

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: P924699

Luminaire Tested: DFN2DIP-PN2F0-030D030US950-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P924699
REPORT IS A COMBINATION OF REPORTS P900994 AND P897905
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN2F0-030D030US950-RLLONL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

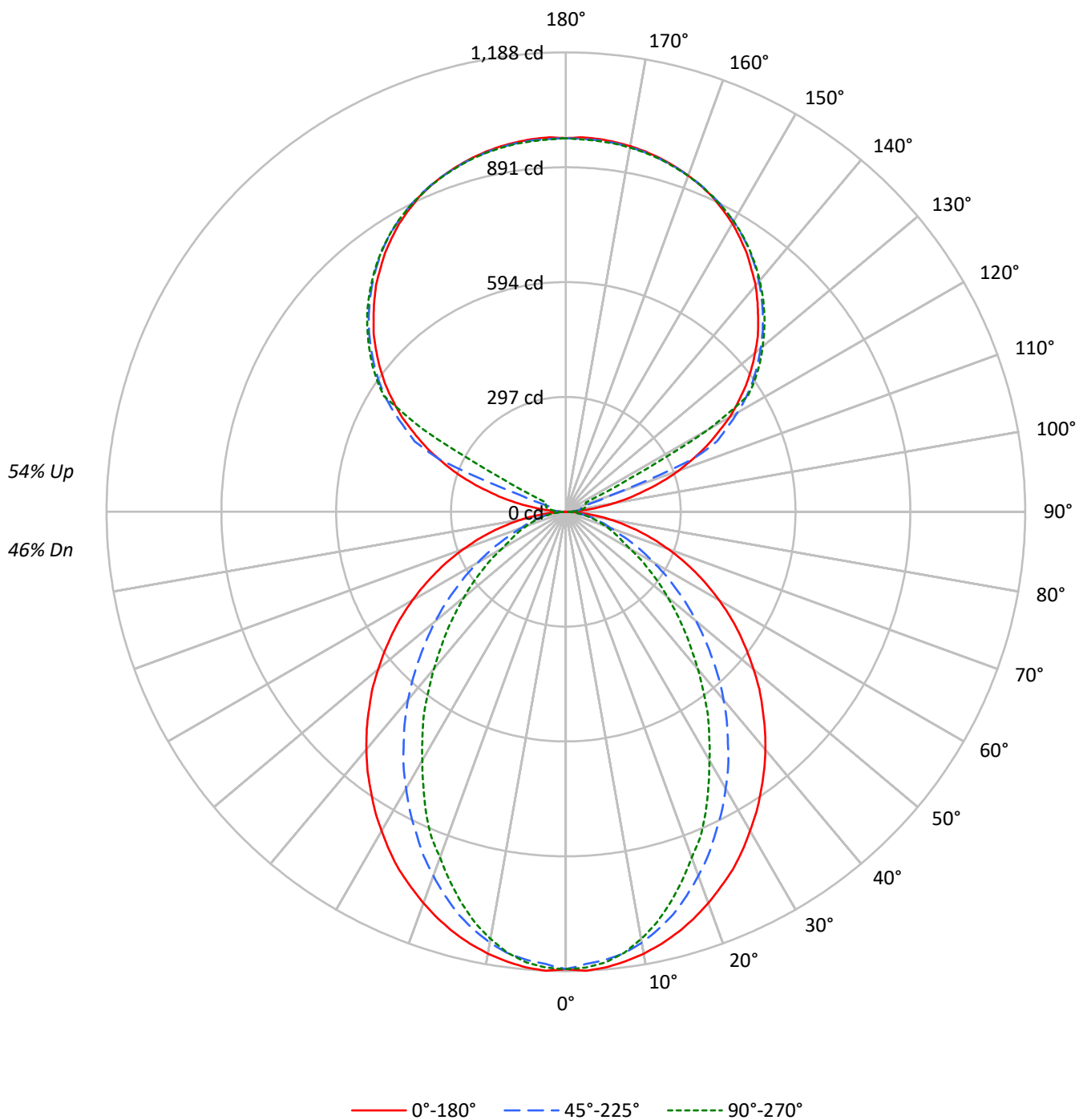
Lumens per Lamp: N/A
Luminaire Lumens: 5266.1 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.17' x L: 2.29' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 46.7
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: P924699

CATALOG NUMBER: DFN2DIP-PN2F0-030D030US950-RLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P924699

CATALOG NUMBER: DFN2DIP-PN2F0-030D030US950-RLLONL

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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53
1	97	93	90	86	89	86	83	80	72	70	68	59	58	56	47	46	45
2	89	82	76	71	82	76	70	66	63	60	57	52	50	48	42	40	39
3	81	72	65	60	75	67	61	56	56	52	48	47	43	41	38	35	34
4	75	64	57	51	68	60	53	48	50	45	41	42	38	35	34	31	29
5	69	58	50	44	63	53	46	41	45	40	36	38	34	31	31	28	26
6	63	52	44	38	58	48	41	36	41	36	32	34	30	27	28	25	23
7	59	47	39	34	54	44	37	32	37	32	28	31	27	24	26	23	21
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19
9	51	39	32	27	47	36	30	25	31	26	22	27	23	20	22	19	17
10	48	36	29	24	44	33	27	23	29	24	20	25	21	18	20	18	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2562	2562	2562
5°	2562	2516	2534
10°	2533	2461	2448
15°	2494	2374	2317
20°	2443	2257	2157
25°	2392	2127	2003
30°	2324	1994	1810
35°	2258	1851	1640
40°	2190	1704	1446
45°	2111	1542	1269
50°	2029	1378	1098
55°	1944	1204	933
60°	1845	1024	765
65°	1730	840	684
70°	1591	669	613
75°	1416	580	551
80°	1166	471	466
85°	762	292	331

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2111 cd/sqm

TEST NUMBER: P924699

CATALOG NUMBER: DFN2DIP-PN2F0-030D030US950-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.9	2.1
10°-20°	304.3	5.8
20°-30°	427.3	8.1
30°-40°	465.7	8.8
40°-50°	428.1	8.1
50°-60°	336.2	6.4
60°-70°	218.8	4.2
70°-80°	112.6	2.1
80°-90°	30.5	0.6
90°-100°	31.9	0.6
100°-110°	118.7	2.3
110°-120°	314.9	6.0
120°-130°	522.3	9.9
130°-140°	554.8	10.5
140°-150°	515.6	9.8
150°-160°	414.5	7.9
160°-170°	267.1	5.1
170°-180°	91.9	1.7
0°-30°	842.5	16.0
0°-40°	1308.2	24.8
0°-60°	2072.5	39.4
0°-90°	2434.4	46.2
90°-120°	465.5	8.8
90°-150°	2058.1	39.1
90°-180°	2832.0	53.8
0°-180°	5266.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1183	1183	1183	1183	1183	
5°	1183	1178	1164	1173	1170	112
15°	1125	1113	1077	1057	1046	317
25°	1021	987	916	872	856	470
35°	880	825	731	664	640	551
45°	719	648	535	459	434	556
55°	547	464	348	284	263	489
65°	369	283	186	150	147	366
75°	197	122	86	78	77	208
85°	46	24	20	20	20	53
90°	1	8	14	18	19	5
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: P924699

CATALOG NUMBER: DFN2DIP-PN2F0-030D030US950-RLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1182.9	1182.9	1182.9	1182.9	1182.9
2.5°	1188.2	1182.9	1171.0	1181.8	1179.7
5°	1182.9	1177.5	1163.6	1173.2	1170.0
7.5°	1173.2	1166.8	1151.9	1156.1	1150.7
10°	1160.4	1152.9	1131.5	1128.2	1121.9
12.5°	1144.3	1134.7	1105.8	1099.4	1087.6
15°	1125.1	1113.2	1076.9	1056.6	1045.9
17.5°	1102.5	1085.5	1040.4	1017.0	999.8
20°	1076.9	1055.4	1001.9	975.3	951.6
22.5°	1049.1	1024.4	962.3	926.0	909.9
25°	1021.3	986.9	916.3	872.4	856.3
27.5°	988.1	951.6	873.5	823.2	798.5
30°	952.8	912.0	826.4	771.9	742.9
32.5°	918.4	869.2	781.5	717.2	690.4
35°	880.0	825.3	731.1	663.7	640.1
37.5°	842.5	783.5	684.0	610.1	583.5
40°	802.9	738.7	634.8	558.8	531.0
42.5°	762.2	693.7	585.6	506.3	479.6
45°	719.4	647.6	535.3	459.2	433.5
47.5°	678.7	602.7	487.1	411.0	387.5
50°	633.7	557.7	440.0	366.0	343.6
52.5°	589.8	509.5	395.1	324.4	304.0
55°	546.9	463.5	347.8	283.7	263.4
57.5°	503.1	417.5	306.2	246.2	229.1
60°	458.1	372.5	262.3	207.7	190.6
62.5°	414.3	328.7	224.8	173.4	164.9
65°	369.3	282.6	186.2	149.9	146.6
67.5°	326.6	239.7	149.9	131.7	128.4
70°	281.5	198.1	124.1	113.4	109.1
72.5°	238.7	159.4	103.8	95.3	93.1
75°	196.9	122.0	85.7	78.1	77.1
77.5°	155.2	86.6	67.4	63.2	61.0
80°	116.7	62.1	51.3	47.1	47.1
82.5°	81.3	41.8	35.3	33.2	33.2
85°	46.0	23.5	20.3	20.3	20.3
87.5°	17.2	8.5	8.5	7.5	7.5
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: P924699

CATALOG NUMBER: DFN2DIP-PN2F0-030D030US950-RLLONL

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: P924699

CATALOG NUMBER: DFN2DIP-PN2F0-030D030US950-RLONL

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	9.94	10.74	10.93	11.74	13.07	5.90	6.70	6.90	7.71	9.03
	3H	11.59	12.31	12.60	13.32	14.67	7.07	7.79	8.08	8.80	10.15
	4H	12.18	12.86	13.20	13.88	15.23	7.51	8.19	8.53	9.20	10.56
	6H	12.59	13.21	13.62	14.23	15.60	7.81	8.44	8.84	9.46	10.82
	8H	12.70	13.30	13.74	14.33	15.70	7.90	8.49	8.93	9.52	10.89
	12H	12.76	13.32	13.80	14.35	15.74	7.93	8.49	8.97	9.52	10.91
4H	2H	9.95	10.62	10.97	11.64	12.99	6.48	7.16	7.51	8.18	9.53
	3H	11.75	12.31	12.78	13.35	14.72	7.81	8.37	8.84	9.42	10.79
	4H	12.42	12.94	13.46	13.97	15.37	8.34	8.86	9.38	9.89	11.28
	6H	12.92	13.36	13.97	14.42	15.81	8.74	9.18	9.79	10.24	11.63
	8H	13.08	13.49	14.13	14.54	15.95	8.86	9.27	9.91	10.32	11.73
	12H	13.16	13.54	14.23	14.60	16.01	8.92	9.29	9.98	10.35	11.76
8H	4H	12.39	12.80	13.44	13.85	15.25	8.61	9.02	9.66	10.07	11.47
	6H	12.93	13.27	14.00	14.36	15.76	9.10	9.44	10.18	10.54	11.94
	8H	13.13	13.43	14.21	14.51	15.93	9.28	9.58	10.36	10.66	12.08
	12H	13.25	13.52	14.34	14.59	16.05	9.39	9.65	10.47	10.72	12.18
12H	4H	12.34	12.71	13.40	13.77	15.18	8.61	8.98	9.68	10.05	11.45
	6H	12.90	13.20	13.98	14.28	15.70	9.15	9.45	10.23	10.52	11.94
	8H	13.11	13.37	14.19	14.44	15.90	9.34	9.60	10.43	10.68	12.14