

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: P916578

Luminaire Tested: DFN2DIP-PN2F0-060D040US930-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P916578
REPORT IS A COMBINATION OF REPORTS P899490 AND P896349
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN2F0-060D040US930-RLLFLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

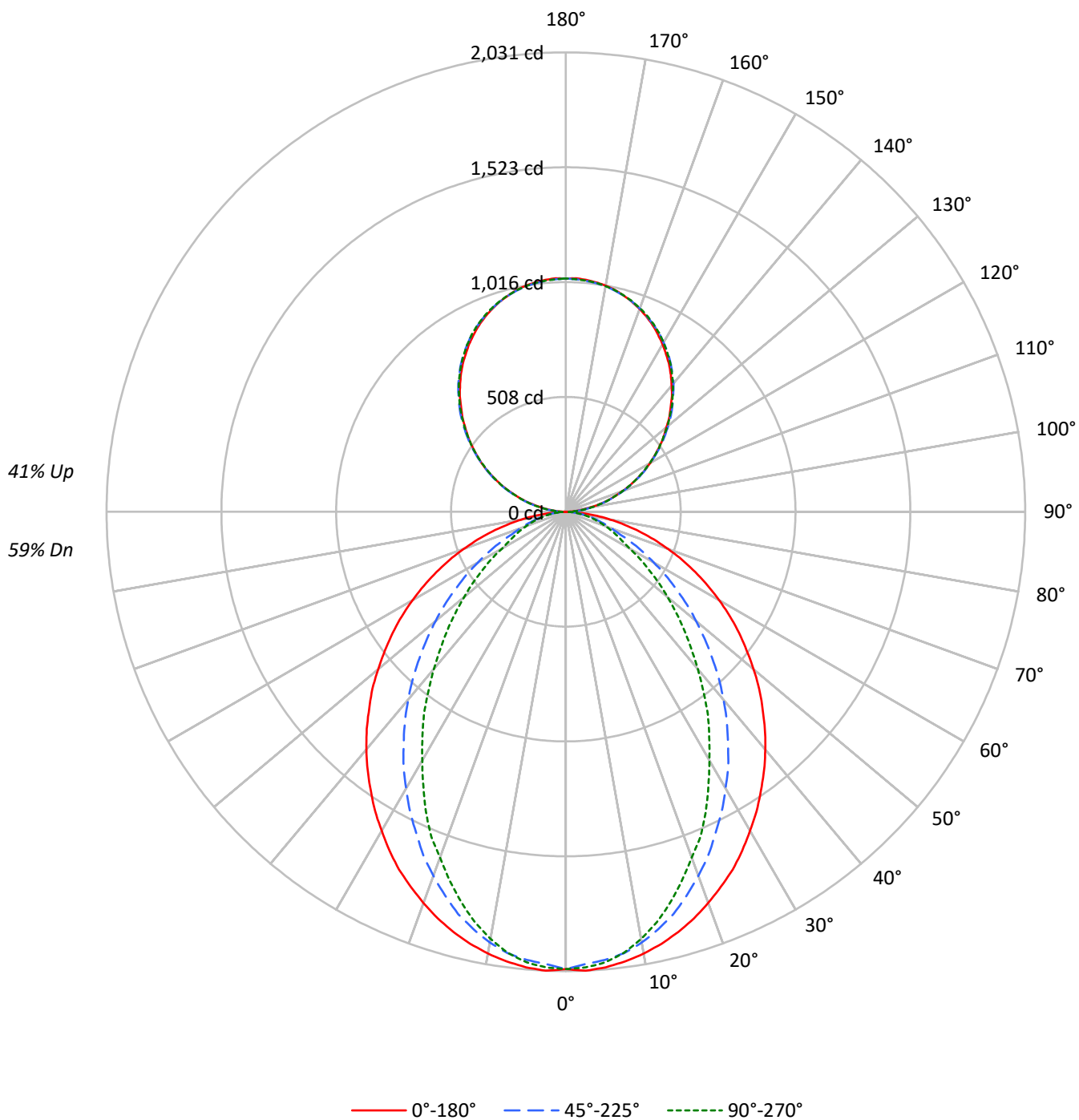
Lumens per Lamp: N/A
Luminaire Lumens: 7044.1 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.17' x L: 2.29' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 95.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P916578

CATALOG NUMBER: DFN2DIP-PN2F0-060D040US930-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P916578

CATALOG NUMBER: DFN2DIP-PN2F0-060D040US930-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	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	56
2	92	85	79	74	86	79	74	70	69	65	62	60	57	55	52	50	48
3	84	75	68	62	78	70	64	59	62	57	53	54	50	47	46	44	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	39	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	24	21
10	50	38	31	26	47	36	29	25	32	27	23	29	24	21	25	22	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4379	4379	4379
5°	4379	4300	4330
10°	4328	4207	4183
15°	4262	4058	3959
20°	4176	3858	3687
25°	4088	3635	3424
30°	3972	3407	3093
35°	3859	3164	2802
40°	3742	2912	2470
45°	3608	2635	2170
50°	3469	2356	1876
55°	3323	2059	1595
60°	3153	1750	1307
65°	2958	1436	1169
70°	2720	1144	1049
75°	2421	990	941
80°	1992	804	797
85°	1302	500	565

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3608 cd/sqm

TEST NUMBER: P916578

CATALOG NUMBER: DFN2DIP-PN2F0-060D040US930-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.5	2.7
10°-20°	520.2	7.4
20°-30°	730.3	10.4
30°-40°	796.1	11.3
40°-50°	731.7	10.4
50°-60°	574.6	8.2
60°-70°	374.0	5.3
70°-80°	192.5	2.7
80°-90°	52.1	0.7
90°-100°	63.8	0.9
100°-110°	202.8	2.9
110°-120°	347.0	4.9
120°-130°	456.4	6.5
130°-140°	512.3	7.3
140°-150°	502.4	7.1
150°-160°	421.4	6.0
160°-170°	279.5	4.0
170°-180°	97.7	1.4
0°-30°	1439.9	20.4
0°-40°	2236.0	31.7
0°-60°	3542.3	50.3
0°-90°	4160.9	59.1
90°-120°	613.6	8.7
90°-150°	2084.7	29.6
90°-180°	2883.0	40.9
0°-180°	7044.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2022	2022	2022	2022	2022	
5°	2022	2013	1989	2005	2000	192
15°	1923	1903	1841	1806	1788	542
25°	1746	1687	1566	1491	1464	803
35°	1504	1411	1250	1134	1094	941
45°	1230	1107	915	785	741	950
55°	935	792	595	485	450	835
65°	631	483	318	256	251	626
75°	337	208	146	134	132	356
85°	79	40	35	35	35	90
90°	1	11	30	29	30	7
95°	45	54	56	56	54	51
105°	187	190	192	193	193	198
115°	348	353	352	351	348	344
125°	506	514	512	509	508	453
135°	655	665	667	666	663	506
145°	795	802	807	808	804	497
155°	910	912	915	919	916	419
165°	989	988	988	995	990	279
175°	1030	1027	1025	1031	1026	98
180°	1031	1031	1031	1031	1031	

TEST NUMBER: P916578

CATALOG NUMBER: DFN2DIP-PN2F0-060D040US930-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2021.8	2021.8	2021.8	2021.8	2021.8
2.5°	2030.9	2021.8	2001.6	2020.0	2016.3
5°	2021.8	2012.6	1988.8	2005.3	1999.8
7.5°	2005.3	1994.4	1968.8	1976.0	1966.8
10°	1983.3	1970.5	1934.1	1928.4	1917.5
12.5°	1956.0	1939.4	1889.9	1879.1	1858.9
15°	1923.0	1902.7	1840.6	1805.9	1787.6
17.5°	1884.6	1855.2	1778.3	1738.1	1708.9
20°	1840.6	1803.9	1712.5	1666.9	1626.5
22.5°	1793.1	1750.9	1644.8	1582.7	1555.3
25°	1745.6	1686.9	1566.2	1491.3	1463.7
27.5°	1688.9	1626.5	1493.0	1407.0	1364.9
30°	1628.5	1558.8	1412.4	1319.2	1269.7
32.5°	1569.9	1485.6	1335.8	1225.9	1180.1
35°	1504.1	1410.7	1249.8	1134.4	1094.0
37.5°	1440.0	1339.2	1169.2	1042.8	997.2
40°	1372.2	1262.6	1084.9	955.0	907.5
42.5°	1302.8	1185.7	1000.9	865.4	819.8
45°	1229.6	1106.8	914.9	784.8	740.9
47.5°	1160.1	1030.2	832.6	702.5	662.3
50°	1083.2	953.3	752.0	625.7	587.4
52.5°	1008.0	870.8	675.1	554.4	519.7
55°	934.9	792.2	594.6	484.9	450.1
57.5°	860.0	713.5	523.3	420.9	391.5
60°	783.1	636.7	448.3	355.1	325.7
62.5°	708.2	561.8	384.2	296.4	281.8
65°	631.3	483.0	318.4	256.2	250.6
67.5°	558.1	409.8	256.2	225.0	219.6
70°	481.2	338.5	212.1	194.0	186.5
72.5°	408.1	272.6	177.4	162.9	159.1
75°	336.6	208.5	146.3	133.5	131.8
77.5°	265.4	148.1	115.3	107.9	104.3
80°	199.3	106.2	87.7	80.6	80.6
82.5°	139.0	71.4	60.3	56.7	56.7
85°	78.6	40.2	34.7	34.7	34.7
87.5°	29.4	14.6	14.6	12.8	12.8
90°	0.9	11.2	30.5	28.6	29.5
92.5°	19.2	26.1	27.1	28.0	28.0
95°	45.4	54.1	55.7	55.7	54.1
97.5°	75.6	83.6	87.1	87.1	87.1
100°	110.4	117.6	120.0	120.0	119.1
102.5°	147.1	152.4	155.8	156.7	155.8
105°	187.2	189.6	191.5	193.1	193.1
107.5°	227.0	230.7	230.7	231.3	227.0
110°	265.5	270.5	270.5	270.5	268.1

TEST NUMBER: P916578

CATALOG NUMBER: DFN2DIP-PN2F0-060D040US930-RLFL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	307.2	312.5	311.5	309.1	307.2
115°	348.2	353.3	351.6	350.7	348.2
117.5°	389.0	395.8	391.5	389.0	386.5
120°	430.1	436.8	430.1	430.1	427.2
122.5°	467.3	476.1	471.7	469.2	467.3
125°	506.5	514.3	511.8	509.0	508.1
127.5°	544.8	554.4	551.0	547.2	544.8
130°	580.5	591.7	590.2	588.3	584.9
132.5°	620.6	629.3	630.0	625.6	623.1
135°	655.2	664.8	666.7	665.7	663.2
137.5°	693.7	701.5	703.0	702.4	698.7
140°	727.6	735.4	739.7	739.7	736.3
142.5°	762.5	770.2	772.7	773.6	770.2
145°	795.4	801.6	806.6	807.6	804.1
147.5°	824.9	832.7	836.4	838.0	834.5
150°	855.4	860.7	864.1	866.9	864.1
152.5°	882.5	887.7	892.1	895.5	892.1
155°	909.5	912.0	914.8	919.2	916.3
157.5°	932.9	934.7	936.2	942.5	938.1
160°	953.7	955.5	956.4	961.7	958.0
162.5°	972.9	972.9	973.9	979.7	975.4
165°	989.4	988.5	988.5	994.7	990.3
167.5°	1004.4	1001.5	1001.5	1007.8	1003.4
170°	1015.5	1013.0	1012.1	1018.3	1013.0
172.5°	1023.3	1020.8	1019.9	1026.1	1020.8
175°	1029.6	1027.0	1025.2	1031.4	1026.1
177.5°	1033.0	1030.5	1028.6	1033.9	1028.6
180°	1031.4	1031.4	1031.4	1031.4	1031.4



TEST NUMBER: P916578

CATALOG NUMBER: DFN2DIP-PN2F0-060D040US930-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	12.97	13.88	13.85	14.77	15.91	8.94	9.85	9.82	10.74	11.88
	3H	14.63	15.44	15.53	16.35	17.52	10.11	10.93	11.01	11.84	13.00
	4H	15.23	16.00	16.14	16.91	18.08	10.56	11.32	11.47	12.24	13.41
	6H	15.64	16.35	16.56	17.27	18.45	10.87	11.57	11.79	12.49	13.68
	8H	15.76	16.43	16.69	17.37	18.55	10.95	11.62	11.88	12.56	13.75
	12H	15.81	16.45	16.75	17.38	18.59	10.99	11.63	11.92	12.56	13.77
4H	2H	12.99	13.76	13.91	14.67	15.85	9.53	10.30	10.45	11.21	12.39
	3H	14.80	15.44	15.73	16.39	17.57	10.87	11.51	11.79	12.45	13.64
	4H	15.48	16.06	16.42	17.00	18.22	11.40	11.99	12.34	12.92	14.14
	6H	15.98	16.48	16.93	17.45	18.66	11.81	12.31	12.76	13.27	14.49
	8H	16.15	16.62	17.10	17.57	18.80	11.93	12.40	12.88	13.35	14.58
	12H	16.24	16.66	17.21	17.63	18.86	11.99	12.41	12.96	13.38	14.62
8H	4H	15.45	15.92	16.40	16.88	18.10	11.68	12.14	12.63	13.10	14.33
	6H	16.00	16.39	16.98	17.38	18.61	12.18	12.56	13.15	13.56	14.79
	8H	16.20	16.54	17.19	17.53	18.78	12.35	12.70	13.34	13.68	14.93
	12H	16.33	16.63	17.32	17.61	18.90	12.46	12.76	13.45	13.74	15.04
12H	4H	15.41	15.83	16.38	16.80	18.04	11.68	12.10	12.65	13.08	14.31
	6H	15.97	16.31	16.96	17.30	18.55	12.22	12.56	13.21	13.55	14.79
	8H	16.18	16.48	17.17	17.46	18.76	12.42	12.72	13.41	13.70	14.99