

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: P918074

Luminaire Tested: DFN2DIP-TR3F0-050D080US930-RLFL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P918074
REPORT IS A COMBINATION OF REPORTS P900346 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-050D080US930-RLLFLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

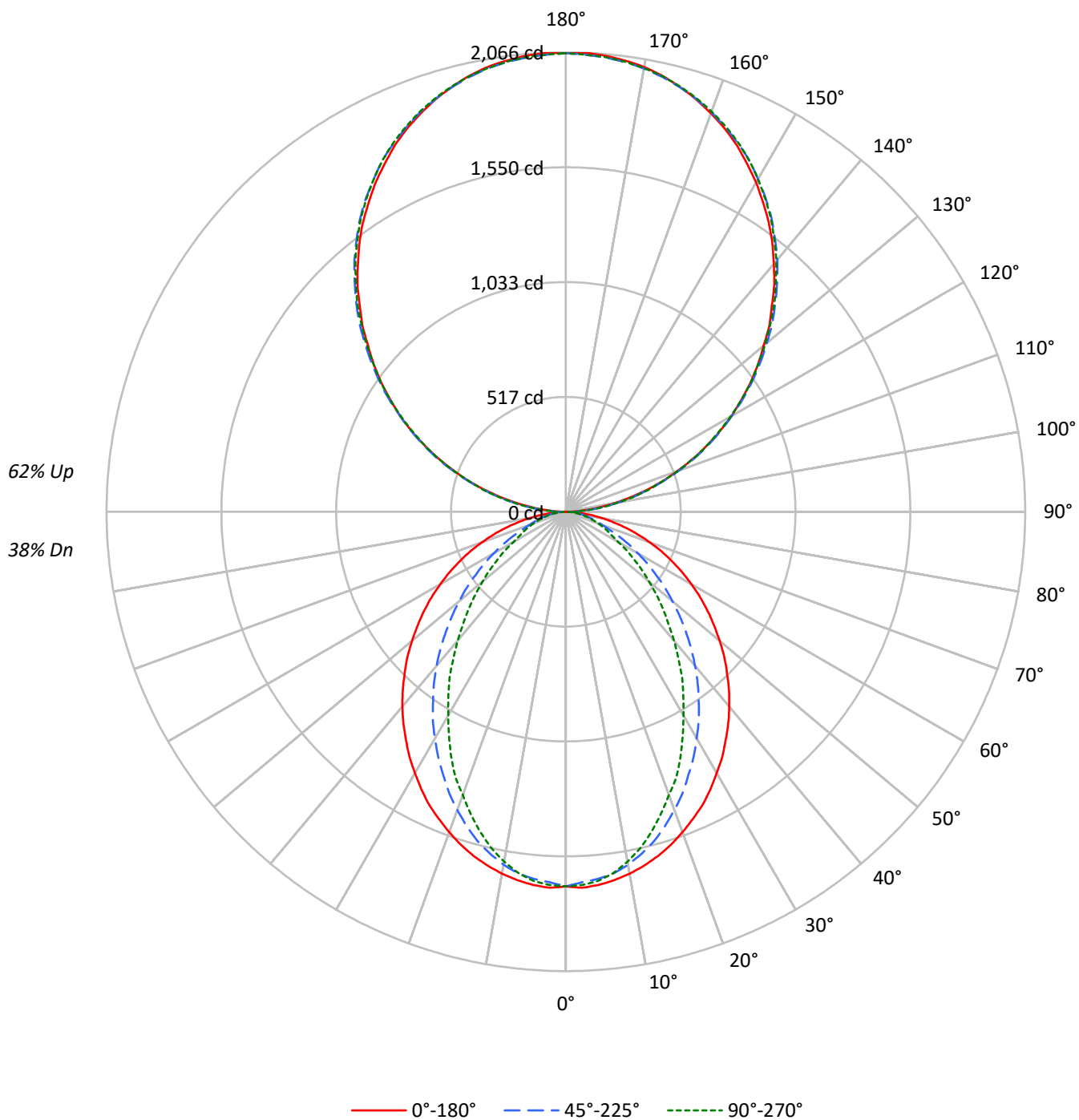
Lumens per Lamp: N/A
Luminaire Lumens: 9237.3 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 106.5
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: P918074

CATALOG NUMBER: DFN2DIP-TR3F0-050D080US930-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P918074

CATALOG NUMBER: DFN2DIP-TR3F0-050D080US930-RLLFLL

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	104	104	104	104	95	95	95	95	76	76	76	60	60	60	45	45	45
1	95	91	88	84	86	83	80	77	67	65	63	53	52	50	40	39	38
2	87	80	74	69	79	73	68	64	59	56	53	47	45	43	36	34	33
3	80	71	64	58	72	64	58	54	53	48	45	42	39	37	32	30	28
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	18	16
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2099	2099	2099
5°	2102	2064	2078
10°	2080	2022	2009
15°	2050	1954	1903
20°	2011	1860	1774
25°	1971	1755	1649
30°	1918	1648	1491
35°	1865	1533	1352
40°	1812	1413	1194
45°	1750	1282	1050
50°	1686	1149	909
55°	1619	1007	774
60°	1542	859	636
65°	1452	709	571
70°	1344	569	515
75°	1208	498	465
80°	1011	412	399
85°	688	266	291

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 2014 cd/sqm

TEST NUMBER: P918074

CATALOG NUMBER: DFN2DIP-TR3F0-050D080US930-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.9	1.7
10°-20°	433.5	4.7
20°-30°	608.6	6.6
30°-40°	663.4	7.2
40°-50°	609.7	6.6
50°-60°	478.8	5.2
60°-70°	311.7	3.4
70°-80°	160.4	1.7
80°-90°	46.8	0.5
90°-100°	127.6	1.4
100°-110°	405.6	4.4
110°-120°	694.1	7.5
120°-130°	912.8	9.9
130°-140°	1024.6	11.1
140°-150°	1004.7	10.9
150°-160°	842.8	9.1
160°-170°	558.9	6.1
170°-180°	195.4	2.1
0°-30°	1200.0	13.0
0°-40°	1863.4	20.2
0°-60°	2951.9	32.0
0°-90°	3470.9	37.6
90°-120°	1227.3	13.3
90°-150°	4169.4	45.1
90°-180°	5766.0	62.4
0°-180°	9237.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1685	1685	1685	1685	1685	
5°	1685	1677	1657	1671	1667	160
15°	1602	1586	1534	1505	1490	452
25°	1455	1406	1305	1243	1220	669
35°	1253	1176	1042	945	912	784
45°	1025	922	762	654	617	791
55°	779	660	496	404	375	696
65°	526	402	265	214	209	521
75°	280	174	122	111	110	297
85°	66	34	29	29	29	75
90°	2	22	61	57	59	9
95°	91	108	111	111	108	101
105°	374	379	383	386	386	395
115°	696	706	703	702	696	689
125°	1013	1029	1024	1018	1016	905
135°	1310	1330	1333	1332	1326	1013
145°	1591	1603	1613	1615	1608	994
155°	1819	1824	1830	1838	1833	837
165°	1979	1977	1977	1989	1981	558
175°	2059	2054	2050	2063	2052	196
180°	2063	2063	2063	2063	2063	

TEST NUMBER: P918074

CATALOG NUMBER: DFN2DIP-TR3F0-050D080US930-RLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1684.8	1684.8	1684.8	1684.8	1684.8
2.5°	1692.4	1684.8	1668.0	1683.3	1680.2
5°	1684.8	1677.2	1657.3	1671.0	1666.6
7.5°	1671.0	1662.0	1640.6	1646.7	1639.0
10°	1652.8	1642.1	1611.7	1607.0	1597.9
12.5°	1629.9	1616.2	1575.0	1565.9	1549.1
15°	1602.5	1585.7	1533.9	1505.0	1489.7
17.5°	1570.4	1546.1	1482.0	1448.5	1424.0
20°	1533.9	1503.3	1427.1	1389.1	1355.4
22.5°	1494.3	1459.1	1370.7	1318.9	1296.1
25°	1454.6	1405.7	1305.1	1242.7	1219.7
27.5°	1407.4	1355.4	1244.1	1172.5	1137.4
30°	1357.1	1299.0	1177.0	1099.3	1058.1
32.5°	1308.2	1238.0	1113.1	1021.6	983.4
35°	1253.4	1175.6	1041.5	945.3	911.7
37.5°	1200.0	1116.1	974.4	869.0	831.0
40°	1143.5	1052.1	904.1	795.9	756.3
42.5°	1085.7	988.1	834.1	721.1	683.1
45°	1024.7	922.4	762.4	654.0	617.4
47.5°	966.7	858.5	693.8	585.5	552.0
50°	902.7	794.4	626.7	521.4	489.5
52.5°	840.1	725.7	562.6	462.0	433.1
55°	779.1	660.1	495.5	404.1	375.1
57.5°	716.6	594.7	436.1	350.7	326.3
60°	652.6	530.6	373.5	295.9	271.4
62.5°	590.1	468.1	320.2	247.0	234.9
65°	526.0	402.5	265.3	213.5	208.9
67.5°	465.0	341.5	213.5	187.5	183.0
70°	401.0	282.1	176.8	161.6	155.5
72.5°	340.1	227.1	147.9	135.7	132.6
75°	280.5	173.7	122.0	111.3	109.8
77.5°	221.1	123.4	96.1	89.9	86.8
80°	166.2	88.5	73.1	67.1	67.1
82.5°	115.9	59.5	50.3	47.2	47.2
85°	65.5	33.5	28.9	28.9	28.9
87.5°	24.5	12.1	12.1	10.7	10.7
90°	1.9	22.4	61.0	57.2	59.1
92.5°	38.6	52.3	54.1	55.9	55.9
95°	90.8	108.2	111.3	111.3	108.2
97.5°	151.2	167.3	174.1	174.1	174.1
100°	220.8	235.1	240.0	240.0	238.1
102.5°	294.2	304.8	311.5	313.4	311.5
105°	374.4	379.4	383.1	386.2	386.2
107.5°	454.0	461.5	461.5	462.7	454.0
110°	531.1	541.0	541.0	541.0	536.1

TEST NUMBER: P918074

CATALOG NUMBER: DFN2DIP-TR3F0-050D080US930-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	614.4	625.0	623.1	618.2	614.4
115°	696.5	706.5	703.4	701.5	696.5
117.5°	778.0	791.7	782.9	778.0	773.0
120°	860.1	873.8	860.1	860.1	854.4
122.5°	934.7	952.1	943.4	938.4	934.7
125°	1013.0	1028.6	1023.6	1018.0	1016.2
127.5°	1089.6	1108.8	1102.0	1094.5	1089.6
130°	1161.1	1183.4	1180.3	1176.6	1169.8
132.5°	1241.3	1258.7	1260.0	1251.2	1246.3
135°	1310.3	1329.6	1333.3	1331.5	1326.5
137.5°	1387.4	1403.0	1406.1	1404.8	1397.3
140°	1455.2	1470.7	1479.4	1479.4	1472.6
142.5°	1524.9	1540.4	1545.4	1547.3	1540.4
145°	1590.8	1603.2	1613.1	1615.0	1608.2
147.5°	1649.8	1665.4	1672.8	1676.0	1669.2
150°	1710.8	1721.3	1728.2	1733.8	1728.2
152.5°	1764.9	1775.5	1784.2	1791.0	1784.2
155°	1819.0	1824.0	1829.6	1838.3	1832.7
157.5°	1865.6	1869.4	1872.5	1884.9	1876.2
160°	1907.3	1911.1	1912.9	1923.5	1916.0
162.5°	1945.9	1945.9	1947.7	1959.6	1950.8
165°	1978.8	1976.9	1976.9	1989.4	1980.7
167.5°	2008.7	2003.1	2003.1	2015.5	2006.8
170°	2031.1	2026.1	2024.2	2036.7	2026.1
172.5°	2046.6	2041.7	2039.8	2052.2	2041.7
175°	2059.0	2054.1	2050.3	2062.8	2052.2
177.5°	2065.9	2060.9	2057.2	2067.8	2057.2
180°	2062.8	2062.8	2062.8	2062.8	2062.8

TEST NUMBER: P918074

CATALOG NUMBER: DFN2DIP-TR3F0-050D080US930-RLLFLL

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	8.39	9.13	9.45	10.19	11.63	4.36	5.10	5.43	6.16	7.60
	3H	10.05	10.71	11.12	11.78	13.24	5.54	6.20	6.61	7.27	8.73
	4H	10.65	11.27	11.73	12.34	13.81	5.98	6.61	7.06	7.68	9.14
	6H	11.05	11.63	12.15	12.71	14.18	6.29	6.87	7.38	7.94	9.42
	8H	11.17	11.72	12.27	12.81	14.28	6.38	6.92	7.47	8.02	9.49
	12H	11.23	11.75	12.33	12.83	14.33	6.42	6.93	7.52	8.02	9.51
4H	2H	8.39	9.02	9.48	10.09	11.56	4.94	5.57	6.03	6.64	8.11
	3H	10.20	10.72	11.30	11.82	13.30	6.28	6.80	7.37	7.90	9.37
	4H	10.88	11.36	11.98	12.45	13.95	6.82	7.29	7.92	8.38	9.88
	6H	11.38	11.79	12.49	12.91	14.40	7.22	7.63	8.33	8.75	10.24
	8H	11.55	11.93	12.66	13.04	14.55	7.35	7.73	8.46	8.83	10.34
	12H	11.64	11.98	12.76	13.10	14.61	7.41	7.75	8.53	8.87	10.38
8H	4H	10.84	11.22	11.95	12.33	13.84	7.08	7.47	8.19	8.57	10.08
	6H	11.40	11.71	12.53	12.86	14.36	7.59	7.91	8.72	9.05	10.56
	8H	11.61	11.88	12.74	13.01	14.53	7.78	8.05	8.91	9.18	10.70
	12H	11.73	11.98	12.87	13.10	14.66	7.89	8.13	9.03	9.25	10.81
12H	4H	10.79	11.14	11.92	12.25	13.77	7.08	7.43	8.21	8.55	10.06
	6H	11.37	11.65	12.51	12.77	14.30	7.64	7.91	8.77	9.04	10.57
	8H	11.58	11.82	12.72	12.95	14.51	7.84	8.08	8.98	9.20	10.77