

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: P916602

Luminaire Tested: DFN2DIP-PN3F0-030D060US930-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P916602
REPORT IS A COMBINATION OF REPORTS P899554 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-030D060US930-RLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

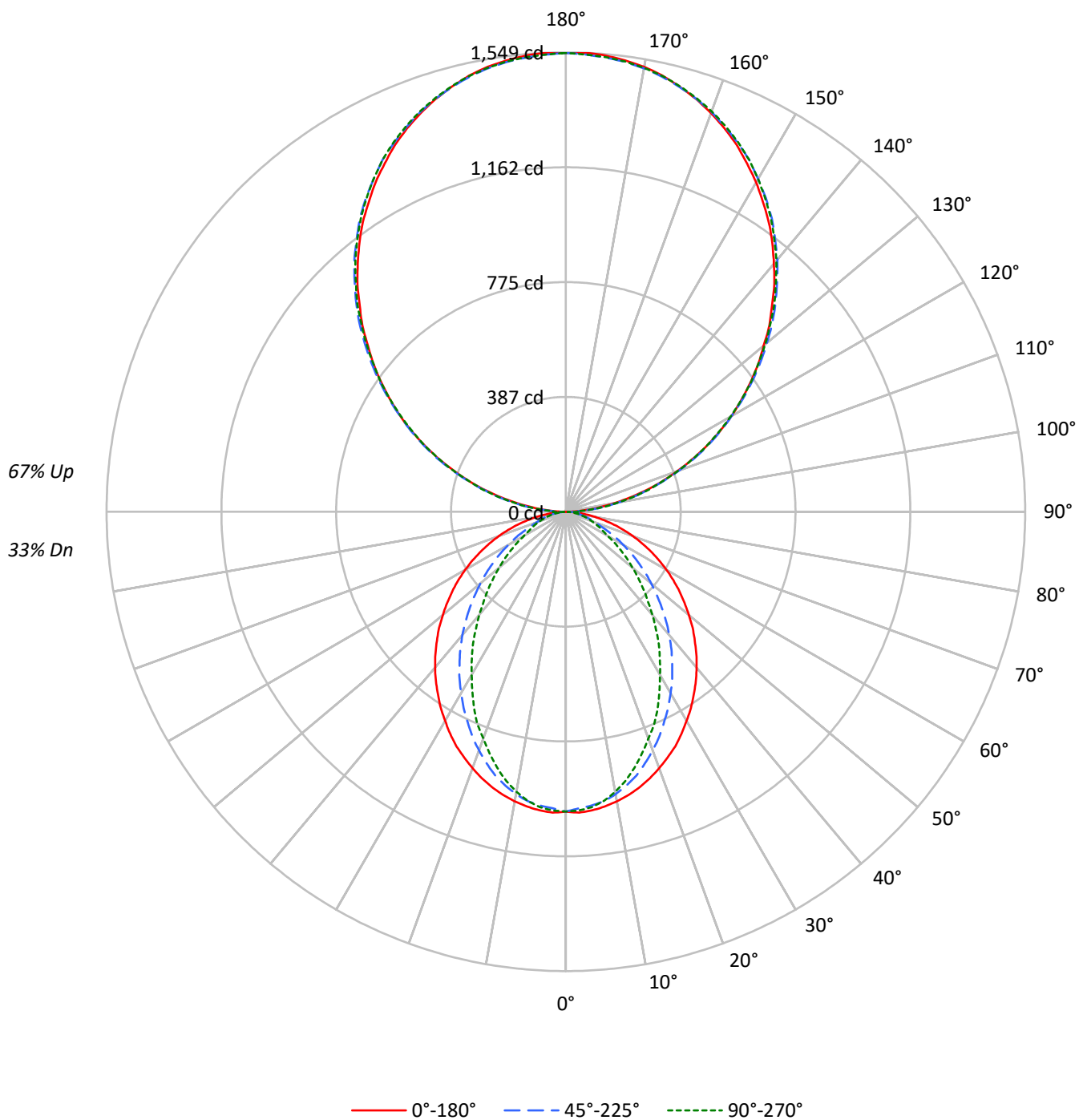
Lumens per Lamp: N/A
Luminaire Lumens: 6408.3 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 69.9
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: P916602

CATALOG NUMBER: DFN2DIP-PN3F0-030D060US930-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P916602

CATALOG NUMBER: DFN2DIP-PN3F0-030D060US930-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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40
1	94	90	86	83	85	81	78	75	65	63	61	50	48	47	36	35	34
2	86	79	73	68	77	71	67	62	57	54	51	44	42	40	32	31	29
3	79	70	63	57	71	63	57	52	51	46	43	39	36	34	29	27	25
4	72	62	54	49	65	56	50	45	45	41	37	35	32	29	26	24	22
5	66	55	47	42	59	50	43	38	40	36	32	32	28	26	23	21	19
6	61	49	42	36	55	45	38	33	36	32	28	29	25	23	21	19	17
7	56	45	37	32	51	41	34	29	33	28	25	26	23	20	19	17	15
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	16	14
9	49	37	30	25	44	34	27	23	28	23	20	22	19	16	17	14	13
10	45	34	27	22	41	31	25	21	25	21	18	20	17	15	15	13	11

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: 1532 cd/sqm

TEST NUMBER: P916602

CATALOG NUMBER: DFN2DIP-PN3F0-030D060US930-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	1.5
10°-20°	260.1	4.1
20°-30°	365.1	5.7
30°-40°	398.0	6.2
40°-50°	365.8	5.7
50°-60°	287.3	4.5
60°-70°	187.0	2.9
70°-80°	96.3	1.5
80°-90°	29.0	0.5
90°-100°	95.7	1.5
100°-110°	304.2	4.7
110°-120°	520.6	8.1
120°-130°	684.6	10.7
130°-140°	768.4	12.0
140°-150°	753.5	11.8
150°-160°	632.1	9.9
160°-170°	419.2	6.5
170°-180°	146.5	2.3
0°-30°	720.0	11.2
0°-40°	1118.0	17.4
0°-60°	1771.2	27.6
0°-90°	2083.4	32.5
90°-120°	920.5	14.4
90°-150°	3127.0	48.8
90°-180°	4325.0	67.5
0°-180°	6408.3	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	17	46	43	44	6
95°	68	81	84	84	81	76
105°	281	284	287	290	290	296
115°	522	530	528	526	522	517
125°	760	771	768	764	762	679
135°	983	997	1000	999	995	760
145°	1193	1202	1210	1211	1206	745
155°	1364	1368	1372	1379	1374	628
165°	1484	1483	1483	1492	1486	419
175°	1544	1541	1538	1547	1539	147
180°	1547	1547	1547	1547	1547	

TEST NUMBER: P916602

CATALOG NUMBER: DFN2DIP-PN3F0-030D060US930-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°	1.4	16.8	45.7	42.9	44.3
92.5°	28.9	39.2	40.6	42.0	42.0
95°	68.1	81.1	83.5	83.5	81.1
97.5°	113.3	125.5	130.6	130.6	130.6
100°	165.6	176.3	180.0	180.0	178.6
102.5°	220.6	228.5	233.7	235.1	233.7
105°	280.8	284.5	287.3	289.7	289.7
107.5°	340.5	346.1	346.1	347.0	340.5
110°	398.4	405.8	405.8	405.8	402.0

TEST NUMBER: P916602

CATALOG NUMBER: DFN2DIP-PN3F0-030D060US930-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	460.8	468.7	467.3	463.6	460.8
115°	522.4	529.9	527.5	526.1	522.4
117.5°	583.5	593.8	587.2	583.5	579.8
120°	645.1	655.3	645.1	645.1	640.8
122.5°	701.0	714.0	707.5	703.8	701.0
125°	759.8	771.4	767.7	763.5	762.1
127.5°	817.2	831.6	826.5	820.9	817.2
130°	870.8	887.6	885.3	882.5	877.3
132.5°	931.0	944.0	944.9	938.4	934.7
135°	982.8	997.2	1000.0	998.6	994.8
137.5°	1040.6	1052.2	1054.6	1053.6	1048.1
140°	1091.4	1103.1	1109.6	1109.6	1104.5
142.5°	1143.6	1155.3	1159.0	1160.4	1155.3
145°	1193.1	1202.4	1209.9	1211.3	1206.2
147.5°	1237.4	1249.0	1254.7	1256.9	1251.8
150°	1283.1	1291.0	1296.2	1300.3	1296.2
152.5°	1323.6	1331.6	1338.1	1343.3	1338.1
155°	1364.2	1368.0	1372.1	1378.8	1374.5
157.5°	1399.2	1402.1	1404.4	1413.7	1407.2
160°	1430.5	1433.3	1434.7	1442.6	1437.0
162.5°	1459.4	1459.4	1460.8	1469.7	1463.1
165°	1484.1	1482.7	1482.7	1492.1	1485.6
167.5°	1506.5	1502.4	1502.4	1511.6	1505.1
170°	1523.3	1519.6	1518.2	1527.5	1519.6
172.5°	1535.0	1531.2	1529.8	1539.1	1531.2
175°	1544.3	1540.6	1537.7	1547.1	1539.1
177.5°	1549.4	1545.7	1542.9	1550.8	1542.9
180°	1547.1	1547.1	1547.1	1547.1	1547.1

TEST NUMBER: P916602

CATALOG NUMBER: DFN2DIP-PN3F0-030D060US930-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	5.79	6.49	6.89	7.59	9.09	1.75	2.46	2.85	3.55	5.05
	3H	7.45	8.08	8.56	9.18	10.70	2.93	3.56	4.03	4.66	6.18
	4H	8.05	8.65	9.17	9.75	11.27	3.37	3.96	4.48	5.07	6.59
	6H	8.46	9.01	9.58	10.11	11.65	3.67	4.23	4.80	5.33	6.87
	8H	8.58	9.10	9.71	10.22	11.75	3.76	4.28	4.89	5.40	6.93
	12H	8.63	9.13	9.77	10.24	11.80	3.80	4.29	4.93	5.41	6.96
4H	2H	5.79	6.39	6.91	7.49	9.01	2.33	2.93	3.45	4.03	5.55
	3H	7.60	8.10	8.73	9.23	10.76	3.66	4.16	4.79	5.29	6.82
	4H	8.28	8.74	9.42	9.86	11.42	4.20	4.66	5.33	5.77	7.33
	6H	8.78	9.17	9.92	10.32	11.87	4.60	5.00	5.75	6.14	7.69
	8H	8.95	9.32	10.09	10.45	12.02	4.73	5.09	5.87	6.23	7.79
	12H	9.04	9.37	10.20	10.51	12.08	4.78	5.12	5.94	6.26	7.83
8H	4H	8.24	8.60	9.38	9.74	11.30	4.47	4.83	5.61	5.96	7.53
	6H	8.79	9.09	9.95	10.27	11.83	4.97	5.27	6.13	6.45	8.01
	8H	9.00	9.27	10.17	10.42	12.01	5.16	5.42	6.32	6.58	8.16
	12H	9.13	9.36	10.30	10.52	12.13	5.27	5.50	6.44	6.65	8.27
12H	4H	8.18	8.52	9.34	9.66	11.23	4.46	4.79	5.62	5.94	7.51
	6H	8.77	9.03	9.93	10.18	11.77	5.02	5.28	6.19	6.44	8.02
	8H	8.98	9.21	10.15	10.36	11.98	5.22	5.45	6.39	6.60	8.22

END OF REPORT