

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: P914602

Luminaire Tested: DFN2DIP-SQ3F0-060D050US927-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P914602
REPORT IS A COMBINATION OF REPORTS P899884 AND P896733
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-SQ3F0-060D050US927-RLLFLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

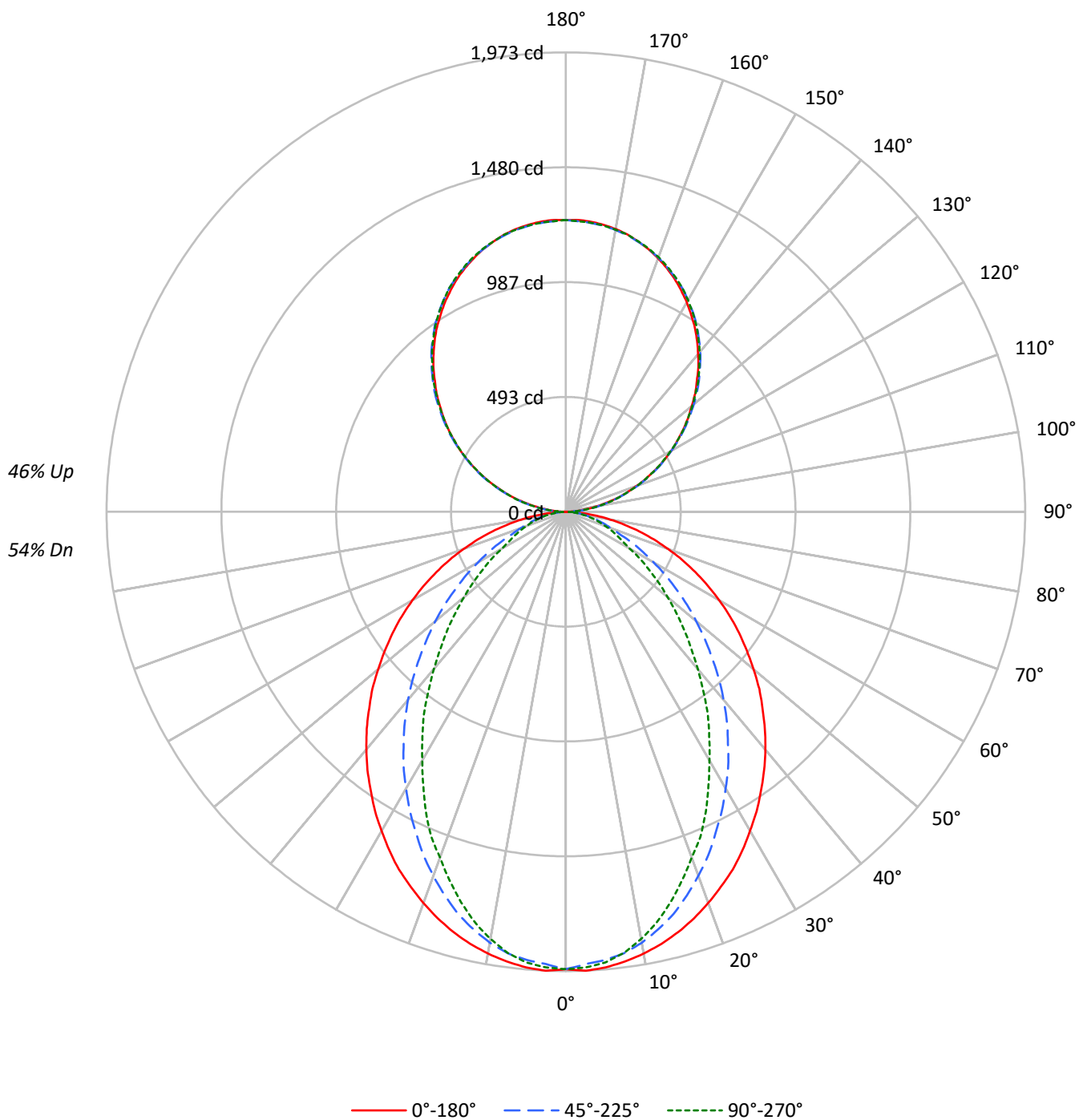
Lumens per Lamp: N/A
Luminaire Lumens: 7545.6 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 3.06' x L: 3.06' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 90.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P914602

CATALOG NUMBER: DFN2DIP-SQ3F0-060D050US927-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P914602

CATALOG NUMBER: DFN2DIP-SQ3F0-060D050US927-RLFL

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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59
1	99	95	91	88	92	88	85	82	76	73	71	64	62	61	53	52	51
2	91	84	78	73	84	78	73	68	67	63	60	57	54	52	48	46	44
3	83	74	67	61	77	69	63	58	59	55	51	51	47	44	43	40	38
4	76	66	58	52	71	61	55	49	53	48	44	46	42	38	38	36	33
5	70	59	51	45	65	55	48	43	48	42	38	41	37	34	35	32	29
6	65	53	45	39	60	50	43	37	43	38	34	37	33	30	32	29	26
7	60	48	40	35	56	45	38	33	39	34	30	34	30	27	29	26	23
8	56	44	36	31	52	41	34	30	36	31	27	31	27	24	27	24	21
9	52	40	33	28	48	38	31	27	33	28	24	29	25	22	25	22	19
10	49	37	30	25	45	35	28	24	31	25	22	27	23	20	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2251	2251	2251
5°	2253	2214	2229
10°	2229	2169	2155
15°	2197	2096	2042
20°	2155	1995	1904
25°	2112	1883	1771
30°	2055	1769	1602
35°	1998	1645	1454
40°	1941	1518	1284
45°	1875	1377	1130
50°	1806	1235	979
55°	1734	1083	835
60°	1650	924	686
65°	1554	763	617
70°	1437	613	557
75°	1291	537	506
80°	1079	446	436
85°	732	290	323

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1875 cd/sqm

TEST NUMBER: P914602

CATALOG NUMBER: DFN2DIP-SQ3F0-060D050US927-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.1	2.4
10°-20°	505.4	6.7
20°-30°	709.6	9.4
30°-40°	773.5	10.3
40°-50°	710.9	9.4
50°-60°	558.3	7.4
60°-70°	363.4	4.8
70°-80°	187.1	2.5
80°-90°	51.3	0.7
90°-100°	77.5	1.0
100°-110°	246.3	3.3
110°-120°	421.5	5.6
120°-130°	554.3	7.3
130°-140°	622.2	8.2
140°-150°	610.1	8.1
150°-160°	511.8	6.8
160°-170°	339.4	4.5
170°-180°	118.6	1.6
0°-30°	1399.1	18.5
0°-40°	2172.6	28.8
0°-60°	3441.9	45.6
0°-90°	4043.7	53.6
90°-120°	745.3	9.9
90°-150°	2532.0	33.6
90°-180°	3502.0	46.4
0°-180°	7545.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1964	1964	1964	1964	1964	
5°	1964	1956	1932	1948	1943	186
15°	1868	1849	1788	1755	1737	527
25°	1696	1639	1522	1449	1422	780
35°	1461	1371	1214	1102	1063	915
45°	1195	1076	889	763	720	923
55°	908	770	578	471	437	812
65°	613	469	309	249	244	608
75°	327	203	142	130	128	346
85°	76	39	34	34	34	88
90°	1	14	37	35	36	7
95°	55	66	68	68	66	61
105°	227	230	233	234	234	240
115°	423	429	427	426	423	418
125°	615	625	622	618	617	550
135°	796	807	810	809	806	615
145°	966	974	980	981	977	604
155°	1105	1108	1111	1116	1113	508
165°	1202	1201	1201	1208	1203	339
175°	1250	1247	1245	1253	1246	119
180°	1253	1253	1253	1253	1253	

TEST NUMBER: P914602

CATALOG NUMBER: DFN2DIP-SQ3F0-060D050US927-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1964.5	1964.5	1964.5	1964.5	1964.5
2.5°	1973.3	1964.5	1944.8	1962.7	1959.1
5°	1964.5	1955.6	1932.4	1948.4	1943.1
7.5°	1948.4	1937.8	1913.0	1919.9	1911.1
10°	1927.1	1914.6	1879.2	1873.7	1863.1
12.5°	1900.5	1884.4	1836.4	1825.8	1806.2
15°	1868.4	1848.8	1788.4	1754.7	1736.9
17.5°	1831.1	1802.6	1727.9	1688.9	1660.4
20°	1788.4	1752.8	1664.0	1619.6	1580.4
22.5°	1742.2	1701.3	1598.1	1537.8	1511.2
25°	1696.1	1639.1	1521.8	1449.0	1422.2
27.5°	1641.0	1580.4	1450.6	1367.1	1326.2
30°	1582.3	1514.6	1372.4	1281.8	1233.7
32.5°	1525.3	1443.5	1297.9	1191.1	1146.6
35°	1461.4	1370.7	1214.3	1102.2	1063.0
37.5°	1399.2	1301.2	1136.1	1013.3	968.9
40°	1333.3	1226.8	1054.2	928.0	881.8
42.5°	1265.8	1152.1	972.5	840.8	796.5
45°	1194.7	1075.5	889.0	762.6	719.9
47.5°	1127.2	1001.0	809.0	682.6	643.6
50°	1052.5	926.3	730.7	607.9	570.8
52.5°	979.5	846.1	656.0	538.7	504.9
55°	908.4	769.8	577.7	471.2	437.4
57.5°	835.6	693.3	508.5	408.9	380.4
60°	760.9	618.7	435.5	345.0	316.5
62.5°	688.1	545.9	373.3	288.0	273.9
65°	613.4	469.3	309.3	249.0	243.5
67.5°	542.2	398.2	249.0	218.6	213.3
70°	467.5	328.9	206.1	188.5	181.3
72.5°	396.5	264.8	172.4	158.3	154.6
75°	327.1	202.6	142.2	129.8	128.1
77.5°	257.9	143.9	112.0	104.9	101.3
80°	193.7	103.1	85.2	78.3	78.3
82.5°	135.1	69.4	58.6	55.1	55.1
85°	76.4	39.1	33.7	33.7	33.7
87.5°	28.5	14.2	14.2	12.4	12.4
90°	1.1	13.6	37.0	34.8	35.9
92.5°	23.4	31.7	32.9	34.0	34.0
95°	55.1	65.8	67.6	67.6	65.8
97.5°	91.7	101.6	105.8	105.8	105.8
100°	134.0	142.8	145.8	145.8	144.7
102.5°	178.6	185.1	189.2	190.4	189.2
105°	227.4	230.4	232.7	234.5	234.5
107.5°	275.7	280.2	280.2	281.0	275.7
110°	322.5	328.6	328.6	328.6	325.5

TEST NUMBER: P914602

CATALOG NUMBER: DFN2DIP-SQ3F0-060D050US927-RLFL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	373.1	379.5	378.4	375.4	373.1
115°	422.9	429.0	427.1	426.0	422.9
117.5°	472.5	480.8	475.5	472.5	469.4
120°	522.3	530.6	522.3	522.3	518.9
122.5°	567.6	578.2	572.9	569.9	567.6
125°	615.2	624.6	621.6	618.2	617.1
127.5°	661.6	673.4	669.2	664.6	661.6
130°	705.1	718.7	716.8	714.5	710.3
132.5°	753.8	764.4	765.2	759.9	756.8
135°	795.7	807.4	809.7	808.6	805.6
137.5°	842.6	852.0	853.9	853.1	848.6
140°	883.7	893.2	898.4	898.4	894.3
142.5°	926.0	935.5	938.5	939.6	935.5
145°	966.1	973.6	979.6	980.8	976.6
147.5°	1002.0	1011.4	1015.9	1017.8	1013.6
150°	1038.9	1045.4	1049.5	1052.9	1049.5
152.5°	1071.8	1078.2	1083.5	1087.7	1083.5
155°	1104.6	1107.6	1111.0	1116.3	1112.9
157.5°	1133.0	1135.2	1137.1	1144.7	1139.4
160°	1158.2	1160.5	1161.7	1168.1	1163.6
162.5°	1181.7	1181.7	1182.8	1190.0	1184.7
165°	1201.7	1200.6	1200.6	1208.2	1202.8
167.5°	1219.8	1216.4	1216.4	1224.0	1218.7
170°	1233.4	1230.4	1229.3	1236.8	1230.4
172.5°	1242.9	1239.8	1238.7	1246.3	1239.8
175°	1250.5	1247.4	1245.2	1252.7	1246.3
177.5°	1254.6	1251.6	1249.3	1255.7	1249.3
180°	1252.7	1252.7	1252.7	1252.7	1252.7

TEST NUMBER: P914602

CATALOG NUMBER: DFN2DIP-SQ3F0-060D050US927-RLLFLL

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	10.26	11.12	11.19	12.07	13.29	6.22	7.08	7.15	8.03	9.25
	3H	11.93	12.70	12.88	13.66	14.90	7.40	8.17	8.35	9.13	10.37
	4H	12.54	13.27	13.50	14.23	15.48	7.85	8.58	8.81	9.54	10.79
	6H	12.96	13.63	13.93	14.60	15.86	8.17	8.84	9.14	9.80	11.07
	8H	13.09	13.72	14.06	14.70	15.97	8.26	8.89	9.23	9.88	11.14
	12H	13.15	13.75	14.13	14.73	16.02	8.30	8.90	9.28	9.88	11.17
4H	2H	10.28	11.01	11.24	11.97	13.22	6.82	7.54	7.78	8.50	9.76
	3H	12.11	12.71	13.08	13.70	14.97	8.16	8.77	9.14	9.76	11.02
	4H	12.80	13.35	13.78	14.33	15.62	8.71	9.26	9.69	10.24	11.53
	6H	13.31	13.78	14.30	14.79	16.08	9.12	9.59	10.12	10.60	11.89
	8H	13.48	13.92	14.48	14.92	16.23	9.25	9.69	10.24	10.69	11.99
	12H	13.58	13.97	14.59	14.99	16.30	9.31	9.71	10.32	10.72	12.03
8H	4H	12.76	13.21	13.76	14.21	15.51	8.99	9.43	9.98	10.43	11.73
	6H	13.33	13.69	14.35	14.73	16.04	9.50	9.86	10.52	10.90	12.21
	8H	13.54	13.86	14.57	14.89	16.21	9.68	10.01	10.71	11.03	12.36
	12H	13.68	13.96	14.71	14.98	16.35	9.80	10.08	10.83	11.10	12.47
12H	4H	12.72	13.12	13.73	14.13	15.44	8.99	9.39	10.01	10.41	11.72
	6H	13.30	13.62	14.33	14.65	15.97	9.55	9.87	10.57	10.90	12.22
	8H	13.52	13.80	14.55	14.82	16.19	9.75	10.03	10.78	11.06	12.42