

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: P924780

Luminaire Tested: DFN2DIP-PN3F0-030D050US950-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P924780
REPORT IS A COMBINATION OF REPORTS P899539 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-030D050US950-FLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

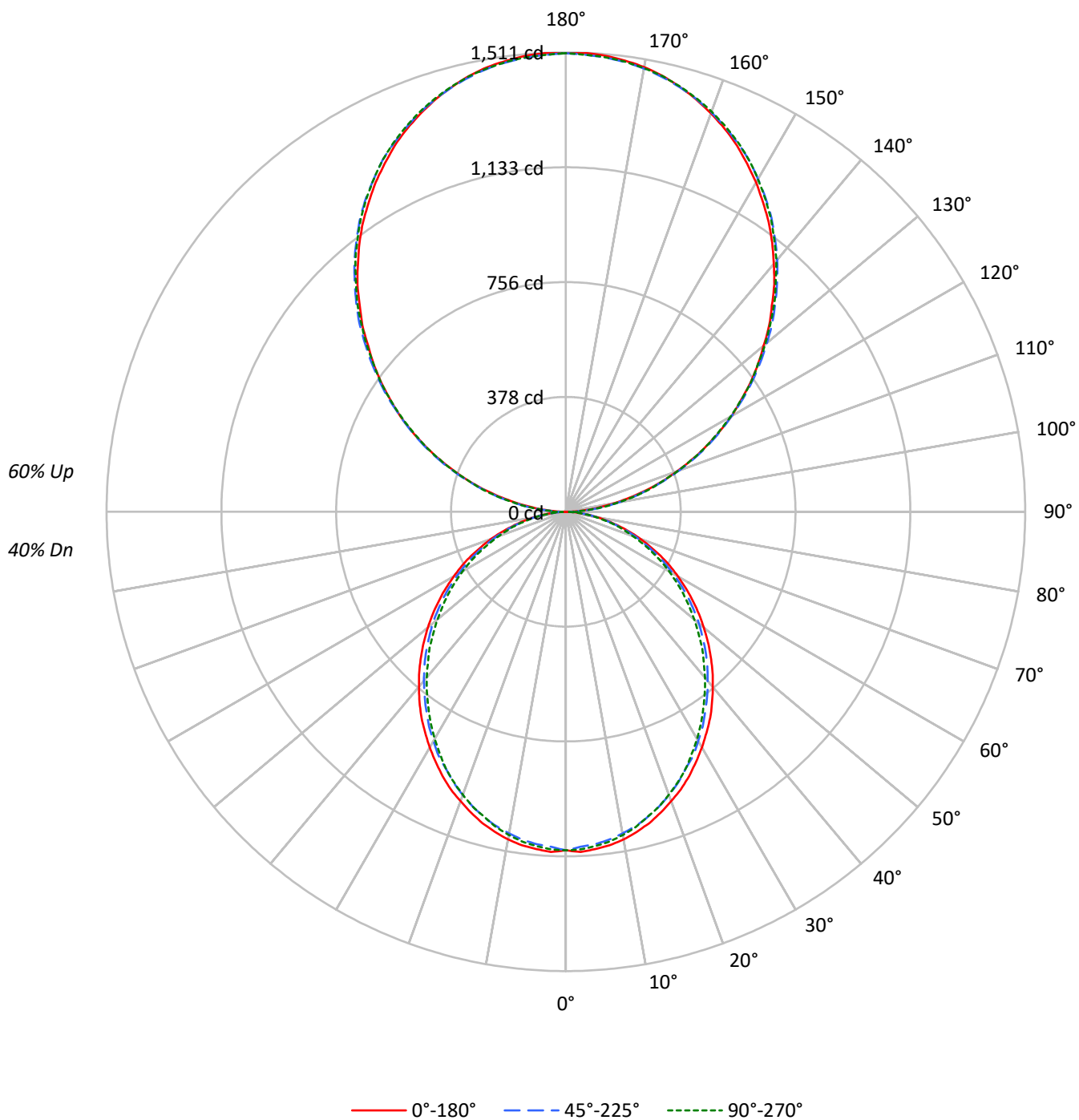
Lumens per Lamp: N/A
Luminaire Lumens: 7054.8 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 61.6
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: P924780

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US950-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P924780

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US950-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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47
1	96	91	87	84	87	83	80	77	68	66	64	54	53	51	42	41	40
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	33
3	79	70	63	57	72	64	58	53	53	48	44	42	39	36	32	30	28
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25
5	67	55	47	41	60	51	44	38	42	37	33	34	30	27	26	23	21
6	61	49	41	36	56	45	38	33	38	32	28	30	27	24	24	21	19
7	57	45	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17
8	52	40	33	28	48	37	30	26	31	26	22	25	21	18	20	17	15
9	49	37	29	24	44	34	27	23	28	23	20	23	19	17	18	16	14
10	46	34	27	22	41	31	25	20	26	21	18	21	18	15	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1302	1302	1302
5°	1303	1283	1292
10°	1292	1265	1274
15°	1272	1243	1246
20°	1246	1213	1217
25°	1219	1177	1184
30°	1186	1144	1143
35°	1155	1105	1099
40°	1117	1066	1057
45°	1079	1027	1014
50°	1037	985	964
55°	993	937	918
60°	944	880	866
65°	890	821	804
70°	821	750	737
75°	725	663	675
80°	610	553	556
85°	431	366	363

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 1494 cd/sqm

TEST NUMBER: P924780

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US950-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.8	1.5
10°-20°	294.9	4.2
20°-30°	433.4	6.1
30°-40°	503.4	7.1
40°-50°	502.7	7.1
50°-60°	438.4	6.2
60°-70°	324.1	4.6
70°-80°	183.3	2.6
80°-90°	52.7	0.7
90°-100°	93.4	1.3
100°-110°	296.6	4.2
110°-120°	507.6	7.2
120°-130°	667.5	9.5
130°-140°	749.3	10.6
140°-150°	734.8	10.4
150°-160°	616.4	8.7
160°-170°	408.8	5.8
170°-180°	142.9	2.0
0°-30°	833.1	11.8
0°-40°	1336.5	18.9
0°-60°	2277.6	32.3
0°-90°	2837.7	40.2
90°-120°	897.5	12.7
90°-150°	3049.2	43.2
90°-180°	4217.0	59.8
0°-180°	7054.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1114	1114	1114	1114	1114	
5°	1114	1109	1098	1106	1104	106
15°	1060	1054	1040	1044	1039	299
25°	959	951	933	935	933	441
35°	828	817	800	793	788	517
45°	674	666	650	638	634	520
55°	510	503	490	478	472	456
65°	344	337	327	317	312	340
75°	180	178	172	166	168	192
85°	44	43	42	38	38	49
90°	1	16	45	42	43	7
95°	66	79	81	81	79	74
105°	274	277	280	282	282	289
115°	509	517	514	513	509	504
125°	741	752	749	744	743	662
135°	958	972	975	974	970	741
145°	1163	1172	1180	1181	1176	727
155°	1330	1334	1338	1344	1340	612
165°	1447	1446	1446	1455	1449	408
175°	1506	1502	1500	1509	1501	143
180°	1509	1509	1509	1509	1509	

TEST NUMBER: P924780

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US950-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1113.6	1113.6	1113.6	1113.6	1113.6
2.5°	1120.1	1114.7	1102.9	1113.6	1111.6
5°	1113.6	1109.4	1097.6	1106.2	1104.1
7.5°	1106.2	1099.8	1087.9	1096.6	1094.4
10°	1094.4	1086.9	1074.1	1082.6	1079.5
12.5°	1078.3	1071.9	1059.1	1064.4	1062.3
15°	1060.1	1053.8	1039.8	1044.1	1038.7
17.5°	1037.6	1031.3	1017.3	1022.6	1017.3
20°	1013.0	1006.6	991.6	994.7	990.5
22.5°	988.4	978.8	964.8	964.8	962.6
25°	959.4	950.9	932.7	934.8	932.7
27.5°	927.3	919.8	905.9	902.8	897.4
30°	895.2	886.6	870.6	867.4	863.1
32.5°	861.0	854.6	837.4	830.9	826.6
35°	827.8	817.1	799.9	793.4	788.1
37.5°	790.3	780.7	763.5	755.9	750.6
40°	751.8	743.2	726.0	716.5	712.2
42.5°	714.3	705.7	688.6	677.8	671.4
45°	673.6	666.1	650.0	638.2	633.9
47.5°	633.9	626.5	609.3	597.5	591.1
50°	592.1	586.8	571.8	556.8	551.5
52.5°	551.5	544.0	530.1	518.3	510.8
55°	509.8	503.3	490.5	477.7	472.3
57.5°	467.9	462.6	448.7	435.8	431.5
60°	426.2	422.0	407.0	395.1	392.0
62.5°	385.5	378.0	367.3	356.6	352.3
65°	343.8	337.3	326.6	317.0	311.7
67.5°	301.0	295.5	285.9	278.5	274.2
70°	261.3	257.0	247.4	239.8	235.6
72.5°	220.7	216.3	210.9	203.5	200.3
75°	179.8	177.8	172.4	166.0	168.2
77.5°	143.5	139.2	137.0	133.8	130.7
80°	107.1	106.0	103.8	100.6	98.5
82.5°	72.8	72.8	71.8	67.4	67.4
85°	43.9	42.8	41.8	38.5	37.5
87.5°	19.3	17.2	15.0	11.8	10.7
90°	1.3	16.4	44.6	41.9	43.2
92.5°	28.2	38.2	39.6	40.9	40.9
95°	66.4	79.2	81.4	81.4	79.2
97.5°	110.5	122.3	127.4	127.4	127.4
100°	161.4	171.9	175.5	175.5	174.2
102.5°	215.1	222.9	227.8	229.2	227.8
105°	273.8	277.4	280.2	282.4	282.4
107.5°	332.0	337.4	337.4	338.4	332.0
110°	388.4	395.7	395.7	395.7	392.0

TEST NUMBER: P924780

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US950-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	449.3	457.1	455.7	452.1	449.3
115°	509.3	516.7	514.4	513.1	509.3
117.5°	569.0	579.0	572.6	569.0	565.3
120°	629.0	639.0	629.0	629.0	624.9
122.5°	683.5	696.3	689.9	686.3	683.5
125°	740.9	752.2	748.6	744.5	743.2
127.5°	796.8	810.9	805.9	800.4	796.8
130°	849.2	865.5	863.2	860.5	855.5
132.5°	907.8	920.5	921.5	915.1	911.5
135°	958.3	972.3	975.1	973.7	970.1
137.5°	1014.7	1026.0	1028.3	1027.4	1021.9
140°	1064.2	1075.6	1081.9	1081.9	1077.0
142.5°	1115.1	1126.6	1130.2	1131.5	1126.6
145°	1163.4	1172.5	1179.7	1181.1	1176.1
147.5°	1206.6	1218.0	1223.4	1225.7	1220.6
150°	1251.2	1258.9	1263.9	1268.0	1263.9
152.5°	1290.8	1298.5	1304.8	1309.8	1304.8
155°	1330.3	1333.9	1338.0	1344.4	1340.3
157.5°	1364.4	1367.1	1369.4	1378.5	1372.1
160°	1394.8	1397.6	1398.9	1406.7	1401.2
162.5°	1423.1	1423.1	1424.4	1433.1	1426.7
165°	1447.2	1445.8	1445.8	1454.9	1448.6
167.5°	1469.0	1464.9	1464.9	1474.0	1467.6
170°	1485.4	1481.8	1480.4	1489.5	1481.8
172.5°	1496.7	1493.1	1491.8	1500.8	1493.1
175°	1505.9	1502.2	1499.5	1508.6	1500.8
177.5°	1510.8	1507.2	1504.5	1512.2	1504.5
180°	1508.6	1508.6	1508.6	1508.6	1508.6

TEST NUMBER: P924780

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US950-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	7.17	7.95	8.21	8.99	10.40	6.73	7.51	7.77	8.55	9.96
	3H	8.82	9.52	9.86	10.57	11.99	8.34	9.03	9.38	10.09	11.51
	4H	9.40	10.06	10.46	11.11	12.55	8.91	9.58	9.97	10.63	12.06
	6H	9.79	10.40	10.86	11.46	12.90	9.30	9.91	10.37	10.97	12.41
	8H	9.89	10.47	10.96	11.54	12.98	9.40	9.98	10.47	11.05	12.49
	12H	9.93	10.48	11.01	11.55	13.01	9.44	9.99	10.51	11.05	12.52
4H	2H	7.62	8.28	8.68	9.33	10.76	7.27	7.93	8.33	8.98	10.41
	3H	9.47	10.02	10.54	11.10	12.55	9.07	9.62	10.14	10.70	12.15
	4H	10.18	10.68	11.25	11.75	13.22	9.76	10.27	10.84	11.34	12.80
	6H	10.68	11.12	11.77	12.21	13.67	10.26	10.69	11.34	11.79	13.25
	8H	10.82	11.23	11.91	12.32	13.79	10.40	10.80	11.49	11.89	13.37
	12H	10.89	11.26	12.00	12.36	13.84	10.45	10.82	11.56	11.92	13.40
8H	4H	10.36	10.77	11.45	11.86	13.33	9.99	10.40	11.08	11.49	12.96
	6H	10.98	11.32	12.09	12.45	13.92	10.61	10.94	11.72	12.07	13.54
	8H	11.20	11.49	12.31	12.60	14.09	10.81	11.11	11.93	12.22	13.71
	12H	11.32	11.58	12.44	12.69	14.22	10.92	11.18	12.04	12.29	13.82
12H	4H	10.34	10.71	11.45	11.81	13.29	9.98	10.35	11.09	11.45	12.93
	6H	11.01	11.30	12.13	12.42	13.91	10.64	10.94	11.76	12.05	13.54
	8H	11.24	11.50	12.36	12.61	14.14	10.87	11.13	11.99	12.24	13.77