

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: P922100

Luminaire Tested: DFN2DIP-PN3F0-050D030US940-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P922100
REPORT IS A COMBINATION OF REPORTS P899515 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-050D030US940-FLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

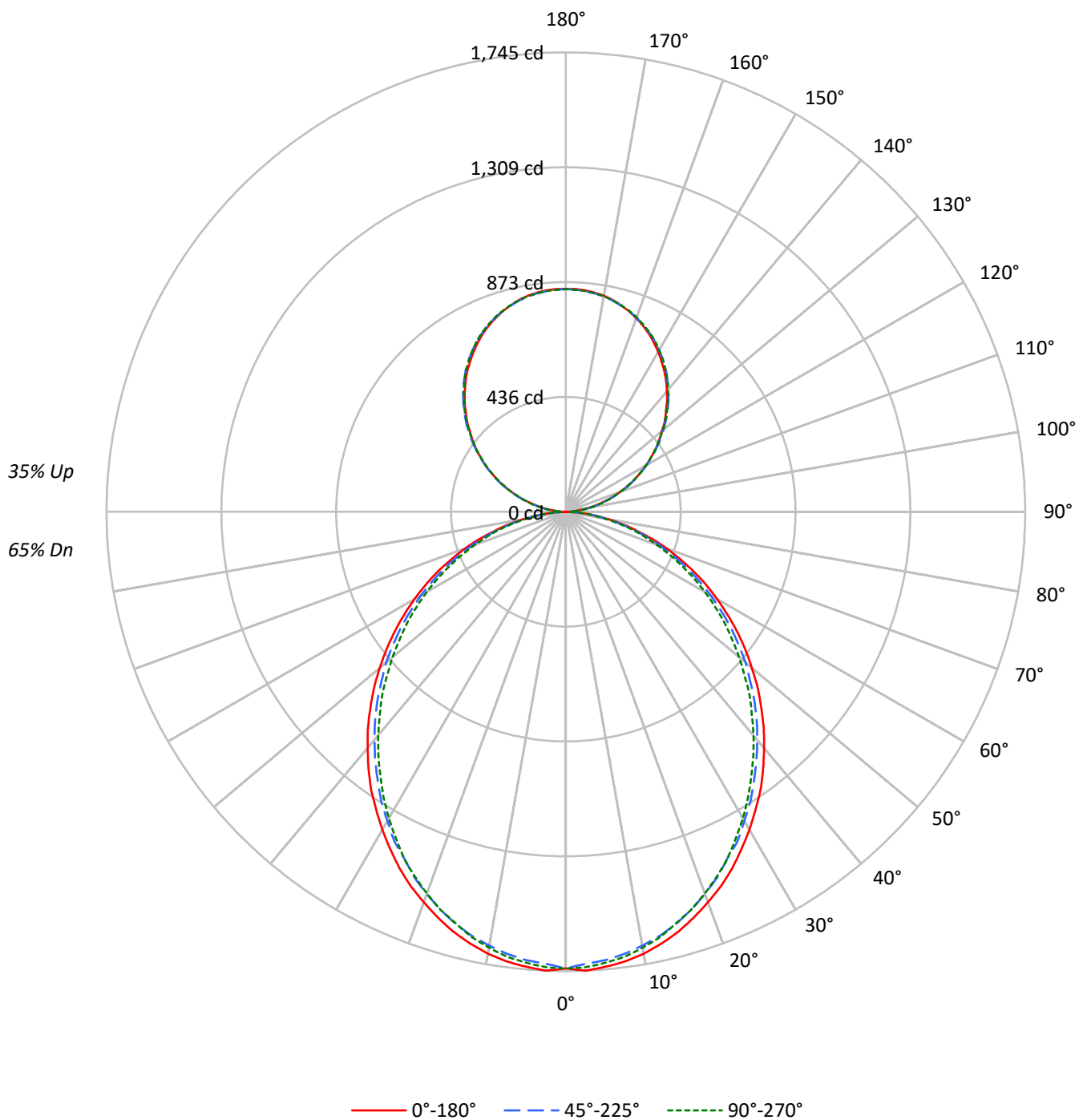
Lumens per Lamp: N/A
Luminaire Lumens: 6781.5 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: Semi-Direct

Input Watts (W): 68.3
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: P922100

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US940-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P922100

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US940-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	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70
1	101	97	93	89	95	91	88	84	81	78	75	71	69	67	62	60	59
2	92	85	78	73	86	80	74	69	71	66	63	62	59	56	55	52	50
3	84	74	67	61	79	70	63	58	62	57	53	55	51	47	48	45	42
4	77	66	58	52	72	62	55	49	55	50	45	49	44	41	43	40	37
5	71	59	50	44	66	56	48	42	50	44	39	44	39	35	39	35	32
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	35	31	28
7	60	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25
8	56	44	36	30	53	41	34	29	37	31	27	33	28	25	30	26	22
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	27	23	20
10	49	37	29	24	46	35	28	23	32	26	22	28	24	20	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2028	2028	2028
5°	2030	1998	2012
10°	2012	1970	1984
15°	1981	1936	1941
20°	1940	1890	1896
25°	1899	1834	1845
30°	1848	1783	1780
35°	1800	1722	1712
40°	1740	1661	1646
45°	1681	1599	1579
50°	1616	1535	1502
55°	1548	1460	1431
60°	1470	1372	1349
65°	1386	1279	1252
70°	1279	1167	1148
75°	1130	1033	1051
80°	950	861	867
85°	670	570	565

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1681 cd/sqm

TEST NUMBER: P922100

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US940-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.3	2.4
10°-20°	459.4	6.8
20°-30°	675.2	10.0
30°-40°	784.2	11.6
40°-50°	783.2	11.5
50°-60°	682.9	10.1
60°-70°	504.8	7.4
70°-80°	285.6	4.2
80°-90°	77.8	1.1
90°-100°	52.3	0.8
100°-110°	166.3	2.5
110°-120°	284.7	4.2
120°-130°	374.4	5.5
130°-140°	420.2	6.2
140°-150°	412.1	6.1
150°-160°	345.7	5.1
160°-170°	229.2	3.4
170°-180°	80.1	1.2
0°-30°	1297.9	19.1
0°-40°	2082.0	30.7
0°-60°	3548.1	52.3
0°-90°	4416.4	65.1
90°-120°	503.4	7.4
90°-150°	1710.0	25.2
90°-180°	2365.0	34.9
0°-180°	6781.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1735	1735	1735	1735	1735	
5°	1735	1728	1710	1723	1720	165
15°	1651	1642	1620	1627	1618	465
25°	1495	1481	1453	1456	1453	688
35°	1290	1273	1246	1236	1228	805
45°	1049	1038	1012	994	988	810
55°	794	784	764	744	736	710
65°	536	526	509	494	485	530
75°	280	277	268	259	262	299
85°	68	67	65	60	58	76
90°	1	9	25	24	24	7
95°	37	44	46	46	44	41
105°	154	156	157	158	158	162
115°	286	290	288	288	286	283
125°	416	422	420	418	417	371
135°	537	545	547	546	544	415
145°	652	658	662	662	660	408
155°	746	748	750	754	752	343
165°	812	811	811	816	812	229
175°	844	842	841	846	842	80
180°	846	846	846	846	846	

TEST NUMBER: P922100

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US940-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1734.8	1734.8	1734.8	1734.8	1734.8
2.5°	1744.9	1736.6	1718.2	1734.8	1731.7
5°	1734.8	1728.3	1709.9	1723.1	1720.0
7.5°	1723.1	1713.2	1694.9	1708.3	1705.0
10°	1705.0	1693.3	1673.3	1686.5	1681.6
12.5°	1679.8	1669.9	1649.9	1658.2	1654.8
15°	1651.4	1641.5	1619.8	1626.6	1618.2
17.5°	1616.4	1606.5	1584.7	1593.0	1584.7
20°	1578.1	1568.2	1544.8	1549.7	1543.2
22.5°	1539.8	1524.7	1503.0	1503.0	1499.6
25°	1494.7	1481.4	1453.0	1456.3	1453.0
27.5°	1444.6	1432.9	1411.3	1406.3	1398.0
30°	1394.6	1381.3	1356.3	1351.3	1344.6
32.5°	1341.2	1331.3	1304.6	1294.5	1287.8
35°	1289.5	1272.9	1246.2	1236.1	1227.8
37.5°	1231.1	1216.1	1189.4	1177.7	1169.4
40°	1171.2	1157.7	1131.0	1116.1	1109.4
42.5°	1112.8	1099.3	1072.7	1055.9	1046.0
45°	1049.4	1037.7	1012.5	994.3	987.6
47.5°	987.6	975.9	949.2	930.8	920.9
50°	922.5	914.2	890.8	867.5	859.1
52.5°	859.1	847.4	825.8	807.4	795.8
55°	794.2	784.1	764.0	744.0	735.8
57.5°	729.0	720.7	698.9	678.9	672.2
60°	663.9	657.4	634.0	615.5	610.6
62.5°	600.6	588.9	572.2	555.5	548.8
65°	535.6	525.5	508.8	493.8	485.4
67.5°	468.9	460.4	445.5	433.8	427.0
70°	407.1	400.4	385.3	373.6	367.1
72.5°	343.8	337.0	328.7	317.0	312.0
75°	280.2	277.0	268.5	258.6	262.0
77.5°	223.6	216.8	213.5	208.5	203.6
80°	166.9	165.1	161.8	156.9	153.5
82.5°	113.4	113.4	111.8	105.1	105.1
85°	68.3	66.7	65.1	60.0	58.4
87.5°	30.1	26.8	23.4	18.4	16.7
90°	0.8	9.2	25.0	23.5	24.3
92.5°	15.8	21.4	22.2	22.9	22.9
95°	37.3	44.4	45.7	45.7	44.4
97.5°	62.0	68.6	71.4	71.4	71.4
100°	90.5	96.4	98.4	98.4	97.7
102.5°	120.6	125.0	127.8	128.6	127.8
105°	153.6	155.6	157.1	158.4	158.4
107.5°	186.2	189.2	189.2	189.8	186.2
110°	217.8	221.9	221.9	221.9	219.9

TEST NUMBER: P922100

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US940-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	252.0	256.4	255.6	253.5	252.0
115°	285.7	289.7	288.5	287.8	285.7
117.5°	319.1	324.7	321.1	319.1	317.0
120°	352.8	358.4	352.8	352.8	350.4
122.5°	383.3	390.5	386.9	384.9	383.3
125°	415.5	421.9	419.8	417.5	416.8
127.5°	446.8	454.8	452.0	448.9	446.8
130°	476.2	485.4	484.1	482.6	479.7
132.5°	509.1	516.2	516.7	513.2	511.1
135°	537.4	545.3	546.9	546.1	544.0
137.5°	569.0	575.4	576.7	576.2	573.1
140°	596.8	603.2	606.8	606.8	604.0
142.5°	625.4	631.8	633.8	634.6	631.8
145°	652.5	657.5	661.6	662.4	659.6
147.5°	676.7	683.1	686.1	687.4	684.6
150°	701.7	706.1	708.8	711.1	708.8
152.5°	723.9	728.2	731.7	734.6	731.7
155°	746.1	748.1	750.4	753.9	751.7
157.5°	765.2	766.7	768.0	773.1	769.5
160°	782.3	783.8	784.6	788.9	785.9
162.5°	798.1	798.1	798.9	803.7	800.1
165°	811.6	810.8	810.8	815.9	812.3
167.5°	823.9	821.5	821.5	826.6	823.0
170°	833.0	831.0	830.3	835.4	831.0
172.5°	839.4	837.4	836.6	841.7	837.4
175°	844.5	842.5	841.0	846.1	841.7
177.5°	847.3	845.3	843.7	848.1	843.7
180°	846.1	846.1	846.1	846.1	846.1

TEST NUMBER: P922100

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US940-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	10.98	11.99	11.79	12.83	13.87	10.54	11.55	11.35	12.39	13.43
	3H	12.64	13.56	13.47	14.40	15.47	12.16	13.07	12.99	13.92	14.99
	4H	13.24	14.10	14.08	14.95	16.03	12.75	13.61	13.59	14.47	15.54
	6H	13.64	14.43	14.50	15.30	16.39	13.15	13.94	14.01	14.81	15.90
	8H	13.75	14.50	14.61	15.38	16.47	13.25	14.01	14.12	14.89	15.98
	12H	13.80	14.52	14.67	15.39	16.51	13.30	14.02	14.17	14.90	16.01
4H	2H	11.45	12.32	12.30	13.17	14.25	11.10	11.97	11.95	12.82	13.90
	3H	13.33	14.05	14.19	14.93	16.03	12.93	13.65	13.79	14.53	15.62
	4H	14.04	14.70	14.92	15.58	16.70	13.63	14.28	14.50	15.17	16.29
	6H	14.56	15.13	15.45	16.04	17.16	14.14	14.71	15.03	15.61	16.74
	8H	14.71	15.24	15.60	16.14	17.28	14.28	14.81	15.18	15.72	16.85
	12H	14.79	15.27	15.70	16.19	17.33	14.35	14.83	15.26	15.75	16.89
8H	4H	14.25	14.78	15.14	15.68	16.82	13.88	14.41	14.77	15.31	16.45
	6H	14.88	15.32	15.80	16.26	17.40	14.50	14.94	15.42	15.89	17.02
	8H	15.10	15.49	16.03	16.42	17.57	14.71	15.10	15.64	16.04	17.19
	12H	15.23	15.57	16.16	16.50	17.71	14.83	15.17	15.76	16.10	17.31
12H	4H	14.24	14.72	15.15	15.64	16.78	13.88	14.36	14.79	15.28	16.42
	6H	14.91	15.30	15.84	16.23	17.39	14.54	14.93	15.47	15.87	17.02
	8H	15.15	15.49	16.08	16.42	17.63	14.78	15.12	15.71	16.05	17.26

END OF REPORT