

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: P926278

Luminaire Tested: DFN2DIP-TR3F0-060D070US950-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P926278
REPORT IS A COMBINATION OF REPORTS P900333 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-060D070US950-FLLFLL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

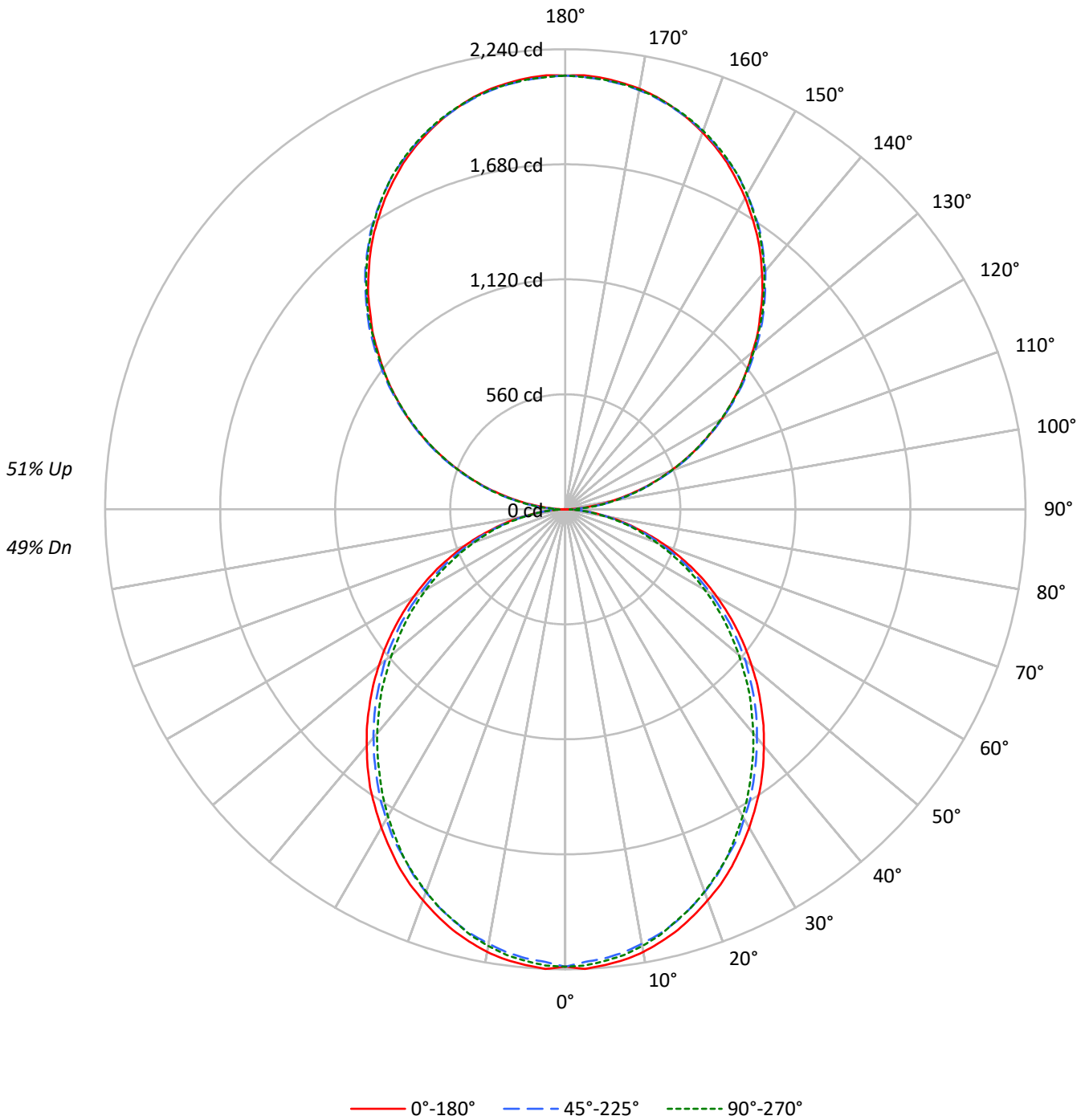
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11576.8 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 110.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P926278
CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLFLL

Luminous Intensity Polar Plot





TEST NUMBER: P926278
 CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLFLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49			49
1	98	93	89	86	90	86	83	80	73	70	68	60	59	57	49	48	47	41			41
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35			35
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	33	29			29
4	74	63	55	49	68	59	52	46	50	45	40	42	38	34	34	31	29	25			25
5	68	56	48	42	62	52	45	40	45	39	35	37	33	30	31	28	25	22			22
6	63	51	43	37	58	47	40	35	40	35	30	34	29	26	28	25	22	19			19
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	20	17			17
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15			15
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	22	18	16	14			14
10	47	35	28	23	43	32	26	22	28	23	19	24	20	17	20	17	14	12			12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2775	2775	2775
5°	2778	2734	2753
10°	2754	2695	2714
15°	2712	2648	2654
20°	2656	2584	2593
25°	2600	2508	2522
30°	2530	2437	2432
35°	2464	2354	2338
40°	2382	2270	2248
45°	2301	2185	2156
50°	2212	2097	2049
55°	2119	1994	1950
60°	2014	1872	1837
65°	1898	1746	1704
70°	1752	1591	1560
75°	1549	1406	1425
80°	1304	1170	1171
85°	921	770	756

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2301 cd/sqm



TEST NUMBER: P926278

CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.6	1.8
10°-20°	589.8	5.1
20°-30°	866.8	7.5
30°-40°	1006.7	8.7
40°-50°	1005.5	8.7
50°-60°	876.7	7.6
60°-70°	648.1	5.6
70°-80°	366.7	3.2
80°-90°	102.8	0.9
90°-100°	130.7	1.1
100°-110°	415.3	3.6
110°-120°	710.6	6.1
120°-130°	934.6	8.1
130°-140°	1049.0	9.1
140°-150°	1028.7	8.9
150°-160°	862.9	7.5
160°-170°	572.3	4.9
170°-180°	200.0	1.7
0°-30°	1666.2	14.4
0°-40°	2673.0	23.1
0°-60°	4555.2	39.3
0°-90°	5672.8	49.0
90°-120°	1256.6	10.9
90°-150°	4268.9	36.9
90°-180°	5904.0	51.0
0°-180°	11576.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2227	2227	2227	2227	2227	
5°	2227	2219	2195	2212	2208	211
15°	2120	2108	2080	2088	2078	597
25°	1919	1902	1866	1870	1866	883
35°	1656	1634	1600	1587	1576	1034
45°	1347	1332	1300	1276	1268	1040
55°	1020	1007	981	955	945	912
65°	688	675	653	634	623	680
75°	360	356	345	332	336	384
85°	88	86	84	77	75	98
90°	2	23	62	59	60	11
95°	93	111	114	114	111	103
105°	383	388	392	395	395	405
115°	713	723	720	718	713	705
125°	1037	1053	1048	1042	1040	927
135°	1342	1361	1365	1363	1358	1037
145°	1629	1642	1652	1654	1647	1018
155°	1862	1868	1873	1882	1876	857
165°	2026	2024	2024	2037	2028	572
175°	2108	2103	2099	2112	2101	200
180°	2112	2112	2112	2112	2112	



TEST NUMBER: P926278

CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2227.2	2227.2	2227.2	2227.2	2227.2
2.5°	2240.2	2229.5	2205.8	2227.2	2223.1
5°	2227.2	2218.8	2195.2	2212.2	2208.1
7.5°	2212.2	2199.5	2175.9	2193.2	2188.9
10°	2188.9	2173.9	2148.1	2165.2	2158.8
12.5°	2156.6	2143.8	2118.2	2128.9	2124.6
15°	2120.2	2107.5	2079.5	2088.2	2077.5
17.5°	2075.2	2062.5	2034.6	2045.2	2034.6
20°	2025.9	2013.2	1983.2	1989.6	1981.2
22.5°	1976.9	1957.5	1929.6	1929.6	1925.3
25°	1918.9	1901.9	1865.5	1869.6	1865.5
27.5°	1854.6	1839.6	1811.8	1805.5	1794.9
30°	1790.6	1773.2	1741.2	1734.8	1726.2
32.5°	1721.9	1709.2	1674.8	1661.9	1653.3
35°	1655.6	1634.2	1599.9	1586.9	1576.2
37.5°	1580.6	1561.2	1527.0	1511.9	1501.2
40°	1503.5	1486.2	1452.0	1432.9	1424.2
42.5°	1428.5	1411.3	1377.2	1355.6	1342.9
45°	1347.2	1332.2	1299.9	1276.5	1267.9
47.5°	1267.9	1252.9	1218.6	1195.0	1182.2
50°	1184.3	1173.6	1143.7	1113.6	1102.9
52.5°	1102.9	1087.9	1060.2	1036.6	1021.6
55°	1019.5	1006.6	980.9	955.2	944.6
57.5°	936.0	925.3	897.3	871.7	863.0
60°	852.3	843.9	814.0	790.3	783.9
62.5°	770.9	755.9	734.6	713.2	704.6
65°	687.5	674.7	653.3	633.9	623.2
67.5°	601.9	591.0	571.9	556.9	548.3
70°	522.6	514.0	494.6	479.7	471.3
72.5°	441.2	432.6	422.0	407.0	400.6
75°	359.7	355.7	344.7	332.0	336.3
77.5°	287.0	278.4	274.0	267.7	261.3
80°	214.3	212.0	207.7	201.3	197.0
82.5°	145.7	145.7	143.6	135.0	135.0
85°	87.7	85.7	83.6	77.0	75.0
87.5°	38.6	34.3	30.0	23.7	21.4
90°	1.9	22.9	62.4	58.6	60.5
92.5°	39.5	53.5	55.4	57.3	57.3
95°	92.9	110.8	114.0	114.0	110.8
97.5°	154.7	171.2	178.3	178.3	178.3
100°	226.0	240.7	245.8	245.8	243.8
102.5°	301.2	312.0	319.0	320.9	319.0
105°	383.3	388.4	392.2	395.4	395.4
107.5°	464.8	472.4	472.4	473.8	464.8
110°	543.8	554.0	554.0	554.0	548.8



TEST NUMBER: P926278

CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	629.1	639.9	638.0	632.9	629.1
115°	713.1	723.3	720.2	718.3	713.1
117.5°	796.5	810.5	801.6	796.5	791.4
120°	880.5	894.6	880.5	880.5	874.8
122.5°	957.0	974.8	965.9	960.8	957.0
125°	1037.2	1053.1	1048.1	1042.3	1040.4
127.5°	1115.5	1135.3	1128.3	1120.7	1115.5
130°	1188.8	1211.7	1208.5	1204.7	1197.7
132.5°	1270.9	1288.8	1290.0	1281.1	1276.0
135°	1341.6	1361.3	1365.2	1363.2	1358.1
137.5°	1420.5	1436.4	1439.6	1438.3	1430.7
140°	1490.0	1505.9	1514.8	1514.8	1507.8
142.5°	1561.2	1577.2	1582.2	1584.1	1577.2
145°	1628.8	1641.5	1651.7	1653.6	1646.6
147.5°	1689.2	1705.2	1712.8	1716.0	1709.0
150°	1751.6	1762.4	1769.5	1775.2	1769.5
152.5°	1807.0	1817.8	1826.7	1833.8	1826.7
155°	1862.4	1867.5	1873.3	1882.1	1876.4
157.5°	1910.2	1914.0	1917.2	1929.9	1921.0
160°	1952.8	1956.7	1958.6	1969.3	1961.7
162.5°	1992.3	1992.3	1994.2	2006.3	1997.4
165°	2026.0	2024.1	2024.1	2036.9	2027.9
167.5°	2056.6	2050.9	2050.9	2063.6	2054.7
170°	2079.5	2074.5	2072.6	2085.3	2074.5
172.5°	2095.5	2090.3	2088.4	2101.2	2090.3
175°	2108.1	2103.1	2099.3	2112.0	2101.2
177.5°	2115.2	2110.1	2106.2	2117.1	2106.2
180°	2112.0	2112.0	2112.0	2112.0	2112.0



TEST NUMBER: P926278
 CATALOG NUMBER: DFN2DIP-TR3F0-060D070US950-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	10.67	11.52	11.64	12.51	13.79	10.24	11.10	11.21	12.08	13.36
	3H	12.32	13.09	13.30	14.08	15.38	11.85	12.62	12.83	13.61	14.92
	4H	12.90	13.63	13.89	14.62	15.94	12.44	13.16	13.43	14.15	15.47
	6H	13.30	13.96	14.30	14.96	16.29	12.83	13.49	13.83	14.49	15.82
	8H	13.40	14.03	14.40	15.05	16.37	12.93	13.56	13.94	14.58	15.90
	12H	13.44	14.04	14.45	15.05	16.40	12.97	13.57	13.98	14.58	15.93
4H	2H	11.13	11.85	12.13	12.85	14.16	10.79	11.51	11.78	12.50	13.82
	3H	12.98	13.59	13.99	14.61	15.94	12.59	13.20	13.60	14.22	15.55
	4H	13.69	14.24	14.70	15.26	16.61	13.29	13.84	14.30	14.86	16.21
	6H	14.20	14.67	15.22	15.71	17.06	13.79	14.27	14.82	15.31	16.66
	8H	14.34	14.79	15.37	15.82	17.18	13.93	14.38	14.96	15.41	16.77
	12H	14.41	14.81	15.45	15.86	17.23	13.99	14.40	15.04	15.44	16.81
8H	4H	13.88	14.33	14.91	15.36	16.72	13.53	13.97	14.55	15.00	16.37
	6H	14.50	14.87	15.55	15.94	17.30	14.14	14.51	15.19	15.58	16.95
	8H	14.72	15.04	15.77	16.10	17.48	14.35	14.68	15.41	15.73	17.12
	12H	14.84	15.13	15.90	16.18	17.60	14.46	14.75	15.52	15.80	17.22
12H	4H	13.87	14.27	14.91	15.31	16.68	13.52	13.92	14.56	14.97	16.34
	6H	14.53	14.85	15.59	15.91	17.29	14.18	14.51	15.24	15.56	16.95
	8H	14.76	15.05	15.83	16.10	17.53	14.41	14.70	15.47	15.75	17.17