

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: P916598

Luminaire Tested: DFN2DIP-PN3F0-030D050US930-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P916598
REPORT IS A COMBINATION OF REPORTS P899540 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-030D050US930-RLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

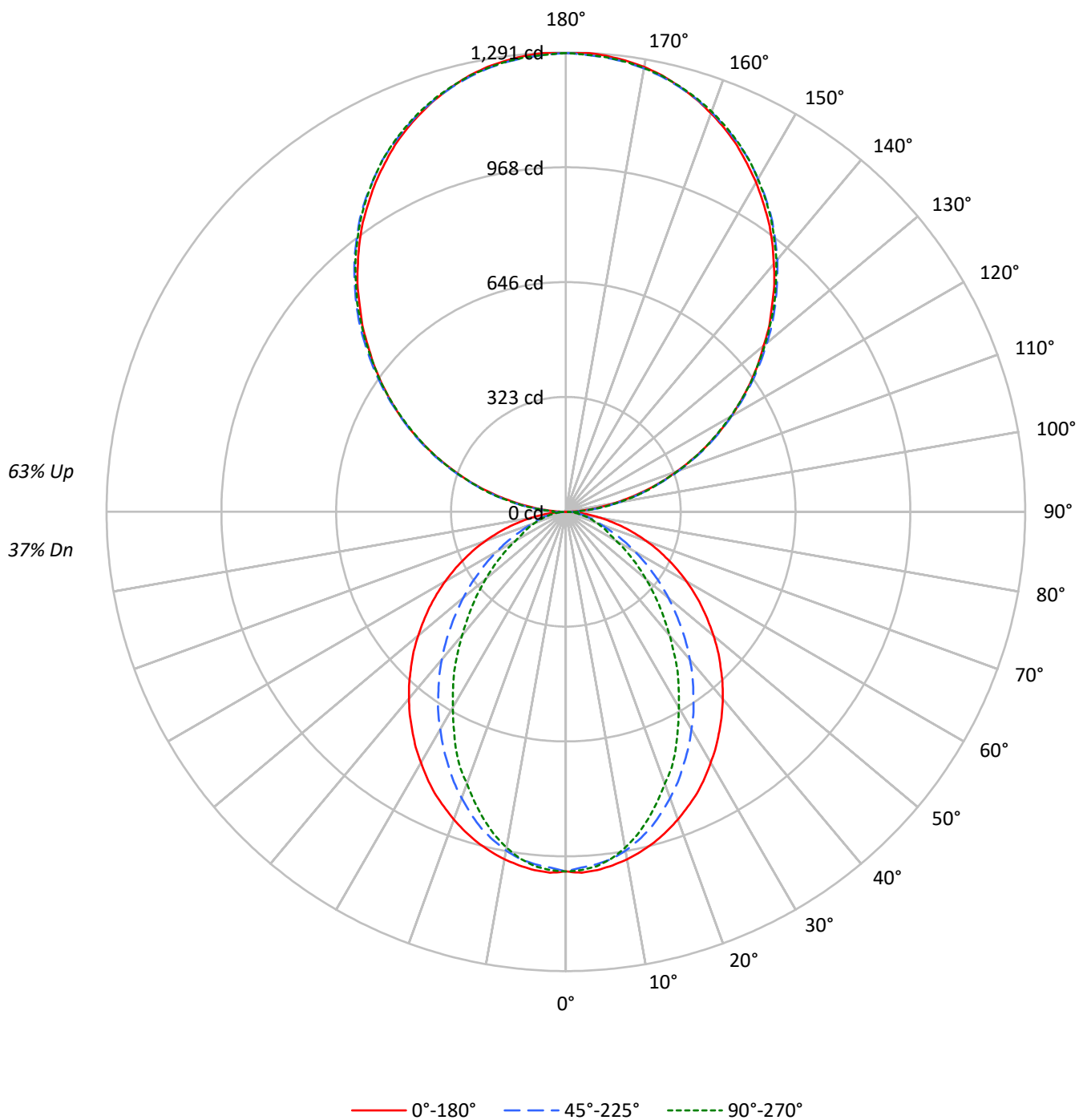
Lumens per Lamp: N/A
Luminaire Lumens: 5686.7 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 61.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P916598

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US930-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P916598

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US930-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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44
1	95	91	87	84	86	83	80	77	67	65	63	53	51	50	39	38	38
2	87	80	74	69	79	73	68	63	59	56	53	47	44	42	35	34	32
3	79	70	64	58	72	64	58	53	52	48	45	41	39	36	31	29	28
4	73	63	55	49	66	57	51	46	47	42	38	37	34	31	28	26	24
5	67	56	48	42	60	51	44	39	42	37	33	33	30	27	26	23	21
6	62	50	42	37	56	46	39	34	38	33	29	30	27	24	23	21	19
7	57	45	38	32	52	41	35	30	34	29	26	28	24	21	21	19	17
8	53	41	34	29	48	38	31	27	31	26	23	25	22	19	20	17	15
9	49	38	30	25	45	34	28	24	29	24	20	23	20	17	18	16	14
10	46	34	27	23	42	32	25	21	26	22	18	22	18	16	17	14	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1182	1182	1182
5°	1183	1162	1170
10°	1170	1138	1131
15°	1154	1100	1072
20°	1132	1047	999
25°	1109	989	929
30°	1079	928	841
35°	1050	863	763
40°	1020	797	673
45°	985	723	592
50°	949	648	513
55°	911	568	438
60°	867	485	360
65°	817	400	323
70°	756	321	292
75°	679	282	264
80°	568	234	228
85°	386	152	168

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 1276 cd/sqm

TEST NUMBER: P916598

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US930-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	1.7
10°-20°	260.1	4.6
20°-30°	365.1	6.4
30°-40°	398.0	7.0
40°-50°	365.8	6.4
50°-60°	287.3	5.1
60°-70°	187.0	3.3
70°-80°	96.3	1.7
80°-90°	28.3	0.5
90°-100°	79.8	1.4
100°-110°	253.5	4.5
110°-120°	433.8	7.6
120°-130°	570.5	10.0
130°-140°	640.4	11.3
140°-150°	627.9	11.0
150°-160°	526.8	9.3
160°-170°	349.3	6.1
170°-180°	122.1	2.1
0°-30°	720.0	12.7
0°-40°	1118.0	19.7
0°-60°	1771.2	31.1
0°-90°	2082.7	36.6
90°-120°	767.0	13.5
90°-150°	2605.8	45.8
90°-180°	3604.0	63.4
0°-180°	5686.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1011	1006	994	1003	1000	96
15°	962	951	920	903	894	271
25°	873	843	783	746	732	401
35°	752	705	625	567	547	471
45°	615	553	458	392	370	475
55°	467	396	297	242	225	418
65°	316	242	159	128	125	313
75°	168	104	73	67	66	178
85°	39	20	17	17	17	45
90°	1	14	38	36	37	6
95°	57	68	70	70	68	63
105°	234	237	240	241	241	247
115°	435	442	440	438	435	431
125°	633	643	640	636	635	566
135°	819	831	833	832	829	633
145°	994	1002	1008	1009	1005	621
155°	1137	1140	1144	1149	1145	523
165°	1237	1236	1236	1243	1238	349
175°	1287	1284	1282	1289	1283	122
180°	1289	1289	1289	1289	1289	

TEST NUMBER: P916598

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US930-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.9	1010.9	1010.9	1010.9	1010.9
2.5°	1015.5	1010.9	1000.8	1010.0	1008.2
5°	1010.9	1006.3	994.4	1002.7	999.9
7.5°	1002.7	997.2	984.4	988.0	983.4
10°	991.6	985.3	967.0	964.2	958.8
12.5°	978.0	969.7	945.0	939.5	929.4
15°	961.5	951.4	920.3	902.9	893.8
17.5°	942.2	927.6	889.2	869.1	854.4
20°	920.3	902.0	856.2	833.5	813.3
22.5°	896.6	875.5	822.4	791.3	777.6
25°	872.8	843.4	783.1	745.6	731.8
27.5°	844.4	813.3	746.5	703.5	682.4
30°	814.2	779.4	706.2	659.7	634.9
32.5°	784.9	742.8	667.9	612.9	590.0
35°	752.0	705.3	624.8	567.2	547.1
37.5°	720.0	669.6	584.6	521.4	498.6
40°	686.2	631.3	542.5	477.5	453.8
42.5°	651.3	592.9	500.4	432.7	409.9
45°	614.8	553.4	457.5	392.4	370.5
47.5°	580.0	515.1	416.3	351.2	331.2
50°	541.6	476.6	376.0	312.8	293.7
52.5°	504.0	435.5	337.6	277.2	259.8
55°	467.4	396.1	297.3	242.5	225.1
57.5°	430.0	356.8	261.7	210.4	195.8
60°	391.5	318.4	224.1	177.5	162.9
62.5°	354.1	280.9	192.1	148.2	141.0
65°	315.6	241.5	159.1	128.1	125.3
67.5°	279.1	204.9	128.1	112.5	109.7
70°	240.6	169.3	106.1	96.9	93.3
72.5°	204.0	136.2	88.7	81.4	79.6
75°	168.3	104.3	73.2	66.8	65.9
77.5°	132.6	74.0	57.6	54.0	52.1
80°	99.7	53.1	43.9	40.3	40.3
82.5°	69.5	35.7	30.2	28.4	28.4
85°	39.3	20.1	17.4	17.4	17.4
87.5°	14.7	7.3	7.3	6.4	6.4
90°	1.1	14.0	38.1	35.8	36.9
92.5°	24.1	32.6	33.8	35.0	35.0
95°	56.7	67.7	69.5	69.5	67.7
97.5°	94.4	104.5	108.8	108.8	108.8
100°	137.9	146.9	150.0	150.0	148.9
102.5°	183.8	190.5	194.7	195.9	194.7
105°	234.0	237.1	239.5	241.3	241.3
107.5°	283.7	288.4	288.4	289.2	283.7
110°	331.9	338.2	338.2	338.2	335.0

TEST NUMBER: P916598

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US930-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	384.0	390.6	389.5	386.4	384.0
115°	435.3	441.6	439.6	438.5	435.3
117.5°	486.2	494.8	489.3	486.2	483.1
120°	537.5	546.1	537.5	537.5	534.0
122.5°	584.2	595.1	589.6	586.5	584.2
125°	633.2	642.9	639.8	636.3	635.1
127.5°	680.9	693.0	688.8	684.0	680.9
130°	725.7	739.6	737.7	735.4	731.1
132.5°	775.8	786.7	787.5	782.0	778.9
135°	819.0	831.0	833.3	832.2	829.1
137.5°	867.2	876.9	878.8	878.0	873.3
140°	909.5	919.2	924.6	924.6	920.4
142.5°	953.0	962.8	965.9	967.0	962.8
145°	994.3	1002.0	1008.2	1009.4	1005.1
147.5°	1031.2	1040.9	1045.5	1047.5	1043.2
150°	1069.3	1075.9	1080.1	1083.6	1080.1
152.5°	1103.1	1109.7	1115.1	1119.4	1115.1
155°	1136.9	1140.0	1143.5	1148.9	1145.4
157.5°	1166.0	1168.3	1170.3	1178.1	1172.6
160°	1192.0	1194.4	1195.6	1202.2	1197.5
162.5°	1216.2	1216.2	1217.3	1224.7	1219.3
165°	1236.8	1235.6	1235.6	1243.4	1237.9
167.5°	1255.4	1251.9	1251.9	1259.7	1254.3
170°	1269.4	1266.3	1265.2	1272.9	1266.3
172.5°	1279.1	1276.0	1274.9	1282.6	1276.0
175°	1286.9	1283.8	1281.5	1289.2	1282.6
177.5°	1291.2	1288.1	1285.7	1292.3	1285.7
180°	1289.2	1289.2	1289.2	1289.2	1289.2

TEST NUMBER: P916598

CATALOG NUMBER: DFN2DIP-PN3F0-030D050US930-RLFL

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	6.29	7.02	7.36	8.09	9.54	2.26	2.99	3.33	4.06	5.51
	3H	7.96	8.61	9.04	9.69	11.16	3.43	4.09	4.51	5.16	6.63
	4H	8.56	9.18	9.65	10.25	11.73	3.87	4.49	4.96	5.57	7.05
	6H	8.97	9.54	10.07	10.62	12.11	4.18	4.76	5.28	5.84	7.33
	8H	9.09	9.63	10.19	10.73	12.21	4.27	4.81	5.37	5.91	7.39
	12H	9.14	9.66	10.25	10.75	12.26	4.31	4.82	5.41	5.91	7.42
4H	2H	6.30	6.92	7.39	7.99	9.47	2.84	3.46	3.93	4.54	6.01
	3H	8.11	8.63	9.21	9.73	11.22	4.17	4.69	5.27	5.79	7.28
	4H	8.79	9.27	9.90	10.36	11.87	4.71	5.18	5.82	6.28	7.79
	6H	9.30	9.70	10.41	10.82	12.32	5.12	5.52	6.23	6.64	8.15
	8H	9.47	9.85	10.58	10.96	12.47	5.24	5.62	6.36	6.73	8.25
	12H	9.55	9.90	10.69	11.02	12.54	5.30	5.64	6.43	6.76	8.29
8H	4H	8.75	9.13	9.87	10.24	11.76	4.98	5.36	6.09	6.47	7.99
	6H	9.31	9.62	10.44	10.77	12.29	5.49	5.80	6.62	6.95	8.47
	8H	9.52	9.79	10.66	10.93	12.46	5.67	5.95	6.82	7.08	8.62
	12H	9.65	9.89	10.80	11.02	12.59	5.78	6.02	6.93	7.15	8.73
12H	4H	8.70	9.04	9.83	10.16	11.69	4.98	5.32	6.11	6.44	7.97
	6H	9.28	9.56	10.42	10.69	12.22	5.53	5.81	6.68	6.94	8.48
	8H	9.49	9.73	10.64	10.86	12.44	5.74	5.98	6.88	7.10	8.68