

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: P926196

Luminaire Tested: DFN2DIP-TR3F0-030D060US950-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P926196
REPORT IS A COMBINATION OF REPORTS P900313 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-030D060US950-FLLFLL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

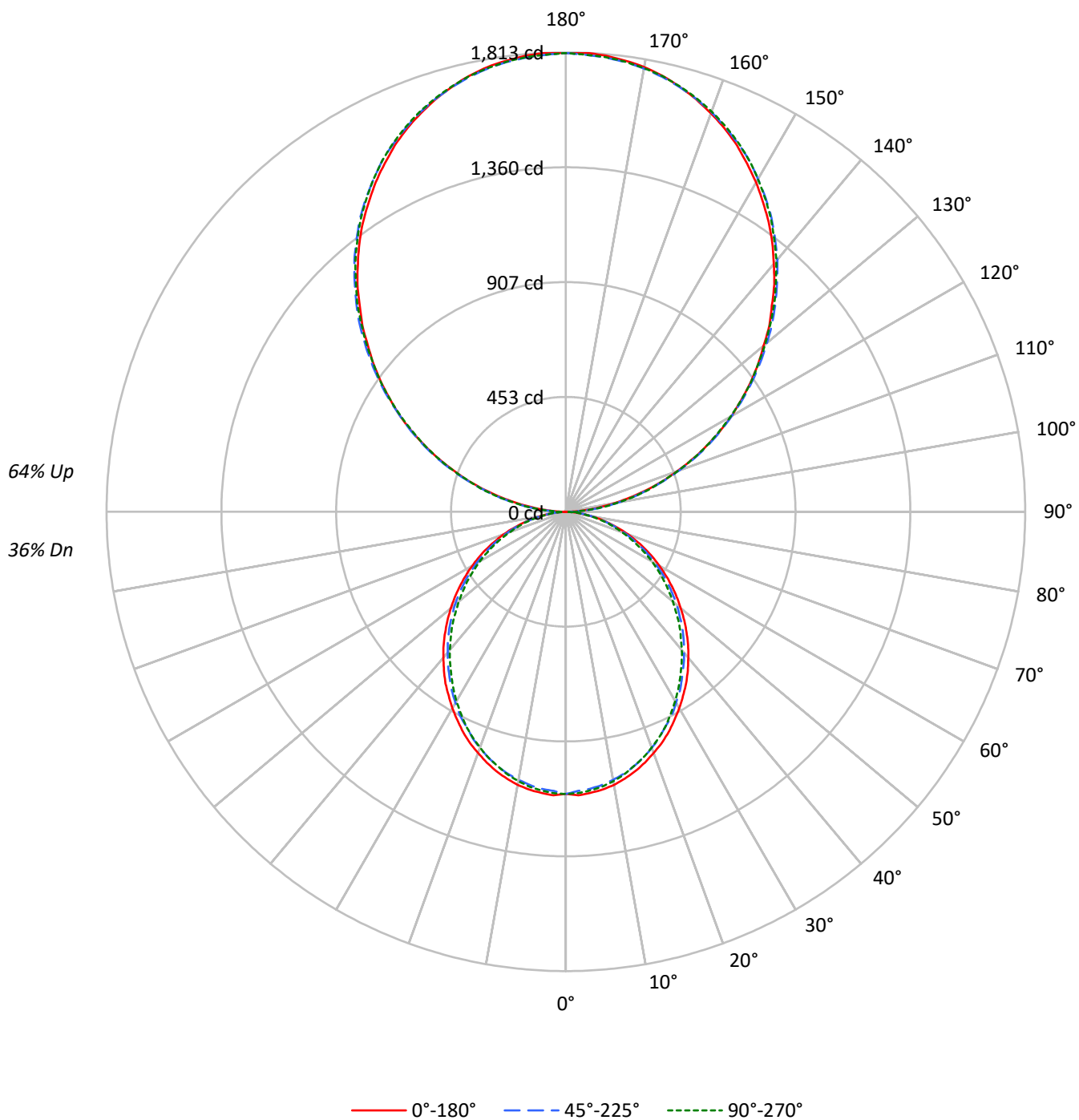
Lumens per Lamp: N/A
Luminaire Lumens: 7899.1 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 69.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P926196

CATALOG NUMBER: DFN2DIP-TR3F0-030D060US950-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P926196

CATALOG NUMBER: DFN2DIP-TR3F0-030D060US950-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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43
1	95	90	87	83	85	82	79	76	66	64	62	52	50	49	38	37	36
2	86	79	73	68	78	72	66	62	58	54	51	45	43	41	34	32	31
3	79	69	62	56	71	63	57	52	51	47	43	40	37	34	30	28	26
4	72	61	54	48	65	56	49	44	45	40	37	36	32	29	27	24	22
5	66	54	47	41	59	50	43	38	40	35	31	32	28	25	24	22	20
6	61	49	41	35	55	45	38	33	36	31	27	29	25	22	22	19	17
7	56	44	36	31	50	40	33	28	33	28	24	26	22	20	20	17	15
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	16	14
9	48	36	29	24	44	33	27	22	27	22	19	22	18	16	17	14	12
10	45	33	26	21	41	30	24	20	25	20	17	20	17	14	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1388	1388	1388
5°	1389	1367	1377
10°	1377	1348	1357
15°	1356	1324	1327
20°	1328	1292	1296
25°	1300	1254	1261
30°	1265	1219	1216
35°	1232	1177	1169
40°	1191	1135	1124
45°	1151	1093	1078
50°	1106	1048	1024
55°	1060	997	975
60°	1007	936	919
65°	949	873	852
70°	876	796	780
75°	774	703	713
80°	652	585	585
85°	461	385	378

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 1765 cd/sqm

TEST NUMBER: P926196

CATALOG NUMBER: DFN2DIP-TR3F0-030D060US950-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.8	1.3
10°-20°	294.9	3.7
20°-30°	433.4	5.5
30°-40°	503.4	6.4
40°-50°	502.7	6.4
50°-60°	438.4	5.5
60°-70°	324.1	4.1
70°-80°	183.3	2.3
80°-90°	53.5	0.7
90°-100°	112.0	1.4
100°-110°	355.9	4.5
110°-120°	609.1	7.7
120°-130°	801.1	10.1
130°-140°	899.2	11.4
140°-150°	881.7	11.2
150°-160°	739.6	9.4
160°-170°	490.5	6.2
170°-180°	171.4	2.2
0°-30°	833.1	10.5
0°-40°	1336.5	16.9
0°-60°	2277.6	28.8
0°-90°	2838.5	35.9
90°-120°	1077.0	13.6
90°-150°	3659.0	46.3
90°-180°	5061.0	64.1
0°-180°	7899.1	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°	2	20	54	50	52	8
95°	80	95	98	98	95	89
105°	329	333	336	339	339	347
115°	611	620	617	616	611	605
125°	889	903	898	893	892	794
135°	1150	1167	1170	1168	1164	889
145°	1396	1407	1416	1417	1411	872
155°	1596	1601	1606	1613	1608	735
165°	1737	1735	1735	1746	1738	490
175°	1807	1803	1799	1810	1801	172
180°	1810	1810	1810	1810	1810	

TEST NUMBER: P926196

CATALOG NUMBER: DFN2DIP-TR3F0-030D060US950-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°	1.6	19.7	53.5	50.2	51.8
92.5°	33.9	45.9	47.5	49.1	49.1
95°	79.7	94.9	97.7	97.7	94.9
97.5°	132.6	146.8	152.8	152.8	152.8
100°	193.8	206.3	210.6	210.6	209.0
102.5°	258.2	267.4	273.4	275.0	273.4
105°	328.6	332.9	336.2	339.0	339.0
107.5°	398.4	405.0	405.0	406.0	398.4
110°	466.1	474.8	474.8	474.8	470.4

TEST NUMBER: P926196

CATALOG NUMBER: DFN2DIP-TR3F0-030D060US950-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	539.2	548.5	546.8	542.4	539.2
115°	611.2	620.0	617.2	615.6	611.2
117.5°	682.8	694.8	687.1	682.8	678.4
120°	754.8	766.8	754.8	754.8	749.8
122.5°	820.2	835.5	827.9	823.6	820.2
125°	889.0	902.7	898.3	893.4	891.8
127.5°	956.2	973.1	967.1	960.6	956.2
130°	1019.0	1038.6	1035.9	1032.6	1026.6
132.5°	1089.4	1104.6	1105.7	1098.1	1093.7
135°	1150.0	1166.8	1170.1	1168.5	1164.1
137.5°	1217.6	1231.2	1234.0	1232.9	1226.4
140°	1277.1	1290.8	1298.4	1298.4	1292.4
142.5°	1338.2	1351.8	1356.2	1357.8	1351.8
145°	1396.1	1407.0	1415.7	1417.4	1411.3
147.5°	1447.9	1461.5	1468.1	1470.8	1464.8
150°	1501.4	1510.7	1516.7	1521.5	1516.7
152.5°	1548.8	1558.2	1565.8	1571.8	1565.8
155°	1596.3	1600.7	1605.6	1613.3	1608.3
157.5°	1637.3	1640.6	1643.3	1654.2	1646.6
160°	1673.9	1677.1	1678.8	1688.0	1681.5
162.5°	1707.7	1707.7	1709.3	1719.7	1712.0
165°	1736.6	1734.9	1734.9	1745.9	1738.3
167.5°	1762.8	1757.9	1757.9	1768.8	1761.2
170°	1782.5	1778.1	1776.4	1787.3	1778.1
172.5°	1796.1	1791.7	1790.1	1801.0	1791.7
175°	1807.0	1802.7	1799.3	1810.3	1801.0
177.5°	1813.0	1808.7	1805.3	1814.6	1805.3
180°	1810.3	1810.3	1810.3	1810.3	1810.3

TEST NUMBER: P926196

CATALOG NUMBER: DFN2DIP-TR3F0-030D060US950-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	6.89	7.64	7.96	8.71	10.17	6.47	7.21	7.53	8.28	9.74
	3H	8.54	9.21	9.61	10.29	11.76	8.07	8.74	9.15	9.82	11.29
	4H	9.11	9.75	10.20	10.83	12.31	8.64	9.28	9.73	10.36	11.85
	6H	9.50	10.08	10.60	11.17	12.66	9.03	9.62	10.13	10.70	12.20
	8H	9.60	10.15	10.70	11.25	12.74	9.13	9.69	10.23	10.79	12.27
	12H	9.64	10.17	10.74	11.26	12.77	9.16	9.69	10.27	10.79	12.30
4H	2H	7.34	7.97	8.43	9.05	10.54	7.00	7.63	8.09	8.71	10.20
	3H	9.18	9.71	10.29	10.82	12.32	8.79	9.32	9.90	10.43	11.93
	4H	9.89	10.37	10.99	11.47	12.99	9.48	9.97	10.59	11.07	12.59
	6H	10.38	10.80	11.50	11.92	13.43	9.98	10.40	11.10	11.52	13.03
	8H	10.53	10.92	11.64	12.03	13.56	10.12	10.51	11.24	11.62	13.15
	12H	10.59	10.94	11.72	12.07	13.60	10.17	10.53	11.31	11.65	13.18
8H	4H	10.07	10.46	11.18	11.57	13.10	9.71	10.10	10.83	11.22	12.74
	6H	10.68	11.01	11.82	12.16	13.68	10.33	10.65	11.46	11.80	13.33
	8H	10.90	11.18	12.04	12.31	13.86	10.53	10.82	11.68	11.95	13.49
	12H	11.02	11.27	12.16	12.40	13.98	10.64	10.89	11.79	12.02	13.60
12H	4H	10.05	10.40	11.18	11.53	13.06	9.70	10.05	10.83	11.18	12.71
	6H	10.71	10.99	11.85	12.13	13.67	10.36	10.65	11.51	11.78	13.32
	8H	10.94	11.19	12.09	12.32	13.90	10.59	10.84	11.73	11.97	13.55

END OF REPORT