

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: P915340

Luminaire Tested: DFN2DIP-TR3F0-050D070US927-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P915340
REPORT IS A COMBINATION OF REPORTS P900331 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-050D070US927-FLLFLL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

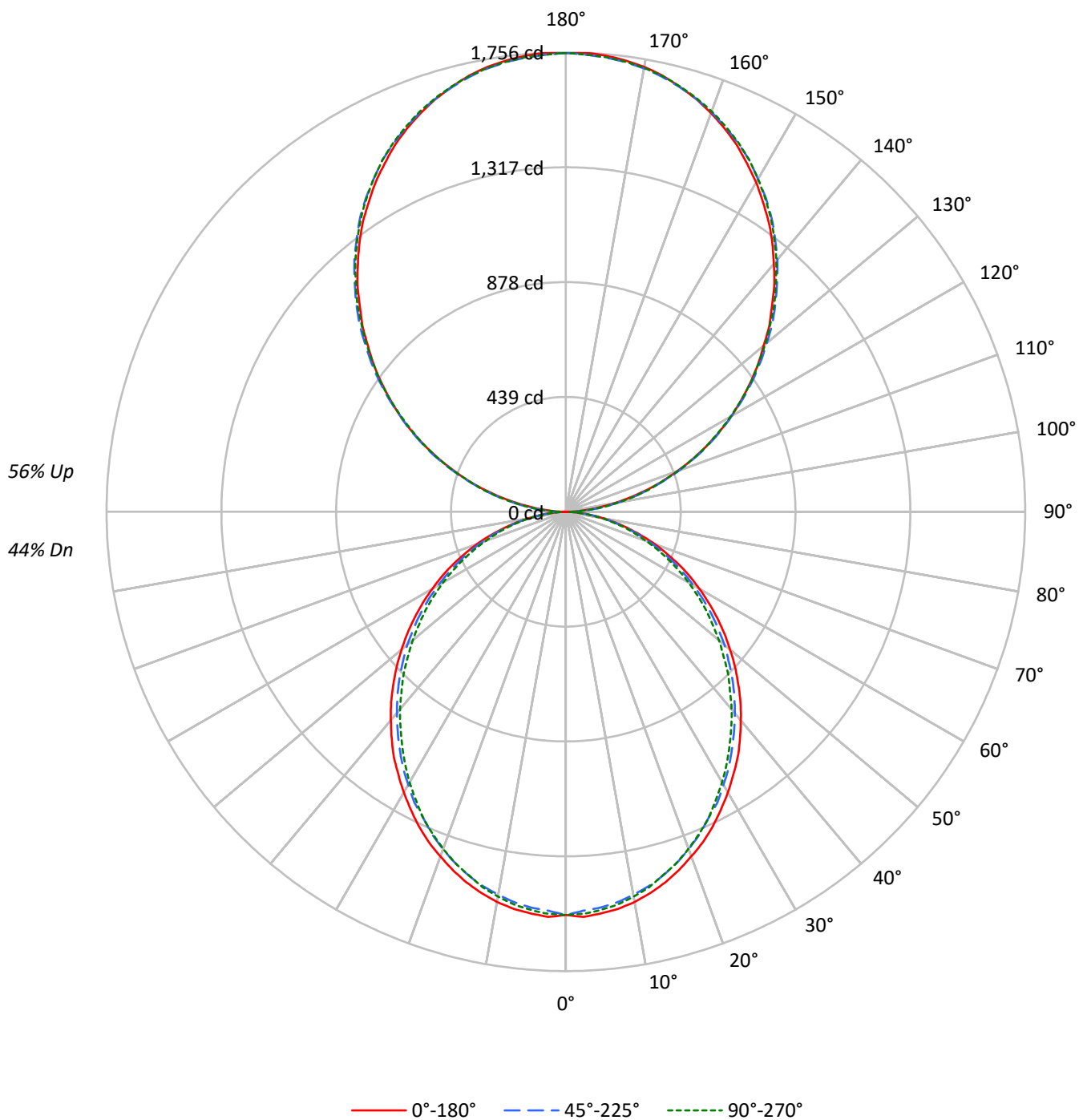
Lumens per Lamp: N/A
Luminaire Lumens: 8828.9 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 98.6
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: P915340

CATALOG NUMBER: DFN2DIP-TR3F0-050D070US927-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P915340

CATALOG NUMBER: DFN2DIP-TR3F0-050D070US927-FLLFLL

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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	31	29	27
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	28	25	23
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16
9	49	37	30	25	45	35	28	23	29	24	20	24	20	18	20	17	15
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1920	1920	1920
5°	1923	1892	1905
10°	1906	1865	1878
15°	1877	1833	1837
20°	1838	1789	1794
25°	1799	1736	1745
30°	1751	1687	1683
35°	1705	1629	1618
40°	1649	1571	1556
45°	1592	1512	1491
50°	1531	1451	1418
55°	1466	1379	1349
60°	1393	1295	1272
65°	1314	1208	1179
70°	1212	1101	1080
75°	1072	973	986
80°	902	810	810
85°	637	533	523

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 1711 cd/sqm

TEST NUMBER: P915340

CATALOG NUMBER: DFN2DIP-TR3F0-050D070US927-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.1	1.6
10°-20°	408.1	4.6
20°-30°	599.8	6.8
30°-40°	696.6	7.9
40°-50°	695.8	7.9
50°-60°	606.7	6.9
60°-70°	448.5	5.1
70°-80°	253.7	2.9
80°-90°	71.9	0.8
90°-100°	108.5	1.2
100°-110°	344.8	3.9
110°-120°	590.1	6.7
120°-130°	776.1	8.8
130°-140°	871.1	9.9
140°-150°	854.2	9.7
150°-160°	716.6	8.1
160°-170°	475.2	5.4
170°-180°	166.1	1.9
0°-30°	1153.0	13.1
0°-40°	1849.6	20.9
0°-60°	3152.1	35.7
0°-90°	3926.3	44.5
90°-120°	1043.4	11.8
90°-150°	3544.8	40.1
90°-180°	4903.0	55.5
0°-180°	8828.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1541	1535	1519	1531	1528	146
15°	1467	1458	1439	1445	1438	413
25°	1328	1316	1291	1294	1291	611
35°	1146	1131	1107	1098	1091	715
45°	932	922	900	883	877	719
55°	706	697	679	661	654	631
65°	476	467	452	439	431	470
75°	249	246	238	230	233	266
85°	61	59	58	53	52	68
90°	2	19	52	49	50	9
95°	77	92	95	95	92	86
105°	318	322	326	328	328	336
115°	592	601	598	596	592	586
125°	861	874	870	866	864	770
135°	1114	1130	1134	1132	1128	861
145°	1352	1363	1372	1373	1367	845
155°	1546	1551	1556	1563	1558	712
165°	1682	1681	1681	1691	1684	475
175°	1751	1746	1743	1754	1745	166
180°	1754	1754	1754	1754	1754	

TEST NUMBER: P915340

CATALOG NUMBER: DFN2DIP-TR3F0-050D070US927-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1541.2	1541.2	1541.2	1541.2	1541.2
2.5°	1550.1	1542.8	1526.5	1541.2	1538.4
5°	1541.2	1535.4	1519.0	1530.8	1528.0
7.5°	1530.8	1522.0	1505.7	1517.7	1514.7
10°	1514.7	1504.3	1486.5	1498.3	1493.9
12.5°	1492.3	1483.5	1465.8	1473.1	1470.1
15°	1467.1	1458.3	1439.0	1445.0	1437.6
17.5°	1436.0	1427.2	1407.9	1415.2	1407.9
20°	1401.9	1393.1	1372.4	1376.7	1370.9
22.5°	1367.9	1354.6	1335.2	1335.2	1332.2
25°	1327.9	1316.1	1290.9	1293.7	1290.9
27.5°	1283.3	1273.0	1253.8	1249.3	1242.0
30°	1239.0	1227.1	1204.9	1200.5	1194.5
32.5°	1191.5	1182.7	1159.0	1150.0	1144.1
35°	1145.6	1130.8	1107.1	1098.1	1090.8
37.5°	1093.7	1080.4	1056.6	1046.2	1038.9
40°	1040.5	1028.5	1004.7	991.5	985.6
42.5°	988.6	976.6	953.0	938.0	929.2
45°	932.2	921.9	899.5	883.4	877.3
47.5°	877.3	867.0	843.3	826.9	818.1
50°	819.5	812.1	791.4	770.6	763.2
52.5°	763.2	752.8	733.6	717.3	706.9
55°	705.5	696.6	678.7	661.0	653.6
57.5°	647.6	640.2	620.9	603.2	597.1
60°	589.8	584.0	563.2	546.8	542.5
62.5°	533.5	523.2	508.3	493.5	487.6
65°	475.8	466.8	452.0	438.7	431.3
67.5°	416.5	409.0	395.8	385.4	379.4
70°	361.6	355.7	342.3	331.9	326.1
72.5°	305.4	299.4	292.0	281.6	277.2
75°	248.9	246.1	238.5	229.7	232.7
77.5°	198.6	192.6	189.6	185.2	180.9
80°	148.3	146.7	143.7	139.3	136.3
82.5°	100.8	100.8	99.3	93.4	93.4
85°	60.7	59.3	57.8	53.3	51.9
87.5°	26.7	23.8	20.8	16.3	14.8
90°	1.6	19.0	51.8	48.6	50.2
92.5°	32.8	44.4	46.0	47.6	47.6
95°	77.2	92.0	94.7	94.7	92.0
97.5°	128.5	142.2	148.1	148.1	148.1
100°	187.7	199.9	204.1	204.1	202.5
102.5°	250.1	259.0	264.9	266.5	264.9
105°	318.3	322.5	325.7	328.4	328.4
107.5°	386.0	392.3	392.3	393.4	386.0
110°	451.5	460.0	460.0	460.0	455.7

TEST NUMBER: P915340

CATALOG NUMBER: DFN2DIP-TR3F0-050D070US927-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	522.4	531.4	529.8	525.5	522.4
115°	592.2	600.6	598.0	596.4	592.2
117.5°	661.4	673.0	665.7	661.4	657.2
120°	731.2	742.8	731.2	731.2	726.4
122.5°	794.6	809.5	802.1	797.8	794.6
125°	861.3	874.5	870.3	865.5	864.0
127.5°	926.3	942.7	936.9	930.6	926.3
130°	987.1	1006.1	1003.5	1000.4	994.5
132.5°	1055.3	1070.2	1071.2	1063.8	1059.5
135°	1114.0	1130.4	1133.6	1131.9	1127.7
137.5°	1179.6	1192.8	1195.4	1194.4	1188.0
140°	1237.2	1250.5	1257.8	1257.8	1252.0
142.5°	1296.4	1309.6	1313.8	1315.4	1309.6
145°	1352.5	1363.0	1371.5	1373.1	1367.3
147.5°	1402.7	1415.9	1422.3	1424.9	1419.1
150°	1454.5	1463.5	1469.3	1474.1	1469.3
152.5°	1500.5	1509.5	1516.9	1522.7	1516.9
155°	1546.5	1550.7	1555.5	1562.9	1558.1
157.5°	1586.2	1589.4	1592.0	1602.6	1595.1
160°	1621.6	1624.8	1626.3	1635.3	1629.0
162.5°	1654.4	1654.4	1656.0	1666.0	1658.6
165°	1682.4	1680.8	1680.8	1691.4	1683.9
167.5°	1707.8	1703.0	1703.0	1713.6	1706.2
170°	1726.8	1722.6	1721.0	1731.5	1722.6
172.5°	1740.0	1735.7	1734.2	1744.8	1735.7
175°	1750.6	1746.4	1743.2	1753.7	1744.8
177.5°	1756.4	1752.1	1749.0	1758.0	1749.0
180°	1753.7	1753.7	1753.7	1753.7	1753.7

TEST NUMBER: P915340

CATALOG NUMBER: DFN2DIP-TR3F0-050D070US927-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	8.95	9.77	9.95	10.78	12.13	8.52	9.34	9.53	10.35	11.70
	3H	10.60	11.33	11.61	12.35	13.72	10.13	10.86	11.14	11.88	13.25
	4H	11.18	11.87	12.20	12.90	14.27	10.71	11.40	11.74	12.43	13.80
	6H	11.57	12.21	12.60	13.24	14.62	11.10	11.74	12.14	12.77	14.15
	8H	11.67	12.27	12.71	13.32	14.70	11.20	11.81	12.24	12.85	14.24
	12H	11.71	12.29	12.76	13.33	14.74	11.24	11.81	12.28	12.85	14.26
4H	2H	9.40	10.09	10.44	11.12	12.50	9.06	9.75	10.09	10.78	12.15
	3H	11.25	11.83	12.30	12.89	14.28	10.87	11.44	11.91	12.50	13.89
	4H	11.96	12.49	13.01	13.53	14.95	11.56	12.09	12.61	13.13	14.54
	6H	12.46	12.92	13.52	13.99	15.39	12.06	12.51	13.12	13.58	14.99
	8H	12.61	13.03	13.67	14.09	15.52	12.20	12.63	13.26	13.69	15.11
	12H	12.67	13.06	13.75	14.13	15.56	12.26	12.64	13.33	13.72	15.15
8H	4H	12.15	12.57	13.21	13.63	15.06	11.79	12.22	12.85	13.28	14.70
	6H	12.77	13.12	13.85	14.22	15.64	12.41	12.76	13.49	13.86	15.28
	8H	12.98	13.29	14.07	14.38	15.82	12.62	12.93	13.71	14.01	15.45
	12H	13.10	13.38	14.20	14.46	15.94	12.73	13.00	13.82	14.08	15.56
12H	4H	12.13	12.52	13.21	13.59	15.02	11.78	12.17	12.86	13.24	14.67
	6H	12.79	13.10	13.88	14.19	15.63	12.45	12.76	13.54	13.84	15.28
	8H	13.03	13.30	14.12	14.38	15.86	12.67	12.95	13.77	14.03	15.51