

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: P919252

Luminaire Tested: DFN2DIP-PN2F0-030D060US935-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P919252
REPORT IS A COMBINATION OF REPORTS P899503 AND P896349
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN2F0-030D060US935-FLLFLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

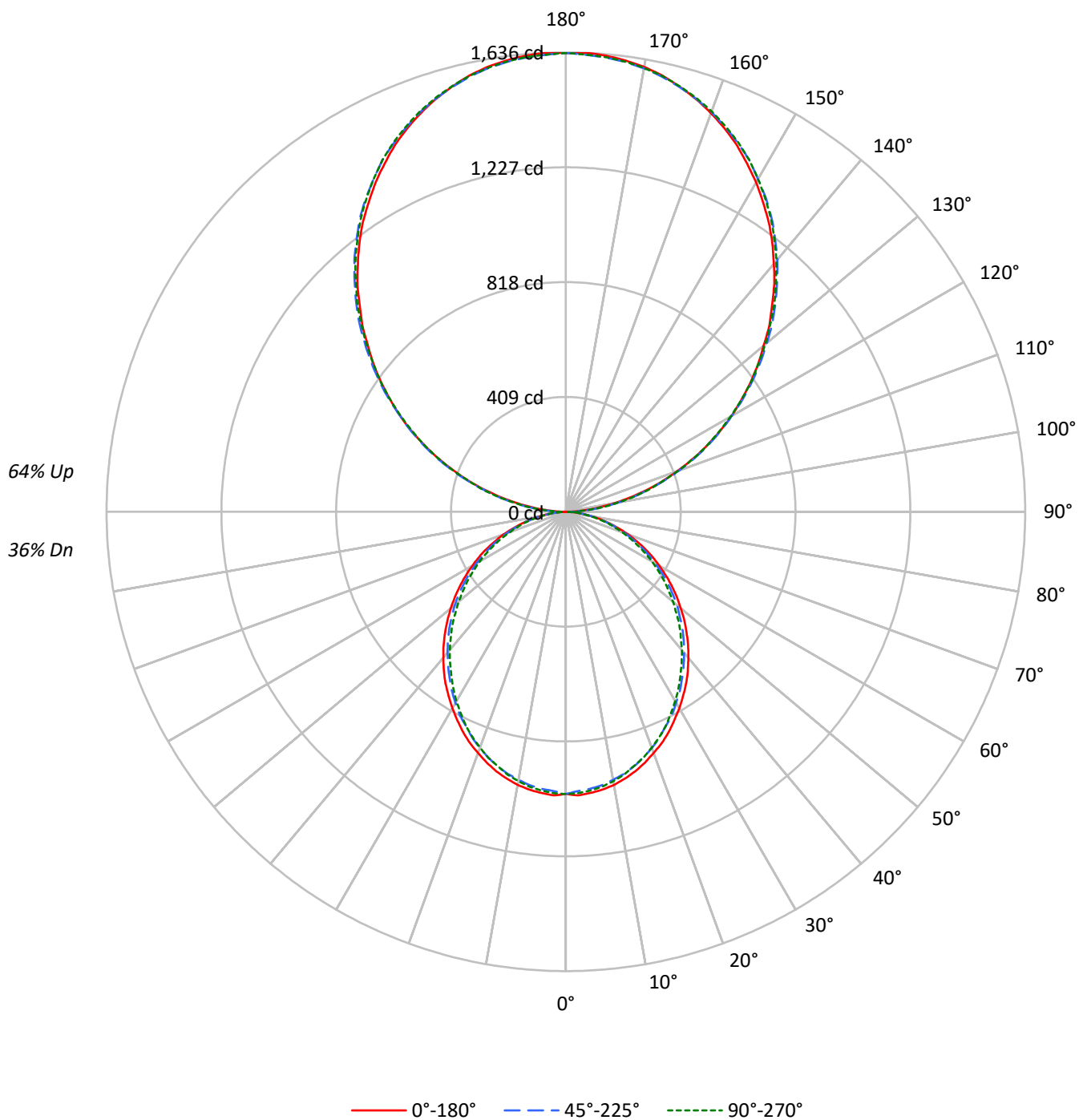
Lumens per Lamp: N/A
Luminaire Lumens: 7129.1 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.17' x L: 2.29' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 80.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P919252

CATALOG NUMBER: DFN2DIP-PN2F0-030D060US935-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P919252

CATALOG NUMBER: DFN2DIP-PN2F0-030D060US935-FLLFL

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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43
1	95	90	87	83	85	82	79	76	66	64	62	52	50	49	38	37	36
2	86	79	73	68	78	72	66	62	58	54	51	45	43	41	34	32	31
3	79	69	62	56	71	63	57	52	51	47	43	40	37	34	30	28	26
4	72	61	54	48	65	56	49	44	45	40	37	36	32	29	27	24	22
5	66	54	47	41	59	50	43	38	40	35	31	32	28	25	24	22	20
6	61	49	41	35	55	45	38	33	36	31	27	29	25	22	22	19	17
7	56	44	36	31	50	40	33	28	33	28	24	26	22	20	20	17	15
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	16	14
9	48	36	29	24	44	33	27	22	27	22	19	22	18	16	17	14	12
10	45	33	26	21	41	30	24	20	25	20	17	20	17	14	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2177	2177	2177
5°	2177	2142	2158
10°	2156	2108	2125
15°	2120	2069	2077
20°	2074	2016	2027
25°	2028	1954	1969
30°	1971	1896	1898
35°	1917	1828	1822
40°	1850	1759	1750
45°	1784	1690	1675
50°	1711	1617	1590
55°	1635	1532	1511
60°	1549	1433	1419
65°	1454	1330	1312
70°	1333	1204	1196
75°	1168	1053	1084
80°	966	859	879
85°	656	543	551

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 2204 cd/sqm

TEST NUMBER: P919252

CATALOG NUMBER: DFN2DIP-PN2F0-030D060US935-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.6	1.3
10°-20°	266.2	3.7
20°-30°	391.1	5.5
30°-40°	454.3	6.4
40°-50°	453.7	6.4
50°-60°	395.6	5.5
60°-70°	292.5	4.1
70°-80°	165.5	2.3
80°-90°	48.3	0.7
90°-100°	101.1	1.4
100°-110°	321.2	4.5
110°-120°	549.7	7.7
120°-130°	723.0	10.1
130°-140°	811.5	11.4
140°-150°	795.8	11.2
150°-160°	667.5	9.4
160°-170°	442.7	6.2
170°-180°	154.7	2.2
0°-30°	751.9	10.5
0°-40°	1206.2	16.9
0°-60°	2055.6	28.8
0°-90°	2561.8	35.9
90°-120°	972.0	13.6
90°-150°	3302.3	46.3
90°-180°	4567.0	64.1
0°-180°	7129.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1005	1005	1005	1005	1005	
5°	1005	1001	991	998	996	95
15°	957	951	938	942	938	269
25°	866	858	842	844	842	398
35°	747	737	722	716	711	467
45°	608	601	587	576	572	469
55°	460	454	443	431	426	411
65°	310	304	295	286	281	307
75°	162	160	156	150	152	173
85°	40	39	38	35	34	44
90°	2	18	48	45	47	7
95°	72	86	88	88	86	80
105°	296	300	303	306	306	313
115°	552	560	557	556	552	546
125°	802	815	811	806	805	717
135°	1038	1053	1056	1055	1051	802
145°	1260	1270	1278	1279	1274	787
155°	1441	1445	1449	1456	1452	663
165°	1567	1566	1566	1576	1569	442
175°	1631	1627	1624	1634	1625	155
180°	1634	1634	1634	1634	1634	

TEST NUMBER: P919252

CATALOG NUMBER: DFN2DIP-PN2F0-030D060US935-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1005.0	1005.0	1005.0	1005.0	1005.0
2.5°	1010.9	1006.1	995.4	1005.0	1003.2
5°	1005.0	1001.3	990.6	998.3	996.4
7.5°	998.3	992.6	981.9	989.7	987.7
10°	987.7	980.9	969.4	977.1	974.2
12.5°	973.2	967.4	955.9	960.6	958.7
15°	956.7	951.1	938.4	942.3	937.5
17.5°	936.4	930.7	918.1	922.9	918.1
20°	914.2	908.4	894.9	897.8	894.0
22.5°	892.1	883.4	870.7	870.7	868.7
25°	865.9	858.2	841.8	843.7	841.8
27.5°	836.9	830.1	817.6	814.8	809.9
30°	808.0	800.2	785.7	782.8	778.9
32.5°	777.1	771.3	755.8	749.9	746.1
35°	747.1	737.4	721.9	716.1	711.3
37.5°	713.3	704.6	689.1	682.3	677.4
40°	678.5	670.7	655.2	646.6	642.7
42.5°	644.6	636.9	621.5	611.7	606.0
45°	608.0	601.1	586.6	576.0	572.1
47.5°	572.1	565.4	549.9	539.2	533.5
50°	534.4	529.6	516.1	502.6	497.7
52.5°	497.7	490.9	478.5	467.8	461.0
55°	460.1	454.3	442.6	431.1	426.3
57.5°	422.3	417.5	404.9	393.3	389.4
60°	384.6	380.8	367.3	356.6	353.8
62.5°	347.9	341.1	331.5	321.8	318.0
65°	310.3	304.4	294.8	286.1	281.3
67.5°	271.6	266.7	258.0	251.3	247.5
70°	235.8	232.0	223.3	216.5	212.7
72.5°	199.1	195.2	190.4	183.7	180.8
75°	162.3	160.5	155.6	149.8	151.8
77.5°	129.5	125.6	123.6	120.8	118.0
80°	96.7	95.7	93.7	90.8	88.9
82.5°	65.7	65.7	64.8	60.9	60.9
85°	39.6	38.7	37.7	34.8	33.8
87.5°	17.4	15.5	13.5	10.7	9.6
90°	1.5	17.7	48.3	45.3	46.8
92.5°	30.6	41.4	42.9	44.3	44.3
95°	71.9	85.7	88.2	88.2	85.7
97.5°	119.7	132.5	137.9	137.9	137.9
100°	174.9	186.1	190.1	190.1	188.6
102.5°	233.0	241.3	246.8	248.2	246.8
105°	296.5	300.5	303.4	305.9	305.9
107.5°	359.6	365.5	365.5	366.4	359.6
110°	420.7	428.5	428.5	428.5	424.6

TEST NUMBER: P919252

CATALOG NUMBER: DFN2DIP-PN2F0-030D060US935-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	486.6	495.0	493.5	489.6	486.6
115°	551.6	559.6	557.1	555.6	551.6
117.5°	616.2	627.1	620.1	616.2	612.3
120°	681.2	692.1	681.2	681.2	676.7
122.5°	740.3	754.1	747.2	743.3	740.3
125°	802.4	814.7	810.7	806.3	804.9
127.5°	863.0	878.2	872.8	866.9	863.0
130°	919.6	937.4	934.9	931.9	926.5
132.5°	983.2	996.9	997.9	991.0	987.0
135°	1037.8	1053.1	1056.0	1054.6	1050.6
137.5°	1098.9	1111.2	1113.7	1112.7	1106.8
140°	1152.6	1164.9	1171.8	1171.8	1166.4
142.5°	1207.7	1220.0	1224.0	1225.5	1220.0
145°	1260.0	1269.8	1277.7	1279.2	1273.8
147.5°	1306.7	1319.0	1325.0	1327.4	1322.0
150°	1355.0	1363.4	1368.8	1373.2	1368.8
152.5°	1397.8	1406.3	1413.2	1418.6	1413.2
155°	1440.7	1444.7	1449.1	1456.0	1451.6
157.5°	1477.6	1480.7	1483.1	1493.0	1486.1
160°	1510.7	1513.6	1515.1	1523.4	1517.6
162.5°	1541.2	1541.2	1542.6	1552.0	1545.1
165°	1567.3	1565.8	1565.8	1575.7	1568.8
167.5°	1591.0	1586.6	1586.6	1596.4	1589.5
170°	1608.7	1604.7	1603.3	1613.1	1604.7
172.5°	1621.0	1617.0	1615.6	1625.4	1617.0
175°	1630.8	1626.9	1623.9	1633.8	1625.4
177.5°	1636.2	1632.4	1629.4	1637.7	1629.4
180°	1633.8	1633.8	1633.8	1633.8	1633.8

TEST NUMBER: P919252

CATALOG NUMBER: DFN2DIP-PN2F0-030D060US935-FLLFLL

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	8.39	9.14	9.46	10.21	11.67	7.96	8.70	9.03	9.77	11.23
	3H	10.02	10.69	11.10	11.77	13.25	9.55	10.22	10.62	11.29	12.77
	4H	10.59	11.23	11.68	12.31	13.79	10.11	10.75	11.20	11.83	13.31
	6H	10.97	11.56	12.07	12.64	14.14	10.49	11.07	11.58	12.16	13.65
	8H	11.07	11.62	12.17	12.72	14.21	10.58	11.14	11.68	12.24	13.73
	12H	11.10	11.63	12.21	12.73	14.24	10.61	11.14	11.72	12.23	13.75
4H	2H	8.83	9.47	9.93	10.55	12.03	8.48	9.12	9.58	10.20	11.68
	3H	10.66	11.19	11.77	12.30	13.80	10.26	10.79	11.37	11.90	13.40
	4H	11.36	11.84	12.46	12.94	14.46	10.94	11.43	12.05	12.53	14.04
	6H	11.85	12.26	12.96	13.38	14.89	11.43	11.84	12.54	12.97	14.47
	8H	11.98	12.37	13.10	13.49	15.01	11.56	11.95	12.67	13.06	14.59
	12H	12.04	12.39	13.17	13.52	15.05	11.61	11.96	12.74	13.09	14.62
8H	4H	11.53	11.92	12.65	13.04	14.56	11.16	11.55	12.28	12.67	14.19
	6H	12.13	12.46	13.27	13.61	15.13	11.76	12.08	12.90	13.24	14.76
	8H	12.34	12.62	13.48	13.76	15.30	11.96	12.24	13.10	13.38	14.92
	12H	12.45	12.70	13.60	13.83	15.41	12.06	12.30	13.20	13.44	15.02
12H	4H	11.51	11.86	12.64	12.99	14.52	11.15	11.50	12.28	12.63	14.16
	6H	12.16	12.44	13.30	13.58	15.12	11.80	12.08	12.94	13.21	14.76
	8H	12.38	12.63	13.53	13.76	15.34	12.01	12.26	13.16	13.39	14.97