

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: P922044

Luminaire Tested: DFN2DIP-PN3F0-030D030US940-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P922044
REPORT IS A COMBINATION OF REPORTS P899511 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-030D030US940-FLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

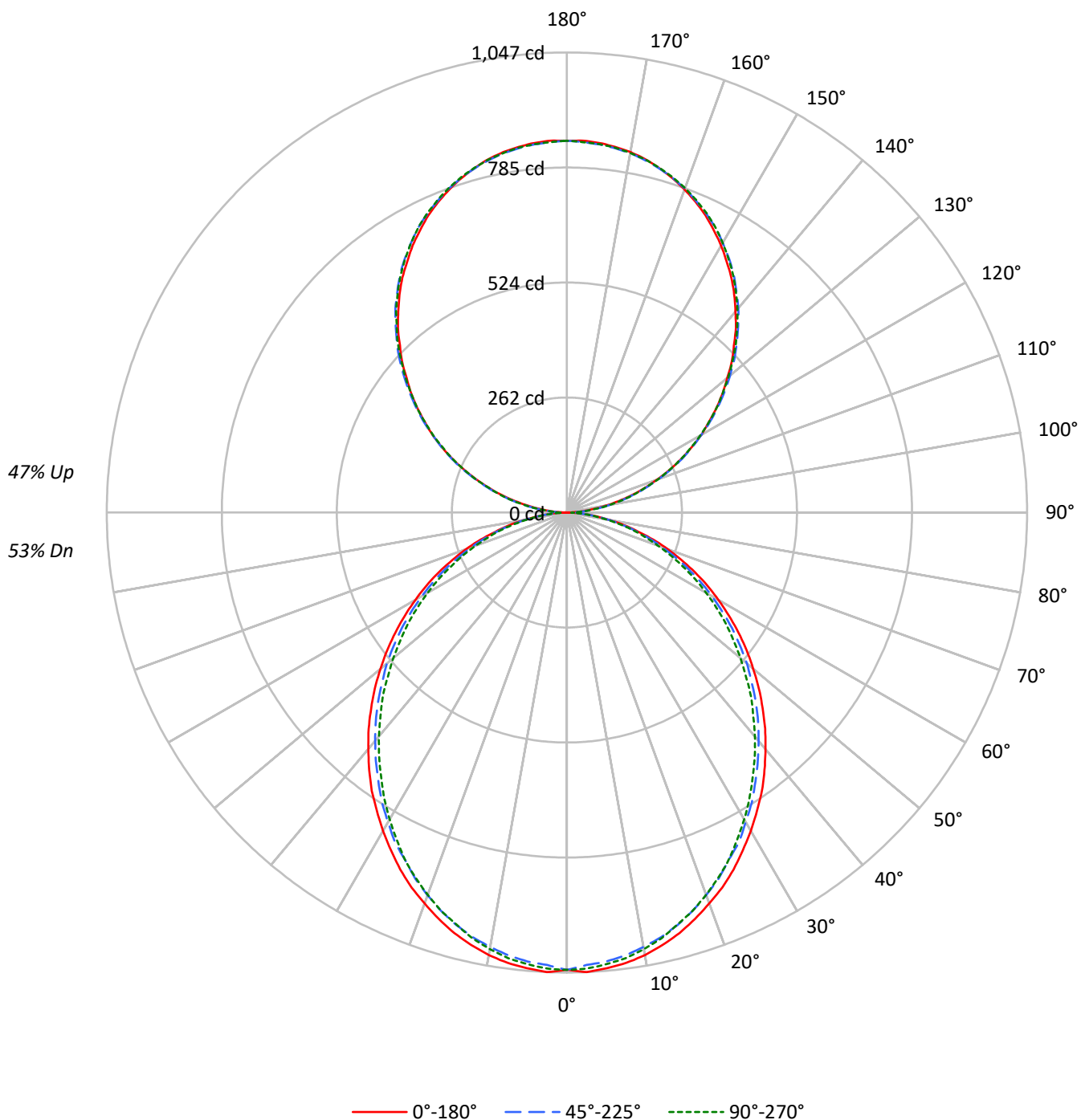
Lumens per Lamp: N/A
Luminaire Lumens: 5015.9 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 47.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P922044

CATALOG NUMBER: DFN2DIP-PN3F0-030D030US940-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P922044

CATALOG NUMBER: DFN2DIP-PN3F0-030D030US940-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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59
1	98	94	90	87	91	87	84	81	74	72	70	63	61	59	52	51	50
2	90	82	76	71	83	76	71	66	65	61	58	55	52	50	46	44	42
3	82	72	65	59	75	67	61	55	58	53	49	49	45	42	41	38	36
4	75	64	56	50	69	60	52	47	51	46	41	43	39	36	36	33	31
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	29	27
6	63	51	43	37	58	48	40	35	41	36	31	35	31	27	30	26	24
7	59	46	38	33	54	43	36	31	37	32	28	32	28	24	27	24	21
8	54	42	34	29	50	39	32	27	34	29	24	29	25	22	25	21	19
9	51	38	31	26	47	36	29	24	31	26	22	27	23	19	23	20	17
10	47	35	28	23	44	33	26	22	29	23	20	25	21	18	21	18	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1217	1217	1217
5°	1218	1199	1207
10°	1207	1182	1191
15°	1189	1162	1164
20°	1164	1134	1138
25°	1140	1101	1107
30°	1109	1070	1068
35°	1080	1033	1027
40°	1044	997	988
45°	1008	960	947
50°	969	921	901
55°	929	876	858
60°	882	823	809
65°	832	768	751
70°	767	700	689
75°	678	620	630
80°	570	516	520
85°	402	342	339

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1008 cd/sqm

TEST NUMBER: P922044

CATALOG NUMBER: DFN2DIP-PN3F0-030D030US940-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	2.0
10°-20°	275.6	5.5
20°-30°	405.1	8.1
30°-40°	470.5	9.4
40°-50°	469.9	9.4
50°-60°	409.8	8.2
60°-70°	302.9	6.0
70°-80°	171.4	3.4
80°-90°	47.6	0.9
90°-100°	52.3	1.0
100°-110°	166.3	3.3
110°-120°	284.7	5.7
120°-130°	374.4	7.5
130°-140°	420.2	8.4
140°-150°	412.1	8.2
150°-160°	345.7	6.9
160°-170°	229.2	4.6
170°-180°	80.1	1.6
0°-30°	778.7	15.5
0°-40°	1249.2	24.9
0°-60°	2128.9	42.4
0°-90°	2650.8	52.8
90°-120°	503.4	10.0
90°-150°	1710.0	34.1
90°-180°	2365.0	47.2
0°-180°	5015.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1041	1041	1041	1041	1041	
5°	1041	1037	1026	1034	1032	99
15°	991	985	972	976	971	279
25°	897	889	872	874	872	413
35°	774	764	748	742	737	483
45°	630	623	608	597	592	486
55°	476	470	458	446	442	426
65°	321	315	305	296	291	318
75°	168	166	161	155	157	179
85°	41	40	39	36	35	46
90°	1	9	25	24	24	5
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: P922044

CATALOG NUMBER: DFN2DIP-PN3F0-030D030US940-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1040.9	1040.9	1040.9	1040.9	1040.9
2.5°	1047.0	1042.0	1030.9	1040.9	1039.0
5°	1040.9	1037.0	1025.9	1033.9	1032.0
7.5°	1033.9	1028.0	1016.9	1025.0	1023.0
10°	1023.0	1015.9	1004.0	1011.9	1009.0
12.5°	1007.9	1001.9	990.0	994.9	992.9
15°	990.9	985.0	971.9	975.9	970.9
17.5°	969.8	963.9	950.8	955.8	950.8
20°	946.8	940.8	926.8	929.8	925.9
22.5°	923.9	914.9	901.8	901.8	899.7
25°	896.8	888.9	871.8	873.8	871.8
27.5°	866.7	859.7	846.8	843.8	838.8
30°	836.8	828.8	813.8	810.7	806.7
32.5°	804.8	798.8	782.7	776.7	772.7
35°	773.7	763.7	747.7	741.6	736.6
37.5°	738.7	729.7	713.6	706.6	701.6
40°	702.7	694.6	678.6	669.7	665.7
42.5°	667.6	659.6	643.6	633.6	627.6
45°	629.6	622.6	607.5	596.6	592.5
47.5°	592.5	585.6	569.5	558.5	552.5
50°	553.5	548.5	534.5	520.5	515.5
52.5°	515.5	508.5	495.5	484.5	477.4
55°	476.5	470.5	458.4	446.5	441.5
57.5°	437.4	432.4	419.4	407.3	403.3
60°	398.3	394.4	380.4	369.3	366.4
62.5°	360.3	353.3	343.3	333.3	329.3
65°	321.4	315.3	305.3	296.3	291.3
67.5°	281.3	276.3	267.2	260.3	256.3
70°	244.2	240.2	231.2	224.2	220.3
72.5°	206.3	202.2	197.2	190.2	187.3
75°	168.1	166.2	161.1	155.2	157.2
77.5°	134.1	130.1	128.0	125.1	122.2
80°	100.1	99.1	97.0	94.1	92.1
82.5°	68.0	68.0	67.1	63.0	63.0
85°	41.0	40.0	39.1	36.0	35.0
87.5°	18.0	16.1	14.0	11.1	10.0
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: P922044

CATALOG NUMBER: DFN2DIP-PN3F0-030D030US940-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: P922044

CATALOG NUMBER: DFN2DIP-PN3F0-030D030US940-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	8.17	9.06	9.10	10.01	11.24	7.73	8.62	8.67	9.57	10.80
	3H	9.83	10.63	10.77	11.58	12.84	9.35	10.14	10.29	11.10	12.36
	4H	10.41	11.17	11.37	12.13	13.39	9.93	10.68	10.89	11.65	12.91
	6H	10.81	11.51	11.78	12.47	13.75	10.32	11.02	11.29	11.98	13.26
	8H	10.91	11.57	11.89	12.56	13.83	10.42	11.09	11.40	12.07	13.34
	12H	10.96	11.59	11.94	12.57	13.87	10.46	11.09	11.45	12.07	13.37
4H	2H	8.63	9.39	9.60	10.35	11.61	8.28	9.04	9.25	10.00	11.26
	3H	10.50	11.12	11.47	12.12	13.39	10.09	10.72	11.07	11.72	12.99
	4H	11.21	11.78	12.19	12.77	14.07	10.79	11.36	11.77	12.35	13.65
	6H	11.72	12.21	12.71	13.22	14.52	11.29	11.79	12.29	12.80	14.10
	8H	11.86	12.33	12.86	13.33	14.64	11.44	11.90	12.43	12.90	14.22
	12H	11.93	12.35	12.95	13.37	14.69	11.50	11.92	12.51	12.94	14.25
8H	4H	11.40	11.86	12.40	12.87	14.18	11.03	11.49	12.03	12.50	13.81
	6H	12.02	12.41	13.05	13.45	14.76	11.65	12.03	12.67	13.08	14.39
	8H	12.24	12.58	13.27	13.61	14.94	11.86	12.20	12.89	13.23	14.56
	12H	12.37	12.67	13.40	13.69	15.07	11.97	12.27	13.00	13.29	14.67
12H	4H	11.39	11.80	12.40	12.82	14.14	11.02	11.44	12.04	12.46	13.78
	6H	12.05	12.39	13.08	13.42	14.75	11.69	12.03	12.72	13.06	14.39
	8H	12.29	12.59	13.32	13.61	14.99	11.92	12.22	12.95	13.24	14.62