

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: P926239

Luminaire Tested: DFN2DIP-TR3F0-050D030US950-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P926239
REPORT IS A COMBINATION OF REPORTS P901796 AND P898751
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-050D030US950-RLLONL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

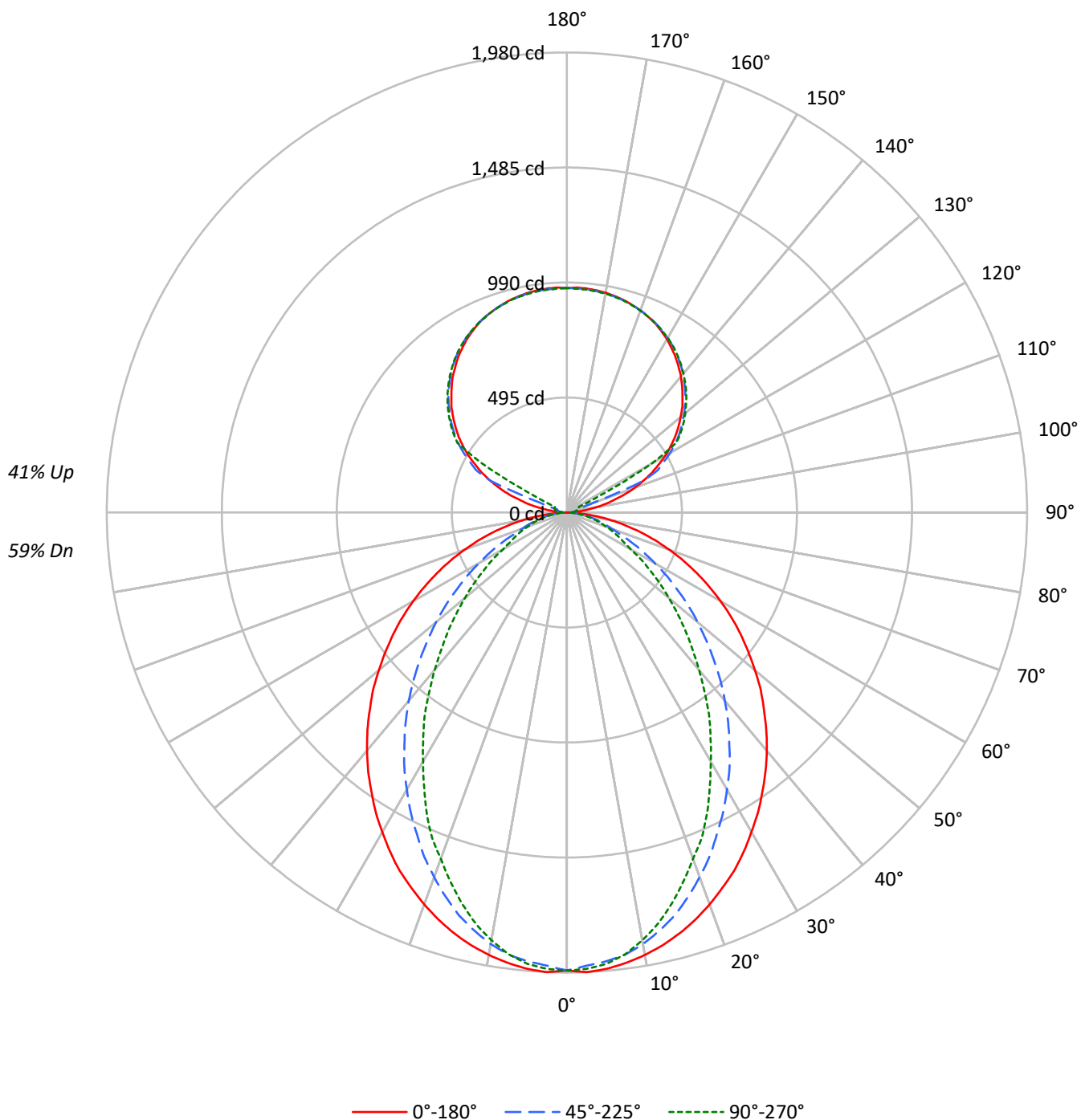
Lumens per Lamp: N/A
Luminaire Lumens: 6887.9 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 68.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P926239

CATALOG NUMBER: DFN2DIP-TR3F0-050D030US950-RLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P926239

CATALOG NUMBER: DFN2DIP-TR3F0-050D030US950-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	109	109	109	109		102	102	102	102		88	88	88		76	76	76		64	64	64
1	100	96	92	89		94	90	87	84		78	76	74		68	66	64		58	57	55
2	92	85	79	74		86	79	74	70		69	65	62		60	57	55		51	49	48
3	84	75	68	62		78	70	64	59		62	57	53		54	50	47		46	43	41
4	77	67	59	53		72	63	56	51		55	50	46		48	44	41		42	39	36
5	71	60	52	46		66	56	49	44		50	44	40		44	39	36		38	34	32
6	66	54	46	40		61	51	44	38		45	39	35		40	35	32		35	31	28
7	61	49	41	36		57	46	39	34		41	35	31		36	32	28		32	28	25
8	57	45	37	32		53	42	35	30		38	32	28		33	29	25		29	26	23
9	53	41	34	29		50	39	32	27		35	29	25		31	26	23		27	23	21
10	50	38	31	26		46	36	29	25		32	27	23		29	24	21		25	22	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2457	2457	2457
5°	2459	2416	2432
10°	2433	2366	2351
15°	2399	2286	2227
20°	2353	2176	2076
25°	2306	2054	1929
30°	2244	1928	1745
35°	2183	1793	1582
40°	2120	1654	1397
45°	2048	1500	1228
50°	1973	1344	1064
55°	1895	1178	906
60°	1804	1005	744
65°	1699	829	668
70°	1573	666	602
75°	1414	582	544
80°	1183	482	467
85°	805	312	342

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2048 cd/sqm

TEST NUMBER: P926239

CATALOG NUMBER: DFN2DIP-TR3F0-050D030US950-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.8	2.7
10°-20°	507.2	7.4
20°-30°	712.1	10.3
30°-40°	776.3	11.3
40°-50°	713.5	10.4
50°-60°	560.3	8.1
60°-70°	364.7	5.3
70°-80°	187.7	2.7
80°-90°	49.6	0.7
90°-100°	31.9	0.5
100°-110°	118.7	1.7
110°-120°	314.9	4.6
120°-130°	522.3	7.6
130°-140°	554.8	8.1
140°-150°	515.6	7.5
150°-160°	414.5	6.0
160°-170°	267.1	3.9
170°-180°	91.9	1.3
0°-30°	1404.1	20.4
0°-40°	2180.4	31.7
0°-60°	3454.1	50.1
0°-90°	4056.2	58.9
90°-120°	465.5	6.8
90°-150°	2058.1	29.9
90°-180°	2832.0	41.1
0°-180°	6887.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1971	1971	1971	1971	1971	
5°	1971	1963	1939	1955	1950	187
15°	1875	1855	1795	1761	1743	528
25°	1702	1645	1527	1454	1427	783
35°	1467	1376	1219	1106	1067	918
45°	1199	1079	892	765	722	926
55°	912	772	580	473	439	815
65°	616	471	310	250	244	610
75°	328	203	143	130	128	347
85°	77	39	34	34	34	88
90°	1	8	14	18	19	7
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: P926239

CATALOG NUMBER: DFN2DIP-TR3F0-050D030US950-RLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1971.4	1971.4	1971.4	1971.4	1971.4
2.5°	1980.3	1971.4	1951.8	1969.7	1966.1
5°	1971.4	1962.6	1939.3	1955.3	1950.1
7.5°	1955.3	1944.7	1919.7	1926.8	1917.8
10°	1933.9	1921.5	1885.9	1880.4	1869.7
12.5°	1907.2	1891.2	1842.9	1832.3	1812.6
15°	1875.1	1855.4	1794.9	1761.0	1743.1
17.5°	1837.6	1809.1	1734.1	1694.9	1666.3
20°	1794.9	1759.1	1669.9	1625.4	1586.0
22.5°	1748.5	1707.4	1603.9	1543.3	1516.6
25°	1702.0	1644.9	1527.2	1454.1	1427.2
27.5°	1646.8	1586.0	1455.8	1371.9	1330.9
30°	1587.9	1520.0	1377.3	1286.4	1238.1
32.5°	1530.8	1448.6	1302.5	1195.4	1150.7
35°	1466.6	1375.6	1218.6	1106.2	1066.9
37.5°	1404.1	1305.9	1140.1	1016.9	972.4
40°	1338.1	1231.1	1057.9	931.3	884.9
42.5°	1270.3	1156.2	975.9	843.8	799.4
45°	1199.0	1079.4	892.1	765.3	722.5
47.5°	1131.2	1004.6	811.9	685.1	645.9
50°	1056.3	929.6	733.3	610.1	572.8
52.5°	983.0	849.2	658.4	540.6	506.8
55°	911.6	772.5	579.7	472.8	438.9
57.5°	838.6	695.8	510.3	410.4	381.8
60°	763.6	620.9	437.0	346.2	317.6
62.5°	690.5	547.8	374.6	289.1	274.8
65°	615.5	471.0	310.4	249.9	244.4
67.5°	544.2	399.6	249.9	219.4	214.1
70°	469.3	330.1	206.9	189.1	181.9
72.5°	397.9	265.8	173.1	158.8	155.2
75°	328.3	203.3	142.7	130.2	128.5
77.5°	258.7	144.4	112.5	105.2	101.6
80°	194.4	103.5	85.6	78.5	78.5
82.5°	135.6	69.6	58.9	55.2	55.2
85°	76.7	39.2	33.9	33.9	33.9
87.5°	28.6	14.2	14.2	12.5	12.5
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: P926239

CATALOG NUMBER: DFN2DIP-TR3F0-050D030US950-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: P926239

CATALOG NUMBER: DFN2DIP-TR3F0-050D030US950-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	11.01	11.92	11.89	12.82	13.96	6.99	7.90	7.87	8.79	9.94
	3H	12.68	13.50	13.58	14.41	15.57	8.18	8.99	9.07	9.90	11.06
	4H	13.29	14.06	14.20	14.97	16.15	8.63	9.39	9.54	10.31	11.48
	6H	13.71	14.41	14.63	15.33	16.52	8.95	9.65	9.87	10.57	11.76
	8H	13.83	14.50	14.76	15.44	16.63	9.04	9.71	9.97	10.65	11.83
	12H	13.89	14.53	14.83	15.46	16.68	9.08	9.72	10.01	10.65	11.86
4H	2H	11.04	11.80	11.95	12.72	13.89	7.59	8.35	8.50	9.27	10.44
	3H	12.86	13.50	13.79	14.45	15.64	8.94	9.57	9.86	10.52	11.71
	4H	13.55	14.13	14.49	15.07	16.29	9.48	10.06	10.42	11.00	12.22
	6H	14.06	14.56	15.01	15.52	16.74	9.90	10.40	10.85	11.36	12.58
	8H	14.23	14.70	15.19	15.66	16.89	10.03	10.49	10.98	11.45	12.68
	12H	14.33	14.75	15.30	15.72	16.96	10.09	10.51	11.06	11.49	12.72
8H	4H	13.52	13.99	14.48	14.95	16.18	9.76	10.23	10.72	11.19	12.42
	6H	14.08	14.47	15.06	15.47	16.70	10.28	10.66	11.26	11.66	12.89
	8H	14.29	14.63	15.28	15.62	16.87	10.46	10.80	11.45	11.79	13.04
	12H	14.43	14.73	15.42	15.71	17.00	10.58	10.88	11.57	11.86	13.16
12H	4H	13.48	13.90	14.45	14.87	16.11	9.77	10.19	10.74	11.17	12.40
	6H	14.06	14.40	15.04	15.39	16.63	10.32	10.66	11.31	11.65	12.90
	8H	14.27	14.57	15.26	15.56	16.85	10.53	10.83	11.52	11.81	13.11