

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: P916647

Luminaire Tested: DFN2DIP-PN3F0-050D030US930-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P916647
REPORT IS A COMBINATION OF REPORTS P901036 AND P897955
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-050D030US930-RLLONL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

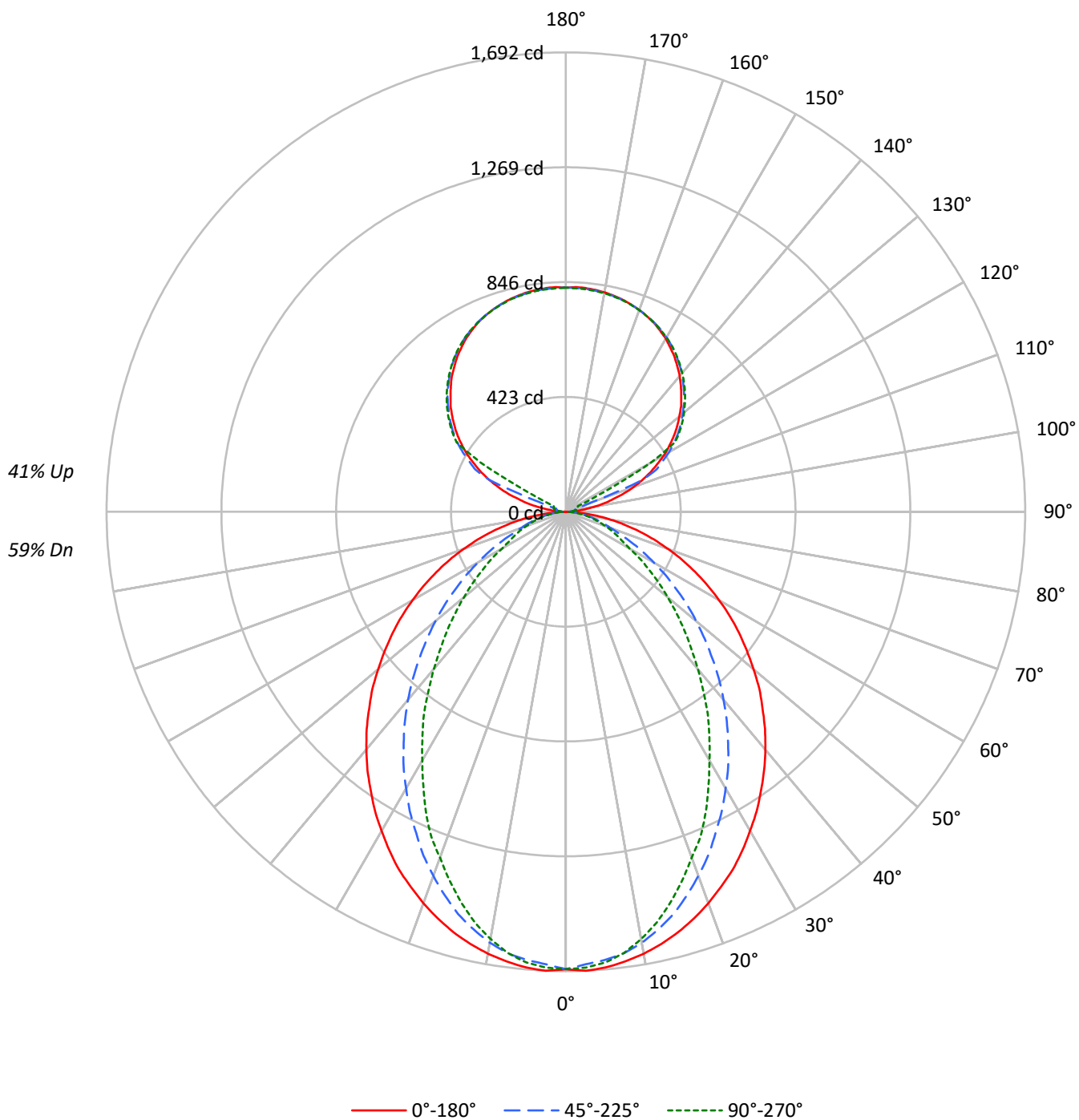
Lumens per Lamp: N/A
Luminaire Lumens: 5886.4 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 68.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P916647

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US930-RLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P916647

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US930-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°	1970	1970	1970
5°	1971	1937	1950
10°	1951	1898	1885
15°	1923	1833	1787
20°	1886	1746	1666
25°	1848	1648	1549
30°	1798	1547	1401
35°	1749	1439	1271
40°	1699	1328	1122
45°	1641	1204	987
50°	1581	1080	856
55°	1518	947	729
60°	1445	808	599
65°	1361	667	539
70°	1259	536	486
75°	1131	469	440
80°	946	389	379
85°	643	253	280

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1641 cd/sqm

TEST NUMBER: P916647

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US930-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.9	2.7
10°-20°	433.5	7.4
20°-30°	608.6	10.3
30°-40°	663.4	11.3
40°-50°	609.7	10.4
50°-60°	478.8	8.1
60°-70°	311.7	5.3
70°-80°	160.4	2.7
80°-90°	42.4	0.7
90°-100°	27.2	0.5
100°-110°	101.5	1.7
110°-120°	269.1	4.6
120°-130°	446.3	7.6
130°-140°	474.1	8.1
140°-150°	440.6	7.5
150°-160°	354.3	6.0
160°-170°	228.3	3.9
170°-180°	78.6	1.3
0°-30°	1200.0	20.4
0°-40°	1863.4	31.7
0°-60°	2951.9	50.1
0°-90°	3466.4	58.9
90°-120°	397.8	6.8
90°-150°	1758.9	29.9
90°-180°	2420.0	41.1
0°-180°	5886.4	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°	1	7	12	15	16	6
95°	39	19	23	26	26	46
105°	182	200	36	43	45	194
115°	343	354	368	92	49	338
125°	486	493	505	509	511	433
135°	601	610	616	622	621	464
145°	697	696	707	711	708	436
155°	768	762	769	773	768	354
165°	809	805	807	811	807	228
175°	827	823	824	828	822	79
180°	826	826	826	826	826	

TEST NUMBER: P916647

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US930-RLLONL

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°	0.6	7.2	11.9	15.0	16.1
92.5°	15.0	12.6	14.3	15.6	16.1
95°	38.8	19.1	23.2	26.3	25.7
97.5°	69.9	21.0	30.4	32.3	32.9
100°	105.7	23.9	34.1	38.8	40.0
102.5°	145.1	144.0	35.2	41.7	43.6
105°	181.6	199.5	36.4	43.0	45.4
107.5°	224.0	238.9	37.7	44.2	46.6
110°	264.6	277.1	104.5	44.8	47.2



TEST NUMBER: P916647

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US930-RLLONL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	302.9	313.6	303.5	46.0	47.8
115°	343.4	353.6	368.5	92.0	49.0
117.5°	378.7	390.6	400.8	315.4	158.9
120°	418.1	427.1	437.8	445.0	364.4
122.5°	451.5	461.1	473.1	476.6	477.3
125°	485.6	493.3	504.8	508.9	510.7
127.5°	516.7	525.0	534.0	540.0	540.5
130°	545.9	555.5	562.1	568.6	568.1
132.5°	575.8	583.6	590.1	595.5	594.9
135°	600.9	610.5	615.8	621.8	620.6
137.5°	627.1	634.3	640.3	646.3	644.5
140°	652.8	657.6	664.1	669.5	666.6
142.5°	674.4	678.6	686.3	691.0	688.1
145°	697.1	696.4	706.6	710.8	707.8
147.5°	716.7	714.9	725.1	728.1	725.7
150°	735.9	731.7	741.3	744.8	741.8
152.5°	751.9	747.2	756.2	759.8	755.6
155°	767.5	762.2	769.3	772.9	768.2
157.5°	780.1	775.3	780.7	784.9	780.1
160°	790.8	787.3	790.8	794.4	790.2
162.5°	800.4	796.8	799.8	804.0	798.6
165°	808.7	805.2	807.0	811.1	807.0
167.5°	815.3	811.7	813.5	817.7	812.4
170°	820.7	817.1	818.3	822.5	817.1
172.5°	824.3	820.7	821.9	826.1	820.7
175°	827.2	823.0	824.3	828.4	822.5
177.5°	828.4	824.3	824.9	829.1	823.7
180°	825.5	825.5	825.5	825.5	825.5

TEST NUMBER: P916647

CATALOG NUMBER: DFN2DIP-PN3F0-050D030US930-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	10.25	11.16	11.14	12.06	13.20	6.22	7.13	7.10	8.03	9.17
	3H	11.93	12.74	12.83	13.65	14.82	7.41	8.22	8.31	9.13	10.30
	4H	12.54	13.31	13.45	14.22	15.40	7.86	8.63	8.77	9.54	10.72
	6H	12.96	13.67	13.88	14.59	15.78	8.18	8.88	9.10	9.81	10.99
	8H	13.09	13.76	14.02	14.70	15.89	8.27	8.94	9.20	9.88	11.07
	12H	13.15	13.79	14.09	14.72	15.93	8.31	8.95	9.25	9.88	11.09
4H	2H	10.28	11.05	11.20	11.96	13.14	6.82	7.59	7.74	8.50	9.68
	3H	12.11	12.75	13.04	13.69	14.88	8.17	8.81	9.10	9.76	10.95
	4H	12.80	13.38	13.74	14.32	15.54	8.72	9.30	9.66	10.24	11.46
	6H	13.31	13.81	14.27	14.78	16.00	9.14	9.63	10.09	10.60	11.82
	8H	13.49	13.95	14.44	14.91	16.14	9.26	9.73	10.22	10.69	11.92
	12H	13.58	14.00	14.55	14.98	16.21	9.33	9.75	10.30	10.72	11.96
8H	4H	12.77	13.24	13.73	14.20	15.43	9.00	9.47	9.95	10.43	11.66
	6H	13.34	13.72	14.31	14.72	15.95	9.51	9.90	10.49	10.90	12.13
	8H	13.55	13.89	14.54	14.88	16.12	9.70	10.04	10.69	11.03	12.28
	12H	13.69	13.99	14.68	14.97	16.26	9.82	10.12	10.81	11.10	12.39
12H	4H	12.73	13.15	13.70	14.12	15.36	9.01	9.43	9.98	10.40	11.64
	6H	13.31	13.65	14.30	14.64	15.89	9.56	9.90	10.55	10.89	12.14
	8H	13.53	13.83	14.52	14.81	16.11	9.77	10.07	10.76	11.05	12.35