4	1000.3	994.4
132.5°	1055.3	1070.1	1071.2	1063.8	1059.5
135°	1114.0	1130.3	1133.5	1132.0	1127.7
137.5°	1179.5	1192.7	1195.4	1194.3	1188.0
140°	1237.1	1250.4	1257.7	1257.7	1252.0
142.5°	1296.3	1309.6	1313.8	1315.4	1309.6
145°	1352.4	1363.0	1371.4	1373.1	1367.2
147.5°	1402.7	1415.9	1422.2	1424.8	1419.0
150°	1454.5	1463.4	1469.2	1474.0	1469.2
152.5°	1500.5	1509.5	1516.8	1522.7	1516.8
155°	1546.4	1550.6	1555.4	1562.8	1558.0
157.5°	1586.1	1589.2	1591.9	1602.5	1595.1
160°	1621.5	1624.7	1626.2	1635.2	1628.9
162.5°	1654.3	1654.3	1655.8	1665.9	1658.5
165°	1682.4	1680.7	1680.7	1691.3	1683.9
167.5°	1707.6	1702.9	1702.9	1713.5	1706.1
170°	1726.7	1722.5	1720.9	1731.5	1722.5
172.5°	1739.9	1735.7	1734.1	1744.7	1735.7
175°	1750.6	1746.2	1743.1	1753.7	1744.7
177.5°	1756.3	1752.1	1748.9	1757.9	1748.9
180°	1753.7	1753.7	1753.7	1753.7	1753.7

TEST NUMBER: P911198

CATALOG NUMBER: DFN2DIP-PN3F0-050D050US850-RLFL

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	10.44	11.26	11.41	12.24	13.53	6.41	7.23	7.38	8.21	9.50
	3H	12.11	12.85	13.09	13.84	15.15	7.59	8.32	8.57	9.31	10.62
	4H	12.72	13.41	13.71	14.40	15.72	8.03	8.73	9.03	9.72	11.04
	6H	13.13	13.77	14.14	14.77	16.10	8.35	8.99	9.36	9.99	11.32
	8H	13.26	13.86	14.27	14.88	16.21	8.44	9.05	9.45	10.06	11.39
	12H	13.31	13.89	14.33	14.90	16.25	8.48	9.06	9.49	10.06	11.42
4H	2H	10.46	11.15	11.46	12.15	13.46	7.00	7.69	8.00	8.69	10.01
	3H	12.28	12.86	13.29	13.88	15.21	8.34	8.92	9.35	9.94	11.27
	4H	12.96	13.49	13.98	14.51	15.86	8.88	9.41	9.90	10.43	11.78
	6H	13.47	13.93	14.50	14.97	16.32	9.29	9.75	10.32	10.79	12.14
	8H	13.65	14.07	14.68	15.10	16.47	9.42	9.84	10.45	10.88	12.24
	12H	13.74	14.12	14.78	15.17	16.54	9.48	9.86	10.53	10.91	12.28
8H	4H	12.93	13.35	13.96	14.39	15.75	9.16	9.58	10.19	10.61	11.98
	6H	13.49	13.84	14.54	14.91	16.28	9.67	10.02	10.72	11.09	12.46
	8H	13.70	14.01	14.76	15.07	16.45	9.85	10.16	10.92	11.22	12.60
	12H	13.84	14.11	14.90	15.16	16.58	9.97	10.24	11.03	11.29	12.72
12H	4H	12.88	13.26	13.93	14.31	15.68	9.16	9.54	10.21	10.59	11.96
	6H	13.46	13.77	14.53	14.83	16.21	9.72	10.02	10.78	11.08	12.47
	8H	13.68	13.95	14.74	15.00	16.43	9.92	10.19	10.99	11.24	12.67

END OF REPORT