

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: P916623

Luminaire Tested: DFN2DIP-PN3F0-040D040US930-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P916623
REPORT IS A COMBINATION OF REPORTS P901048 AND P897955
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-040D040US930-RLLONL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

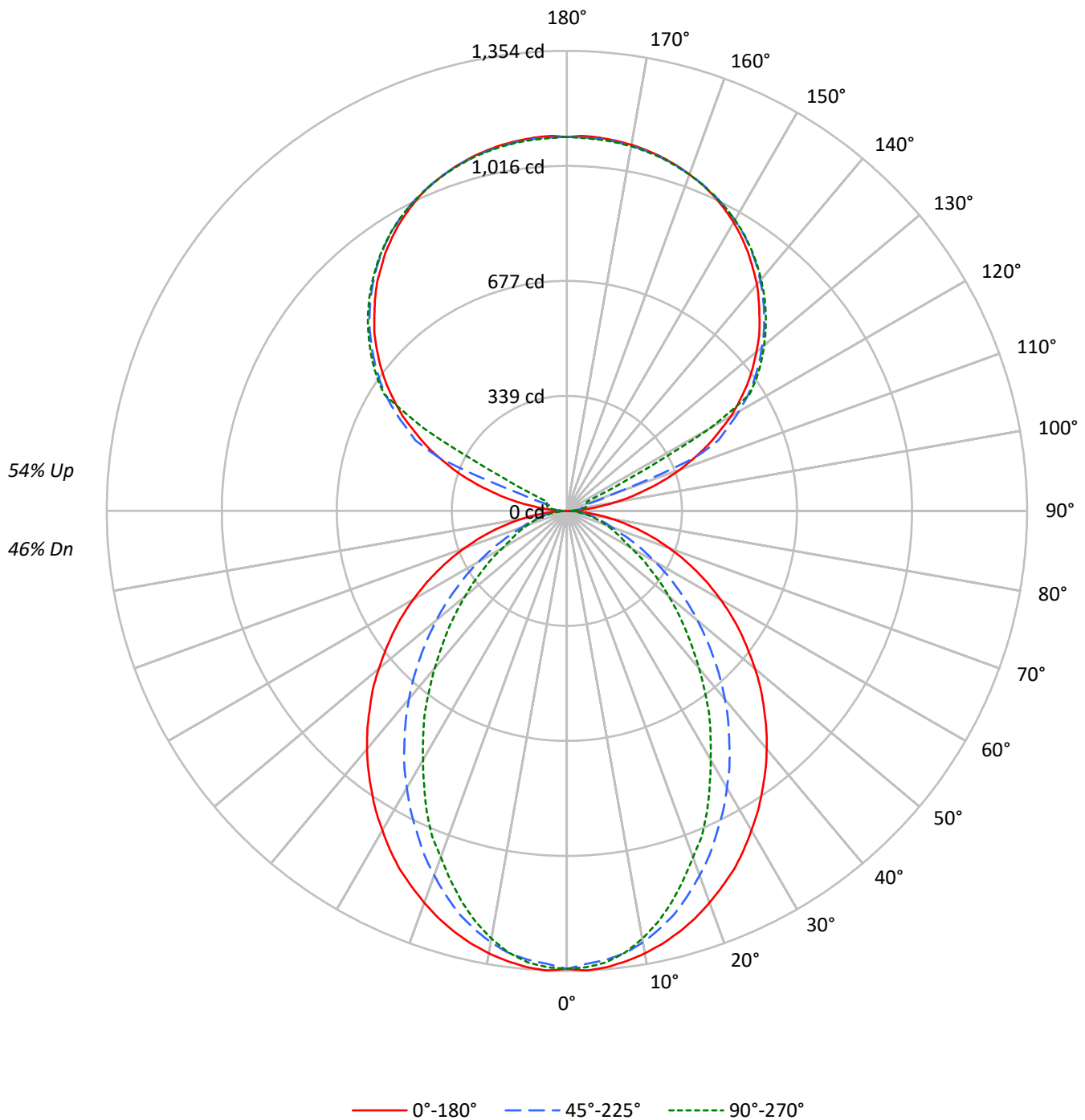
Lumens per Lamp: N/A
Luminaire Lumens: 6000.6 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 64.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P916623

CATALOG NUMBER: DFN2DIP-PN3F0-040D040US930-RLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P916623

CATALOG NUMBER: DFN2DIP-PN3F0-040D040US930-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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53
1	97	93	90	86	89	86	83	80	72	70	68	59	58	56	47	46	45
2	89	82	76	71	82	76	70	66	63	60	57	52	50	48	42	40	39
3	81	72	65	60	75	67	61	56	56	52	48	47	43	41	38	35	34
4	75	64	57	51	68	60	53	48	50	45	41	42	38	35	34	31	29
5	69	58	50	44	63	53	46	41	45	40	36	38	34	31	31	28	26
6	63	52	44	38	58	48	41	36	41	36	32	34	30	27	28	25	23
7	59	47	39	34	54	44	37	32	37	32	28	31	27	24	26	23	21
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19
9	51	39	32	27	47	36	30	25	31	26	22	27	23	20	22	19	17
10	48	36	29	24	44	33	27	23	29	24	20	25	21	18	20	18	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1576	1576	1576
5°	1577	1549	1560
10°	1561	1518	1508
15°	1538	1467	1429
20°	1509	1397	1332
25°	1479	1318	1239
30°	1439	1238	1121
35°	1399	1151	1017
40°	1359	1062	898
45°	1313	963	790
50°	1265	864	685
55°	1215	757	583
60°	1156	646	480
65°	1089	534	431
70°	1007	429	389
75°	905	375	353
80°	757	311	303
85°	514	203	224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1313 cd/sqm

TEST NUMBER: P916623

CATALOG NUMBER: DFN2DIP-PN3F0-040D040US930-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.3	2.1
10°-20°	346.8	5.8
20°-30°	486.9	8.1
30°-40°	530.7	8.8
40°-50°	487.8	8.1
50°-60°	383.1	6.4
60°-70°	249.3	4.2
70°-80°	128.4	2.1
80°-90°	34.7	0.6
90°-100°	36.3	0.6
100°-110°	135.3	2.3
110°-120°	358.8	6.0
120°-130°	595.1	9.9
130°-140°	632.1	10.5
140°-150°	587.5	9.8
150°-160°	472.3	7.9
160°-170°	304.4	5.1
170°-180°	104.8	1.7
0°-30°	960.0	16.0
0°-40°	1490.7	24.8
0°-60°	2361.5	39.4
0°-90°	2774.0	46.2
90°-120°	530.4	8.8
90°-150°	2345.2	39.1
90°-180°	3227.0	53.8
0°-180°	6000.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1348	1348	1348	1348	1348	
5°	1348	1342	1326	1337	1333	128
15°	1282	1268	1227	1204	1192	361
25°	1164	1125	1044	994	976	535
35°	1003	940	833	756	729	628
45°	820	738	610	523	494	633
55°	623	528	396	323	300	557
65°	421	322	212	171	167	417
75°	224	139	98	89	88	237
85°	52	27	23	23	23	60
90°	1	10	16	20	21	6
95°	52	25	31	35	34	61
105°	242	266	49	57	60	259
115°	458	471	491	123	65	451
125°	647	658	673	679	681	577
135°	801	814	821	829	828	619
145°	929	929	942	948	944	581
155°	1023	1016	1026	1030	1024	472
165°	1078	1074	1076	1082	1076	305
175°	1103	1097	1099	1105	1097	105
180°	1101	1101	1101	1101	1101	

TEST NUMBER: P916623

CATALOG NUMBER: DFN2DIP-PN3F0-040D040US930-RLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1347.9	1347.9	1347.9	1347.9	1347.9
2.5°	1354.0	1347.9	1334.4	1346.7	1344.2
5°	1347.9	1341.7	1325.8	1336.8	1333.3
7.5°	1336.8	1329.6	1312.5	1317.3	1311.2
10°	1322.3	1313.7	1289.3	1285.6	1278.4
12.5°	1304.0	1293.0	1260.0	1252.7	1239.3
15°	1282.0	1268.5	1227.1	1204.0	1191.8
17.5°	1256.4	1236.8	1185.5	1158.8	1139.2
20°	1227.1	1202.6	1141.7	1111.3	1084.3
22.5°	1195.4	1167.3	1096.5	1055.1	1036.9
25°	1163.7	1124.6	1044.1	994.2	975.7
27.5°	1125.9	1084.3	995.3	938.0	909.9
30°	1085.7	1039.2	941.6	879.5	846.5
32.5°	1046.6	990.4	890.5	817.3	786.7
35°	1002.7	940.4	833.2	756.3	729.4
37.5°	960.0	892.8	779.4	695.2	664.8
40°	914.8	841.7	723.3	636.7	605.0
42.5°	868.5	790.4	667.2	576.9	546.5
45°	819.7	737.9	609.9	523.3	494.0
47.5°	773.4	686.8	555.1	468.4	441.6
50°	722.1	635.5	501.3	417.1	391.6
52.5°	672.1	580.6	450.1	369.6	346.4
55°	623.3	528.2	396.4	323.3	300.1
57.5°	573.3	475.7	348.9	280.5	261.1
60°	522.0	424.4	298.8	236.7	217.2
62.5°	472.1	374.5	256.1	197.6	187.9
65°	420.9	322.0	212.2	170.8	167.1
67.5°	372.1	273.2	170.8	150.0	146.3
70°	320.8	225.7	141.5	129.3	124.3
72.5°	272.1	181.7	118.3	108.6	106.2
75°	224.4	139.0	97.6	89.0	87.9
77.5°	176.9	98.7	76.9	72.0	69.5
80°	132.9	70.8	58.5	53.7	53.7
82.5°	92.7	47.6	40.3	37.7	37.7
85°	52.4	26.8	23.2	23.2	23.2
87.5°	19.6	9.7	9.7	8.6	8.6
90°	0.7	9.5	15.9	20.0	21.4
92.5°	20.0	16.7	19.1	20.7	21.4
95°	51.7	25.4	31.0	35.1	34.2
97.5°	93.2	27.9	40.6	43.0	43.8
100°	141.0	31.9	45.4	51.7	53.3
102.5°	193.5	192.0	47.0	55.7	58.1
105°	242.1	266.0	48.6	57.3	60.5
107.5°	298.6	318.5	50.2	58.9	62.1
110°	352.9	369.5	139.4	59.8	62.9



TEST NUMBER: P916623

CATALOG NUMBER: DFN2DIP-PN3F0-040D040US930-RLLONL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	403.8	418.1	404.6	61.3	63.8
115°	457.9	471.4	491.4	122.6	65.4
117.5°	504.9	520.8	534.4	420.4	211.8
120°	557.5	569.4	583.8	593.4	485.8
122.5°	602.0	614.8	630.8	635.5	636.3
125°	647.4	657.9	672.9	678.6	680.9
127.5°	688.8	700.0	712.0	720.0	720.7
130°	727.9	740.7	749.3	758.1	757.4
132.5°	767.7	778.1	786.8	794.0	793.3
135°	801.2	814.0	821.1	829.1	827.5
137.5°	836.2	845.7	853.8	861.7	859.3
140°	870.4	876.9	885.6	892.8	888.8
142.5°	899.2	904.7	915.1	921.4	917.5
145°	929.4	928.6	942.1	947.7	943.7
147.5°	955.6	953.2	966.8	970.8	967.7
150°	981.1	975.6	988.4	993.1	989.1
152.5°	1002.7	996.3	1008.2	1013.0	1007.5
155°	1023.4	1016.3	1025.8	1030.5	1024.2
157.5°	1040.1	1033.7	1041.0	1046.5	1040.1
160°	1054.4	1049.6	1054.4	1059.2	1053.6
162.5°	1067.1	1062.4	1066.4	1072.0	1064.8
165°	1078.3	1073.6	1075.9	1081.5	1075.9
167.5°	1087.1	1082.2	1084.8	1090.3	1083.1
170°	1094.3	1089.5	1091.0	1096.7	1089.5
172.5°	1099.0	1094.3	1095.9	1101.5	1094.3
175°	1102.9	1097.4	1099.0	1104.6	1096.7
177.5°	1104.6	1099.0	1099.8	1105.5	1098.3
180°	1100.7	1100.7	1100.7	1100.7	1100.7

TEST NUMBER: P916623

CATALOG NUMBER: DFN2DIP-PN3F0-040D040US930-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	8.32	9.12	9.32	10.13	11.45	4.29	5.09	5.28	6.09	7.42
	3H	9.99	10.71	11.00	11.72	13.07	5.47	6.19	6.48	7.20	8.54
	4H	10.60	11.27	11.62	12.29	13.64	5.92	6.59	6.93	7.61	8.96
	6H	11.01	11.63	12.04	12.65	14.02	6.23	6.85	7.26	7.87	9.24
	8H	11.14	11.73	12.17	12.76	14.13	6.32	6.91	7.35	7.94	9.31
	12H	11.19	11.76	12.23	12.79	14.17	6.36	6.92	7.39	7.95	9.33
4H	2H	8.34	9.01	9.36	10.03	11.38	4.88	5.56	5.90	6.57	7.93
	3H	10.16	10.72	11.19	11.76	13.13	6.22	6.78	7.25	7.82	9.19
	4H	10.84	11.36	11.88	12.39	13.78	6.76	7.28	7.80	8.31	9.70
	6H	11.35	11.79	12.40	12.85	14.24	7.17	7.61	8.22	8.67	10.06
	8H	11.52	11.93	12.57	12.99	14.39	7.30	7.71	8.35	8.76	10.16
	12H	11.61	11.98	12.68	13.05	14.46	7.36	7.73	8.43	8.79	10.20
8H	4H	10.81	11.22	11.86	12.27	13.67	7.04	7.45	8.09	8.50	9.90
	6H	11.37	11.71	12.44	12.80	14.20	7.54	7.88	8.62	8.98	10.38
	8H	11.58	11.88	12.66	12.95	14.37	7.73	8.03	8.81	9.11	10.53
	12H	11.71	11.97	12.80	13.05	14.51	7.84	8.11	8.93	9.18	10.64
12H	4H	10.76	11.13	11.83	12.20	13.60	7.04	7.41	8.11	8.48	9.88
	6H	11.34	11.64	12.42	12.72	14.14	7.59	7.89	8.67	8.97	10.39
	8H	11.56	11.82	12.64	12.89	14.35	7.80	8.06	8.88	9.13	10.59