

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: P906246

Luminaire Tested: DFN2DIP-SQ2F0-050D030US835-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P906246
REPORT IS A COMBINATION OF REPORTS P899776 AND P896659
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-SQ2F0-050D030US835-RLLFLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

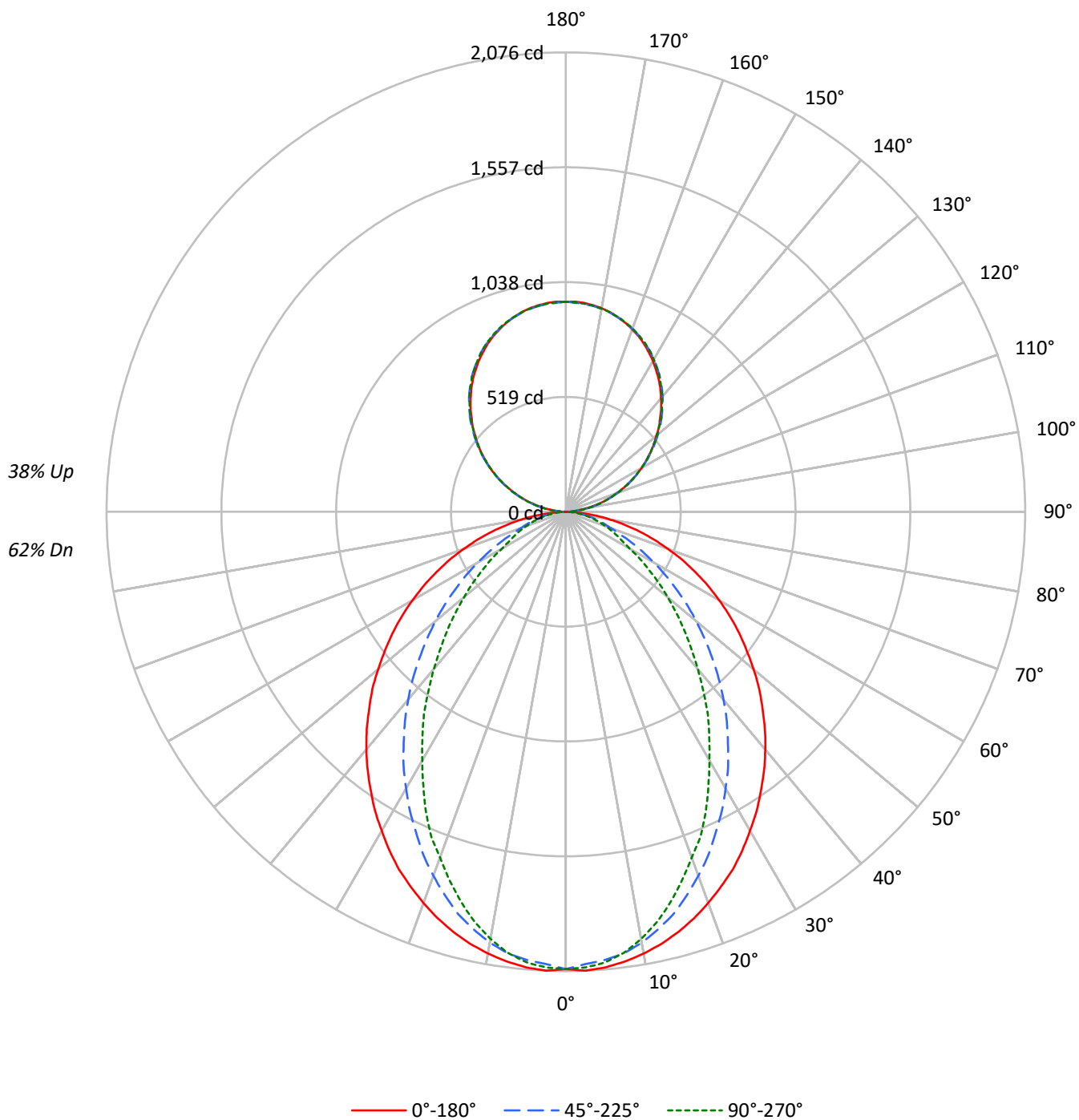
Lumens per Lamp: N/A
Luminaire Lumens: 6905.0 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.21' x L: 2.21' x H: 0.1')
CIE Type: Semi-Direct

Input Watts (W): 67
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P906246

CATALOG NUMBER: DFN2DIP-SQ2F0-050D030US835-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P906246

CATALOG NUMBER: DFN2DIP-SQ2F0-050D030US835-RLFL

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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67
1	101	97	93	90	94	91	88	85	80	77	75	69	68	66	60	59	58
2	92	85	79	74	86	80	75	70	71	67	63	62	59	56	53	51	49
3	85	75	68	63	79	71	65	60	63	58	54	55	51	48	48	45	43
4	78	67	60	54	73	63	57	51	56	51	46	49	45	42	43	40	37
5	72	60	52	46	67	57	50	44	51	45	41	45	40	37	39	36	33
6	66	54	46	41	62	51	44	39	46	40	36	41	36	32	36	32	29
7	62	49	42	36	58	47	40	35	42	36	32	37	33	29	33	29	26
8	57	45	37	32	54	43	36	31	38	33	28	34	30	26	30	27	24
9	53	41	34	29	50	39	32	28	35	30	26	32	27	24	28	24	22
10	50	38	31	26	47	36	30	25	33	27	23	29	25	22	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4544	4544	4544
5°	4543	4462	4494
10°	4491	4365	4341
15°	4421	4211	4110
20°	4331	4003	3827
25°	4239	3771	3555
30°	4119	3535	3211
35°	4000	3282	2910
40°	3879	3021	2565
45°	3739	2733	2253
50°	3594	2443	1949
55°	3441	2135	1657
60°	3264	1814	1358
65°	3060	1489	1215
70°	2813	1186	1091
75°	2501	1026	979
80°	2054	834	830
85°	1337	518	591

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3739 cd/sqm

TEST NUMBER: P906246

CATALOG NUMBER: DFN2DIP-SQ2F0-050D030US835-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.7	2.8
10°-20°	531.7	7.7
20°-30°	746.5	10.8
30°-40°	813.7	11.8
40°-50°	747.9	10.8
50°-60°	587.3	8.5
60°-70°	382.3	5.5
70°-80°	196.8	2.9
80°-90°	52.9	0.8
90°-100°	58.7	0.9
100°-110°	186.5	2.7
110°-120°	319.2	4.6
120°-130°	419.8	6.1
130°-140°	471.2	6.8
140°-150°	462.1	6.7
150°-160°	387.7	5.6
160°-170°	257.1	3.7
170°-180°	89.9	1.3
0°-30°	1471.8	21.3
0°-40°	2285.5	33.1
0°-60°	3620.7	52.4
0°-90°	4252.7	61.6
90°-120°	564.5	8.2
90°-150°	1917.7	27.8
90°-180°	2652.0	38.4
0°-180°	6905.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2066	2066	2066	2066	2066	
5°	2066	2057	2033	2050	2044	196
15°	1966	1945	1881	1846	1827	554
25°	1784	1724	1601	1524	1496	821
35°	1537	1442	1277	1160	1118	962
45°	1257	1131	935	802	757	971
55°	956	810	608	496	460	854
65°	645	494	325	262	256	640
75°	344	213	150	136	135	364
85°	80	41	36	36	36	92
90°	1	10	28	26	27	7
95°	42	50	51	51	50	46
105°	172	174	176	178	178	182
115°	320	325	324	323	320	317
125°	466	473	471	468	467	416
135°	603	612	613	612	610	466
145°	732	737	742	743	740	457
155°	837	839	842	846	843	385
165°	910	909	909	915	911	257
175°	947	945	943	949	944	90
180°	949	949	949	949	949	

TEST NUMBER: P906246

CATALOG NUMBER: DFN2DIP-SQ2F0-050D030US835-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2066.5	2066.5	2066.5	2066.5	2066.5
2.5°	2075.8	2066.5	2045.9	2064.7	2060.9
5°	2066.5	2057.2	2032.8	2049.6	2044.1
7.5°	2049.6	2038.5	2012.3	2019.7	2010.3
10°	2027.2	2014.1	1976.8	1971.1	1959.9
12.5°	1999.2	1982.4	1931.8	1920.7	1900.0
15°	1965.5	1944.9	1881.4	1845.9	1827.2
17.5°	1926.2	1896.3	1817.7	1776.6	1746.6
20°	1881.4	1843.9	1750.4	1703.8	1662.5
22.5°	1832.8	1789.7	1681.2	1617.7	1589.7
25°	1784.1	1724.2	1600.8	1524.2	1496.0
27.5°	1726.2	1662.5	1526.0	1438.1	1395.1
30°	1664.5	1593.3	1443.7	1348.4	1297.8
32.5°	1604.6	1518.5	1365.3	1253.0	1206.2
35°	1537.3	1441.9	1277.4	1159.5	1118.3
37.5°	1471.8	1368.9	1195.1	1065.9	1019.3
40°	1402.6	1290.5	1108.9	976.2	927.6
42.5°	1331.6	1211.9	1023.0	884.5	837.9
45°	1256.8	1131.4	935.1	802.2	757.3
47.5°	1185.7	1053.0	851.0	718.1	677.0
50°	1107.2	974.4	768.7	639.5	600.4
52.5°	1030.4	890.1	690.1	566.7	531.2
55°	955.6	809.7	607.7	495.6	460.1
57.5°	879.0	729.4	534.9	430.2	400.2
60°	800.4	650.8	458.1	362.9	332.9
62.5°	723.8	574.2	392.7	303.0	288.1
65°	645.2	493.7	325.4	261.9	256.2
67.5°	570.4	418.9	261.9	230.0	224.4
70°	491.9	346.0	216.9	198.2	190.7
72.5°	417.1	278.6	181.4	166.5	162.7
75°	344.1	213.1	149.6	136.5	134.7
77.5°	271.2	151.4	117.9	110.3	106.5
80°	203.8	108.5	89.7	82.3	82.3
82.5°	142.1	73.0	61.7	57.9	57.9
85°	80.4	41.1	35.5	35.5	35.5
87.5°	30.0	14.9	14.9	13.1	13.1
90°	0.9	10.3	28.0	26.3	27.2
92.5°	17.7	24.0	24.9	25.7	25.7
95°	41.8	49.8	51.2	51.2	49.8
97.5°	69.5	76.9	80.1	80.1	80.1
100°	101.5	108.1	110.4	110.4	109.6
102.5°	135.3	140.2	143.3	144.2	143.3
105°	172.2	174.5	176.2	177.6	177.6
107.5°	208.8	212.2	212.2	212.8	208.8
110°	244.3	248.9	248.9	248.9	246.6



TEST NUMBER: P906246

CATALOG NUMBER: DFN2DIP-SQ2F0-050D030US835-RLFL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	282.6	287.5	286.6	284.3	282.6
115°	320.4	324.9	323.5	322.7	320.4
117.5°	357.8	364.1	360.1	357.8	355.5
120°	395.6	401.9	395.6	395.6	393.0
122.5°	429.9	437.9	433.9	431.6	429.9
125°	466.0	473.1	470.8	468.2	467.4
127.5°	501.1	510.0	506.9	503.4	501.1
130°	534.0	544.3	542.9	541.2	538.0
132.5°	570.9	578.9	579.5	575.5	573.2
135°	602.7	611.5	613.3	612.4	610.1
137.5°	638.1	645.3	646.7	646.2	642.7
140°	669.3	676.5	680.5	680.5	677.3
142.5°	701.4	708.5	710.8	711.7	708.5
145°	731.7	737.4	742.0	742.8	739.7
147.5°	758.9	766.0	769.4	770.9	767.7
150°	786.9	791.8	794.9	797.5	794.9
152.5°	811.8	816.6	820.6	823.8	820.6
155°	836.7	838.9	841.5	845.5	843.0
157.5°	858.1	859.8	861.3	867.0	863.0
160°	877.3	879.0	879.9	884.7	881.3
162.5°	895.0	895.0	895.9	901.3	897.3
165°	910.2	909.3	909.3	915.0	911.0
167.5°	923.9	921.3	921.3	927.0	923.0
170°	934.2	931.9	931.1	936.8	931.9
172.5°	941.3	939.1	938.2	943.9	939.1
175°	947.1	944.8	943.1	948.8	943.9
177.5°	950.2	947.9	946.2	951.1	946.2
180°	948.8	948.8	948.8	948.8	948.8

TEST NUMBER: P906246

CATALOG NUMBER: DFN2DIP-SQ2F0-050D030US835-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	13.31	14.24	14.17	15.12	16.22	9.27	10.20	10.13	11.08	12.18
	3H	14.97	15.81	15.85	16.69	17.82	10.45	11.28	11.32	12.17	13.29
	4H	15.58	16.36	16.46	17.25	18.39	10.89	11.68	11.78	12.57	13.71
	6H	15.99	16.71	16.88	17.61	18.76	11.20	11.93	12.10	12.82	13.97
	8H	16.11	16.80	17.01	17.71	18.86	11.28	11.98	12.19	12.89	14.04
	12H	16.16	16.82	17.08	17.73	18.90	11.32	11.98	12.24	12.89	14.06
4H	2H	13.34	14.12	14.23	15.01	16.15	9.87	10.66	10.76	11.55	12.68
	3H	15.15	15.81	16.05	16.73	17.88	11.21	11.86	12.11	12.78	13.93
	4H	15.83	16.43	16.75	17.35	18.52	11.74	12.34	12.66	13.26	14.43
	6H	16.33	16.85	17.26	17.79	18.97	12.15	12.66	13.07	13.60	14.78
	8H	16.50	16.98	17.43	17.92	19.11	12.27	12.75	13.20	13.68	14.87
	12H	16.59	17.02	17.54	17.98	19.17	12.33	12.76	13.28	13.71	14.91
8H	4H	15.80	16.28	16.73	17.22	18.41	12.02	12.50	12.95	13.43	14.62
	6H	16.35	16.75	17.31	17.73	18.92	12.52	12.91	13.47	13.89	15.08
	8H	16.56	16.91	17.52	17.87	19.08	12.69	13.04	13.66	14.01	15.22
	12H	16.68	16.99	17.65	17.95	19.21	12.80	13.11	13.77	14.07	15.33
12H	4H	15.76	16.19	16.71	17.14	18.34	12.02	12.46	12.97	13.41	14.61
	6H	16.33	16.68	17.29	17.64	18.85	12.56	12.91	13.53	13.88	15.09
	8H	16.54	16.84	17.50	17.81	19.06	12.76	13.07	13.73	14.03	15.28

END OF REPORT