

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: P919846

Luminaire Tested: DFN2DIP-SQ2F0-030D050US935-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P919846
REPORT IS A COMBINATION OF REPORTS P899796 AND P896659
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-SQ2F0-030D050US935-RLLFLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

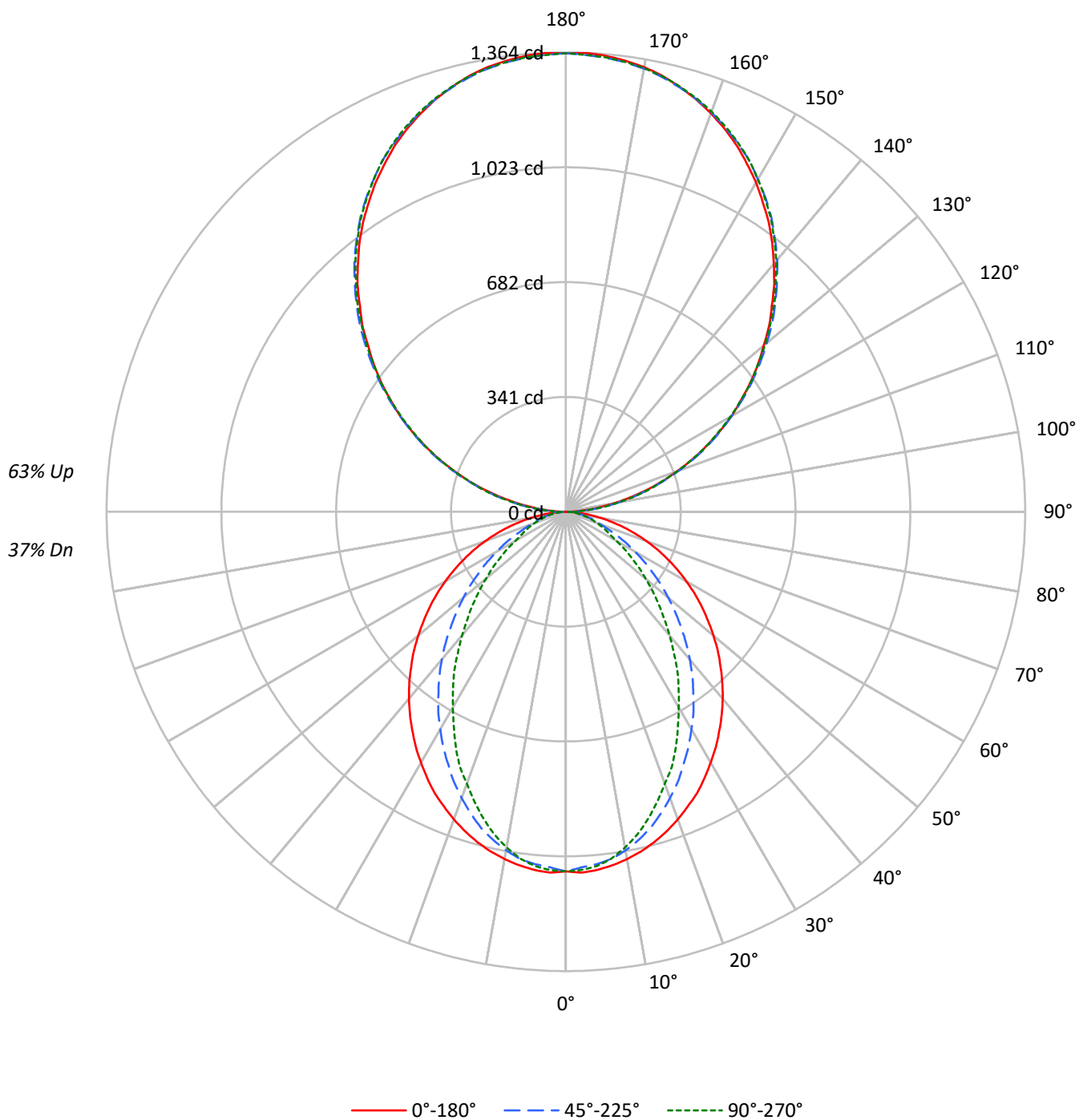
Lumens per Lamp: N/A
Luminaire Lumens: 6005.4 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.21' x L: 2.21' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 60.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P919846

CATALOG NUMBER: DFN2DIP-SQ2F0-030D050US935-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P919846

CATALOG NUMBER: DFN2DIP-SQ2F0-030D050US935-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°	2348	2348	2348
5°	2347	2305	2321
10°	2320	2255	2243
15°	2284	2175	2123
20°	2237	2068	1977
25°	2190	1948	1836
30°	2128	1826	1659
35°	2067	1696	1503
40°	2004	1561	1325
45°	1932	1412	1164
50°	1857	1262	1007
55°	1778	1103	856
60°	1686	937	702
65°	1581	769	628
70°	1453	612	563
75°	1292	530	506
80°	1061	430	428
85°	690	267	304

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1932 cd/sqm

TEST NUMBER: P919846

CATALOG NUMBER: DFN2DIP-SQ2F0-030D050US935-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.1	1.7
10°-20°	274.7	4.6
20°-30°	385.6	6.4
30°-40°	420.3	7.0
40°-50°	386.3	6.4
50°-60°	303.4	5.1
60°-70°	197.5	3.3
70°-80°	101.7	1.7
80°-90°	29.8	0.5
90°-100°	84.2	1.4
100°-110°	267.7	4.5
110°-120°	458.1	7.6
120°-130°	602.5	10.0
130°-140°	676.3	11.3
140°-150°	663.1	11.0
150°-160°	556.3	9.3
160°-170°	368.9	6.1
170°-180°	128.9	2.1
0°-30°	760.3	12.7
0°-40°	1180.7	19.7
0°-60°	1870.4	31.1
0°-90°	2199.4	36.6
90°-120°	810.0	13.5
90°-150°	2751.9	45.8
90°-180°	3806.0	63.4
0°-180°	6005.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1068	1063	1050	1059	1056	101
15°	1015	1005	972	954	944	286
25°	922	891	827	787	773	424
35°	794	745	660	599	578	497
45°	649	584	483	414	391	501
55°	494	418	314	256	238	441
65°	333	255	168	135	132	330
75°	178	110	77	70	70	188
85°	42	21	18	18	18	48
90°	1	15	40	38	39	6
95°	60	72	73	73	72	67
105°	247	250	253	255	255	261
115°	460	466	464	463	460	455
125°	669	679	676	672	671	598
135°	865	878	880	879	876	669
145°	1050	1058	1065	1066	1061	656
155°	1201	1204	1208	1213	1210	553
165°	1306	1305	1305	1313	1307	368
175°	1359	1356	1353	1362	1354	129
180°	1362	1362	1362	1362	1362	

TEST NUMBER: P919846

CATALOG NUMBER: DFN2DIP-SQ2F0-030D050US935-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1067.6	1067.6	1067.6	1067.6	1067.6
2.5°	1072.4	1067.6	1056.9	1066.6	1064.7
5°	1067.6	1062.7	1050.2	1058.9	1055.9
7.5°	1058.9	1053.1	1039.6	1043.4	1038.5
10°	1047.2	1040.5	1021.2	1018.2	1012.5
12.5°	1032.8	1024.1	998.0	992.2	981.5
15°	1015.4	1004.7	971.9	953.6	943.9
17.5°	995.1	979.6	939.0	917.8	902.3
20°	971.9	952.5	904.2	880.2	858.8
22.5°	946.8	924.5	868.5	835.7	821.2
25°	921.7	890.7	827.0	787.4	772.8
27.5°	891.7	858.8	788.3	743.0	720.7
30°	859.9	823.1	745.8	696.6	670.5
32.5°	828.9	784.5	705.3	647.3	623.1
35°	794.2	744.8	659.9	599.0	577.7
37.5°	760.3	707.1	617.3	550.6	526.6
40°	724.6	666.7	572.9	504.3	479.2
42.5°	687.9	626.1	528.5	456.9	432.8
45°	649.3	584.4	483.1	414.4	391.2
47.5°	612.5	544.0	439.6	370.9	349.7
50°	572.0	503.3	397.1	330.4	310.1
52.5°	532.3	459.9	356.5	292.7	274.4
55°	493.6	418.3	313.9	256.1	237.7
57.5°	454.1	376.8	276.4	222.2	206.7
60°	413.5	336.2	236.7	187.4	172.0
62.5°	373.9	296.6	202.9	156.5	148.9
65°	333.3	255.0	168.1	135.3	132.3
67.5°	294.7	216.4	135.3	118.8	115.9
70°	254.1	178.7	112.0	102.4	98.5
72.5°	215.4	143.9	93.7	86.0	84.0
75°	177.7	110.1	77.3	70.5	69.6
77.5°	140.1	78.2	60.9	57.0	55.0
80°	105.3	56.1	46.3	42.5	42.5
82.5°	73.4	37.7	31.9	30.0	30.0
85°	41.5	21.2	18.3	18.3	18.3
87.5°	15.5	7.7	7.7	6.8	6.8
90°	1.2	14.8	40.2	37.8	39.0
92.5°	25.5	34.4	35.7	36.9	36.9
95°	59.9	71.5	73.4	73.4	71.5
97.5°	99.7	110.4	114.9	114.9	114.9
100°	145.7	155.2	158.4	158.4	157.2
102.5°	194.2	201.1	205.6	206.9	205.6
105°	247.1	250.4	252.9	254.9	254.9
107.5°	299.6	304.5	304.5	305.4	299.6
110°	350.5	357.1	357.1	357.1	353.8

TEST NUMBER: P919846

CATALOG NUMBER: DFN2DIP-SQ2F0-030D050US935-RLFL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	405.5	412.5	411.3	408.0	405.5
115°	459.7	466.3	464.3	463.0	459.7
117.5°	513.5	522.5	516.8	513.5	510.2
120°	567.7	576.7	567.7	567.7	564.0
122.5°	616.9	628.4	622.7	619.4	616.9
125°	668.7	678.9	675.6	671.9	670.7
127.5°	719.1	731.8	727.4	722.4	719.1
130°	766.4	781.1	779.0	776.6	772.1
132.5°	819.3	830.8	831.6	825.9	822.6
135°	864.9	877.5	880.0	878.8	875.5
137.5°	915.8	926.0	928.1	927.2	922.3
140°	960.4	970.8	976.5	976.5	972.0
142.5°	1006.4	1016.8	1020.0	1021.2	1016.8
145°	1050.0	1058.2	1064.7	1066.0	1061.4
147.5°	1089.0	1099.2	1104.1	1106.2	1101.6
150°	1129.2	1136.2	1140.6	1144.4	1140.6
152.5°	1164.9	1171.9	1177.6	1182.2	1177.6
155°	1200.6	1203.8	1207.5	1213.3	1209.6
157.5°	1231.4	1233.8	1235.9	1244.1	1238.4
160°	1258.9	1261.4	1262.6	1269.5	1264.6
162.5°	1284.4	1284.4	1285.6	1293.4	1287.6
165°	1306.1	1304.8	1304.8	1313.1	1307.3
167.5°	1325.8	1322.1	1322.1	1330.3	1324.6
170°	1340.6	1337.3	1336.1	1344.3	1337.3
172.5°	1350.8	1347.5	1346.3	1354.5	1347.5
175°	1359.1	1355.7	1353.3	1361.5	1354.5
177.5°	1363.6	1360.3	1357.8	1364.8	1357.8
180°	1361.5	1361.5	1361.5	1361.5	1361.5

TEST NUMBER: P919846

CATALOG NUMBER: DFN2DIP-SQ2F0-030D050US935-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	8.60	9.33	9.67	10.40	11.85	4.56	5.29	5.63	6.36	7.81
	3H	10.25	10.91	11.33	11.98	13.45	5.72	6.38	6.80	7.45	8.92
	4H	10.84	11.46	11.93	12.54	14.02	6.16	6.78	7.25	7.85	9.33
	6H	11.24	11.81	12.34	12.89	14.38	6.46	7.03	7.55	8.11	9.60
	8H	11.36	11.90	12.46	13.00	14.48	6.54	7.08	7.64	8.17	9.66
	12H	11.41	11.92	12.52	13.01	14.52	6.57	7.08	7.67	8.17	9.68
4H	2H	8.60	9.22	9.70	10.30	11.78	5.13	5.75	6.23	6.83	8.31
	3H	10.40	10.92	11.50	12.02	13.51	6.45	6.97	7.56	8.07	9.56
	4H	11.07	11.55	12.18	12.64	14.15	6.98	7.46	8.09	8.55	10.06
	6H	11.56	11.97	12.68	13.09	14.59	7.38	7.78	8.49	8.90	10.40
	8H	11.73	12.10	12.84	13.21	14.73	7.49	7.87	8.61	8.98	10.50
	12H	11.81	12.15	12.94	13.27	14.79	7.54	7.88	8.67	9.01	10.53
8H	4H	11.03	11.41	12.14	12.52	14.04	7.24	7.62	8.36	8.73	10.25
	6H	11.57	11.88	12.71	13.03	14.55	7.73	8.04	8.87	9.20	10.71
	8H	11.77	12.05	12.91	13.18	14.71	7.91	8.18	9.05	9.32	10.85
	12H	11.89	12.13	13.04	13.26	14.83	8.01	8.25	9.16	9.38	10.95
12H	4H	10.97	11.32	12.11	12.44	13.96	7.24	7.58	8.37	8.71	10.23
	6H	11.54	11.82	12.68	12.95	14.48	7.78	8.05	8.92	9.18	10.72
	8H	11.74	11.98	12.89	13.11	14.69	7.97	8.21	9.11	9.34	10.91