

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: P924801

Luminaire Tested: DFN2DIP-PN3F0-040D030US950-FLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P924801
REPORT IS A COMBINATION OF REPORTS P901033 AND P897955
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-040D030US950-FLLONL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

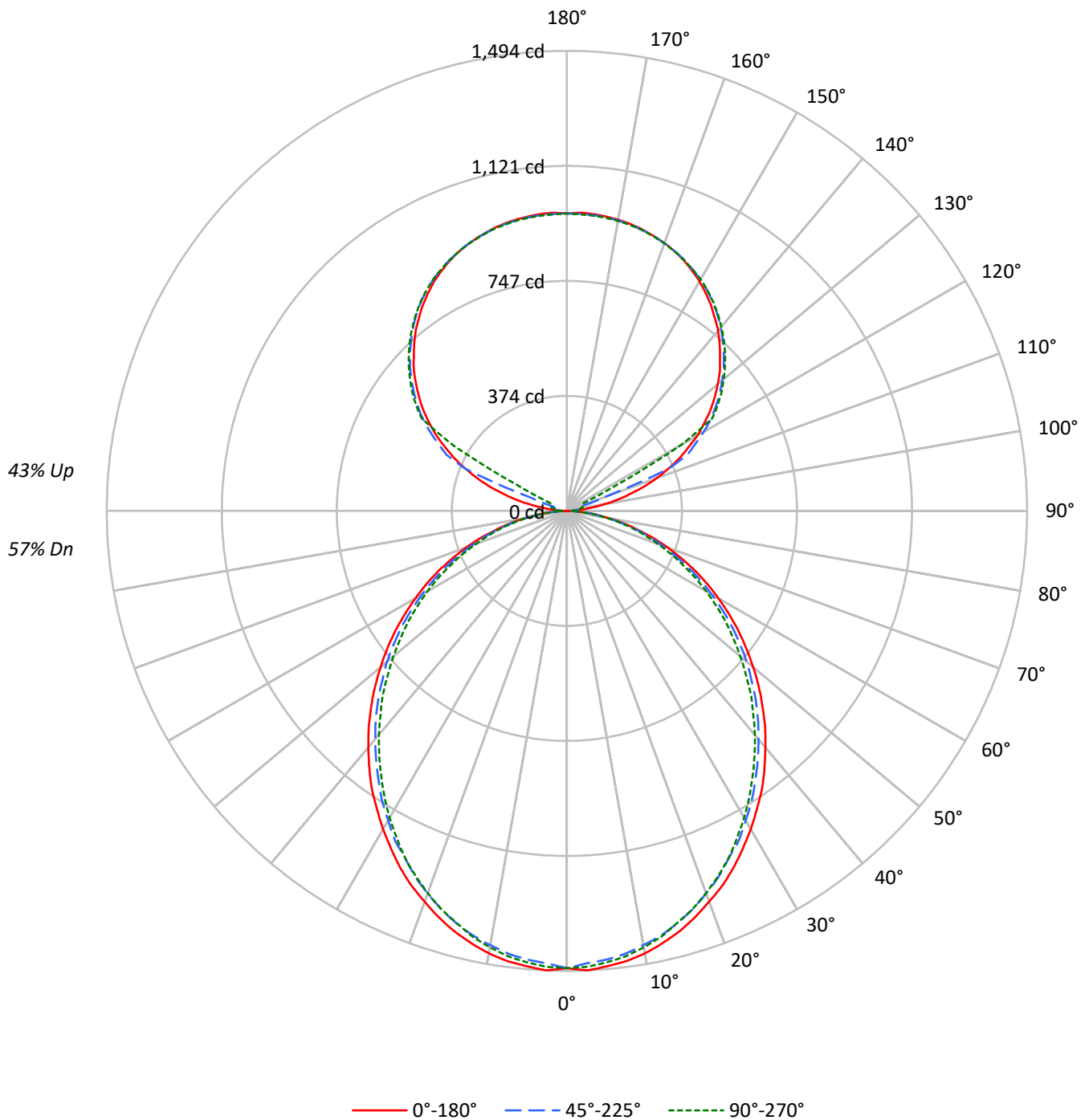
Lumens per Lamp: N/A
Luminaire Lumens: 6611.2 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 58
Input Voltage (V):
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: P924801

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US950-FLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P924801

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US950-FLLONL

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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	63	63	63
1	99	95	91	88	92	89	85	82	77	74	72	66	64	62	55	54	53
2	91	83	77	72	84	77	72	67	67	63	59	58	55	52	49	47	45
3	83	73	66	60	77	68	62	56	59	54	50	51	47	44	43	40	38
4	76	65	57	50	70	61	53	48	53	47	43	45	41	38	39	35	33
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	31	29
6	64	52	44	38	59	49	41	36	43	37	32	37	32	29	32	28	25
7	59	47	39	33	55	44	37	31	39	33	28	34	29	25	29	25	22
8	55	43	35	29	51	40	33	28	35	29	25	31	26	23	27	23	20
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18
10	48	36	28	24	45	34	27	22	30	24	20	26	22	18	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1736	1736	1736
5°	1737	1710	1722
10°	1722	1686	1698
15°	1696	1657	1661
20°	1661	1617	1623
25°	1626	1570	1579
30°	1582	1526	1524
35°	1540	1474	1465
40°	1489	1421	1409
45°	1439	1369	1352
50°	1383	1314	1285
55°	1324	1250	1224
60°	1258	1174	1154
65°	1186	1095	1072
70°	1094	999	983
75°	967	884	899
80°	813	737	742
85°	574	487	484

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1439 cd/sqm

TEST NUMBER: P924801

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US950-FLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.8	2.1
10°-20°	393.2	5.9
20°-30°	577.9	8.7
30°-40°	671.2	10.2
40°-50°	670.3	10.1
50°-60°	584.5	8.8
60°-70°	432.1	6.5
70°-80°	244.5	3.7
80°-90°	66.2	1.0
90°-100°	31.9	0.5
100°-110°	118.7	1.8
110°-120°	314.9	4.8
120°-130°	522.3	7.9
130°-140°	554.8	8.4
140°-150°	515.6	7.8
150°-160°	414.5	6.3
160°-170°	267.1	4.0
170°-180°	91.9	1.4
0°-30°	1110.8	16.8
0°-40°	1782.0	27.0
0°-60°	3036.8	45.9
0°-90°	3779.5	57.2
90°-120°	465.5	7.0
90°-150°	2058.1	31.1
90°-180°	2832.0	42.8
0°-180°	6611.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1485	1485	1485	1485	1485	
5°	1485	1479	1463	1475	1472	141
15°	1413	1405	1386	1392	1385	398
25°	1279	1268	1244	1246	1244	589
35°	1104	1090	1067	1058	1051	689
45°	898	888	867	851	845	693
55°	680	671	654	637	630	608
65°	458	450	436	423	416	453
75°	240	237	230	221	224	256
85°	58	57	56	51	50	65
90°	1	8	14	18	19	6
95°	45	22	27	31	30	54
105°	212	233	43	50	53	227
115°	402	414	431	108	57	396
125°	568	577	591	596	598	507
135°	703	714	721	728	726	543
145°	816	815	827	832	828	510
155°	898	892	900	904	899	414
165°	946	942	944	949	944	267
175°	968	963	964	969	962	92
180°	966	966	966	966	966	

TEST NUMBER: P924801

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US950-FLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1484.8	1484.8	1484.8	1484.8	1484.8
2.5°	1493.5	1486.3	1470.6	1484.8	1482.1
5°	1484.8	1479.2	1463.4	1474.8	1472.1
7.5°	1474.8	1466.3	1450.6	1462.1	1459.2
10°	1459.2	1449.2	1432.1	1443.5	1439.2
12.5°	1437.7	1429.2	1412.1	1419.3	1416.3
15°	1413.4	1405.0	1386.4	1392.1	1385.0
17.5°	1383.5	1375.0	1356.4	1363.5	1356.4
20°	1350.6	1342.1	1322.1	1326.3	1320.8
22.5°	1317.9	1305.0	1286.4	1286.4	1283.5
25°	1279.2	1267.9	1243.6	1246.4	1243.6
27.5°	1236.4	1226.4	1208.0	1203.7	1196.6
30°	1193.6	1182.2	1160.8	1156.5	1150.8
32.5°	1147.9	1139.5	1116.6	1108.0	1102.2
35°	1103.7	1089.5	1066.6	1058.0	1050.8
37.5°	1053.7	1040.8	1017.9	1008.0	1000.8
40°	1002.4	990.8	967.9	955.2	949.5
42.5°	952.4	940.8	918.1	903.7	895.2
45°	898.1	888.2	866.6	851.1	845.2
47.5°	845.2	835.2	812.4	796.7	788.2
50°	789.5	782.4	762.4	742.4	735.2
52.5°	735.2	725.3	706.8	691.1	681.1
55°	679.7	671.0	654.0	636.8	629.7
57.5°	623.9	616.9	598.2	581.1	575.4
60°	568.2	562.6	542.6	526.9	522.6
62.5°	514.0	504.0	489.8	475.5	469.7
65°	458.4	449.7	435.5	422.6	415.6
67.5°	401.3	394.0	381.3	371.3	365.6
70°	348.4	342.7	329.8	319.8	314.2
72.5°	294.2	288.4	281.3	271.3	267.0
75°	239.8	237.1	229.8	221.3	224.2
77.5°	191.3	185.6	182.7	178.4	174.2
80°	142.8	141.3	138.4	134.2	131.4
82.5°	97.1	97.1	95.8	90.0	90.0
85°	58.5	57.1	55.7	51.3	50.0
87.5°	25.8	22.9	20.0	15.7	14.2
90°	0.7	8.4	13.9	17.6	18.8
92.5°	17.6	14.7	16.8	18.2	18.8
95°	45.4	22.3	27.2	30.8	30.1
97.5°	81.8	24.5	35.6	37.8	38.4
100°	123.7	28.0	39.9	45.4	46.8
102.5°	169.8	168.5	41.2	48.8	51.0
105°	212.5	233.4	42.6	50.3	53.1
107.5°	262.1	279.5	44.1	51.7	54.6
110°	309.7	324.3	122.3	52.5	55.2

TEST NUMBER: P924801

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US950-FLLONL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	354.4	366.9	355.1	53.8	55.9
115°	401.8	413.7	431.2	107.6	57.3
117.5°	443.1	457.1	469.0	369.0	185.9
120°	489.2	499.7	512.3	520.7	426.3
122.5°	528.3	539.6	553.6	557.7	558.5
125°	568.2	577.3	590.6	595.5	597.6
127.5°	604.5	614.3	624.9	631.8	632.5
130°	638.8	650.1	657.7	665.3	664.7
132.5°	673.7	682.9	690.5	696.8	696.1
135°	703.1	714.4	720.6	727.6	726.2
137.5°	733.8	742.2	749.3	756.2	754.1
140°	763.9	769.5	777.1	783.4	780.0
142.5°	789.1	794.0	803.1	808.6	805.2
145°	815.7	814.9	826.8	831.7	828.2
147.5°	838.7	836.6	848.5	851.9	849.2
150°	861.1	856.2	867.4	871.5	868.0
152.5°	879.9	874.3	884.8	889.0	884.2
155°	898.1	891.9	900.2	904.4	898.9
157.5°	912.8	907.3	913.6	918.4	912.8
160°	925.4	921.2	925.4	929.6	924.6
162.5°	936.5	932.3	935.9	940.7	934.4
165°	946.3	942.2	944.3	949.1	944.3
167.5°	954.0	949.8	951.9	956.9	950.6
170°	960.3	956.1	957.5	962.4	956.1
172.5°	964.5	960.3	961.7	966.6	960.3
175°	967.9	963.1	964.5	969.4	962.4
177.5°	969.4	964.5	965.3	970.1	963.8
180°	965.9	965.9	965.9	965.9	965.9

TEST NUMBER: P924801

CATALOG NUMBER: DFN2DIP-PN3F0-040D030US950-FLONL

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	9.79	10.72	10.68	11.63	12.79	9.35	10.28	10.24	11.19	12.35
	3H	11.45	12.28	12.35	13.20	14.39	10.96	11.80	11.87	12.72	13.91
	4H	12.03	12.82	12.95	13.75	14.95	11.55	12.34	12.47	13.26	14.46
	6H	12.43	13.16	13.36	14.09	15.30	11.94	12.67	12.87	13.60	14.82
	8H	12.54	13.23	13.47	14.18	15.39	12.05	12.74	12.98	13.69	14.90
	12H	12.58	13.24	13.53	14.19	15.42	12.09	12.75	13.03	13.69	14.93
4H	2H	10.25	11.04	11.18	11.97	13.17	9.90	10.69	10.83	11.62	12.82
	3H	12.12	12.78	13.05	13.73	14.95	11.72	12.37	12.65	13.33	14.55
	4H	12.83	13.43	13.78	14.38	15.62	12.41	13.01	13.36	13.97	15.21
	6H	13.34	13.86	14.30	14.84	16.08	12.92	13.44	13.88	14.42	15.65
	8H	13.49	13.98	14.45	14.95	16.20	13.06	13.55	14.03	14.52	15.77
	12H	13.56	14.00	14.55	14.99	16.25	13.13	13.56	14.11	14.55	15.81
8H	4H	13.03	13.51	13.99	14.48	15.74	12.66	13.14	13.62	14.11	15.37
	6H	13.65	14.05	14.64	15.07	16.32	13.28	13.68	14.27	14.69	15.94
	8H	13.87	14.23	14.87	15.23	16.50	13.49	13.84	14.48	14.84	16.11
	12H	14.00	14.31	15.00	15.31	16.62	13.60	13.91	14.60	14.91	16.22
12H	4H	13.02	13.45	14.00	14.44	15.70	12.65	13.09	13.63	14.08	15.34
	6H	13.68	14.04	14.68	15.04	16.31	13.32	13.67	14.31	14.67	15.94
	8H	13.92	14.23	14.92	15.23	16.55	13.55	13.86	14.55	14.86	16.17