

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: P919406

Luminaire Tested: DFN2DIP-PN3F0-060D040US935-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P919406
REPORT IS A COMBINATION OF REPORTS P899532 AND P896399
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN3F0-060D040US935-RLLFLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

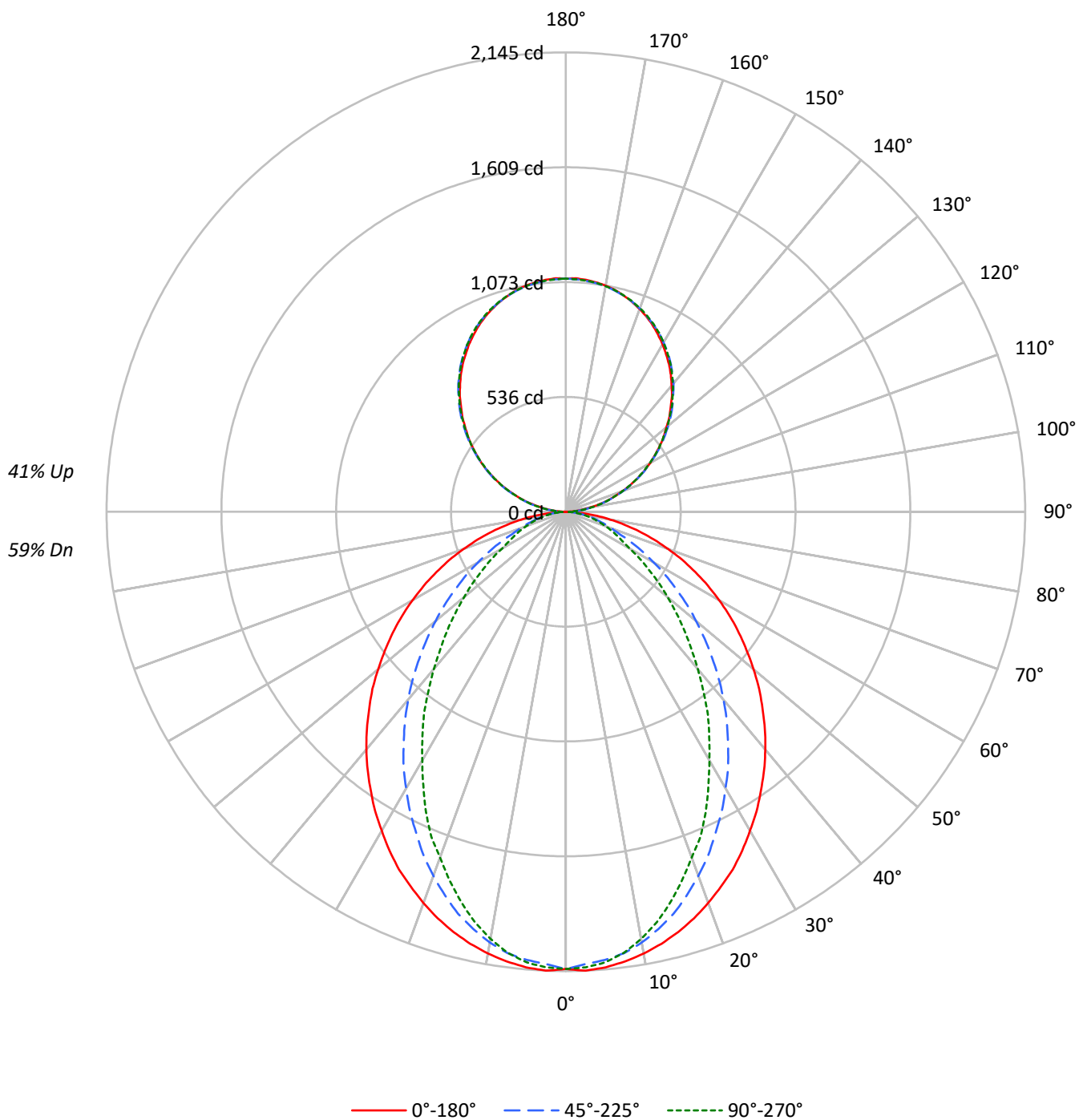
Lumens per Lamp: N/A
Luminaire Lumens: 7439.0 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.96' x L: 3.11' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 87
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9821
Total Harmonic Distortion (THDi): 0.08
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P919406

CATALOG NUMBER: DFN2DIP-PN3F0-060D040US935-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P919406

CATALOG NUMBER: DFN2DIP-PN3F0-060D040US935-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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64
1	100	96	92	89	94	90	87	84	78	76	74	68	66	64	58	57	56
2	92	85	79	74	86	79	74	70	69	65	62	60	57	55	52	50	48
3	84	75	68	62	78	70	64	59	62	57	53	54	50	47	46	44	41
4	77	67	59	53	72	63	56	51	55	50	46	48	44	41	42	39	36
5	71	60	52	46	66	56	49	44	50	44	40	44	39	36	38	34	32
6	66	54	46	40	61	51	44	39	45	39	35	40	35	32	35	31	28
7	61	49	41	36	57	46	39	34	41	35	31	36	32	28	32	28	25
8	57	45	37	32	53	42	35	30	38	32	28	33	29	25	29	26	23
9	53	41	34	29	50	39	32	27	35	29	25	31	26	23	27	24	21
10	50	38	31	26	47	36	29	25	32	27	23	29	24	21	25	22	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2496	2496	2496
5°	2498	2454	2471
10°	2472	2405	2389
15°	2437	2323	2264
20°	2390	2212	2111
25°	2343	2088	1963
30°	2279	1961	1775
35°	2217	1824	1611
40°	2153	1683	1422
45°	2080	1526	1251
50°	2004	1368	1084
55°	1924	1200	924
60°	1832	1024	760
65°	1725	845	683
70°	1596	679	616
75°	1434	594	558
80°	1199	493	481
85°	814	321	355

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2080 cd/sqm

TEST NUMBER: P919406

CATALOG NUMBER: DFN2DIP-PN3F0-060D040US935-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.1	2.7
10°-20°	549.3	7.4
20°-30°	771.2	10.4
30°-40°	840.7	11.3
40°-50°	772.7	10.4
50°-60°	606.8	8.2
60°-70°	395.0	5.3
70°-80°	203.3	2.7
80°-90°	55.0	0.7
90°-100°	67.4	0.9
100°-110°	214.2	2.9
110°-120°	366.5	4.9
120°-130°	482.0	6.5
130°-140°	541.0	7.3
140°-150°	530.5	7.1
150°-160°	445.0	6.0
160°-170°	295.1	4.0
170°-180°	103.2	1.4
0°-30°	1520.7	20.4
0°-40°	2361.4	31.7
0°-60°	3740.9	50.3
0°-90°	4394.2	59.1
90°-120°	648.0	8.7
90°-150°	2201.5	29.6
90°-180°	3045.0	40.9
0°-180°	7439.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2135	2135	2135	2135	2135	
5°	2135	2126	2100	2118	2112	202
15°	2031	2009	1944	1907	1888	572
25°	1843	1782	1654	1575	1546	848
35°	1588	1490	1320	1198	1155	994
45°	1298	1169	966	829	782	1003
55°	987	837	628	512	475	882
65°	667	510	336	271	265	661
75°	356	220	154	141	139	376
85°	83	42	37	37	37	95
90°	1	12	32	30	31	7
95°	48	57	59	59	57	53
105°	198	200	202	204	204	209
115°	368	373	371	370	368	364
125°	535	543	540	538	537	478
135°	692	702	704	703	700	535
145°	840	846	852	853	849	525
155°	960	963	966	971	968	442
165°	1045	1044	1044	1050	1046	295
175°	1087	1085	1083	1089	1084	103
180°	1089	1089	1089	1089	1089	

TEST NUMBER: P919406

CATALOG NUMBER: DFN2DIP-PN3F0-060D040US935-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2135.1	2135.1	2135.1	2135.1	2135.1
2.5°	2144.7	2135.1	2113.7	2133.2	2129.3
5°	2135.1	2125.5	2100.2	2117.7	2111.9
7.5°	2117.7	2106.2	2079.1	2086.7	2077.1
10°	2094.5	2080.9	2042.5	2036.5	2025.0
12.5°	2065.6	2048.1	1995.9	1984.4	1963.1
15°	2030.7	2009.4	1943.8	1907.1	1887.8
17.5°	1990.2	1959.2	1878.0	1835.6	1804.7
20°	1943.8	1905.0	1808.5	1760.3	1717.7
22.5°	1893.6	1849.1	1737.0	1671.4	1642.4
25°	1843.4	1781.5	1654.0	1574.9	1545.7
27.5°	1783.6	1717.7	1576.7	1485.8	1441.4
30°	1719.8	1646.1	1491.6	1393.2	1340.9
32.5°	1657.9	1568.9	1410.7	1294.6	1246.2
35°	1588.4	1489.8	1319.8	1198.0	1155.4
37.5°	1520.7	1414.3	1234.8	1101.3	1053.1
40°	1449.1	1333.3	1145.7	1008.6	958.4
42.5°	1375.8	1252.1	1057.0	913.9	865.7
45°	1298.5	1168.9	966.2	828.8	782.5
47.5°	1225.1	1088.0	879.3	741.9	699.5
50°	1143.9	1006.8	794.2	660.7	620.3
52.5°	1064.5	919.6	713.0	585.5	548.8
55°	987.3	836.6	627.9	512.1	475.4
57.5°	908.2	753.5	552.7	444.4	413.5
60°	827.0	672.4	473.4	375.0	344.0
62.5°	747.9	593.3	405.7	313.1	297.6
65°	666.7	510.1	336.2	270.6	264.7
67.5°	589.4	432.7	270.6	237.6	231.9
70°	508.2	357.5	224.0	204.8	197.0
72.5°	430.9	287.8	187.4	172.0	168.1
75°	355.5	220.2	154.5	141.0	139.2
77.5°	280.3	156.4	121.7	114.0	110.1
80°	210.5	112.1	92.6	85.1	85.1
82.5°	146.8	75.4	63.7	59.8	59.8
85°	83.0	42.4	36.7	36.7	36.7
87.5°	31.0	15.4	15.4	13.5	13.5
90°	0.9	11.8	32.2	30.2	31.2
92.5°	20.3	27.6	28.6	29.5	29.5
95°	48.0	57.2	58.8	58.8	57.2
97.5°	79.8	88.3	92.0	92.0	92.0
100°	116.6	124.2	126.7	126.7	125.8
102.5°	155.3	160.9	164.5	165.5	164.5
105°	197.7	200.3	202.2	203.9	203.9
107.5°	239.7	243.7	243.7	244.3	239.7
110°	280.4	285.7	285.7	285.7	283.1



TEST NUMBER: P919406

CATALOG NUMBER: DFN2DIP-PN3F0-060D040US935-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	324.4	330.0	329.0	326.4	324.4
115°	367.7	373.1	371.3	370.4	367.7
117.5°	410.8	418.0	413.5	410.8	408.2
120°	454.2	461.3	454.2	454.2	451.2
122.5°	493.5	502.7	498.2	495.5	493.5
125°	534.9	543.1	540.5	537.5	536.6
127.5°	575.3	585.5	581.9	577.9	575.3
130°	613.0	624.9	623.3	621.3	617.7
132.5°	655.4	664.6	665.3	660.6	658.1
135°	691.9	702.1	704.0	703.0	700.4
137.5°	732.6	740.8	742.4	741.7	737.9
140°	768.4	776.6	781.2	781.2	777.6
142.5°	805.2	813.4	816.0	817.0	813.4
145°	840.0	846.5	851.8	852.8	849.2
147.5°	871.2	879.3	883.3	884.9	881.3
150°	903.4	909.0	912.6	915.5	912.6
152.5°	931.9	937.5	942.1	945.7	942.1
155°	960.4	963.1	966.0	970.7	967.7
157.5°	985.2	987.0	988.7	995.3	990.7
160°	1007.1	1009.1	1010.0	1015.6	1011.7
162.5°	1027.4	1027.4	1028.5	1034.7	1030.1
165°	1044.9	1043.9	1043.9	1050.4	1045.9
167.5°	1060.7	1057.6	1057.6	1064.3	1059.6
170°	1072.5	1069.8	1068.8	1075.4	1069.8
172.5°	1080.6	1078.1	1077.0	1083.7	1078.1
175°	1087.3	1084.6	1082.6	1089.2	1083.7
177.5°	1090.9	1088.2	1086.2	1091.8	1086.2
180°	1089.2	1089.2	1089.2	1089.2	1089.2

TEST NUMBER: P919406

CATALOG NUMBER: DFN2DIP-PN3F0-060D040US935-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	11.09	12.00	11.97	12.90	14.04	7.06	7.97	7.94	8.87	10.00
	3H	12.77	13.58	13.66	14.49	15.65	8.25	9.06	9.14	9.97	11.13
	4H	13.38	14.15	14.29	15.06	16.23	8.70	9.46	9.61	10.38	11.55
	6H	13.80	14.51	14.72	15.43	16.61	9.02	9.72	9.94	10.64	11.83
	8H	13.92	14.60	14.85	15.53	16.72	9.11	9.78	10.04	10.72	11.90
	12H	13.99	14.63	14.92	15.56	16.77	9.15	9.79	10.08	10.72	11.93
4H	2H	11.12	11.89	12.03	12.80	13.97	7.66	8.43	8.58	9.34	10.52
	3H	12.95	13.59	13.87	14.53	15.72	9.01	9.65	9.94	10.59	11.78
	4H	13.64	14.22	14.57	15.16	16.37	9.56	10.14	10.49	11.08	12.29
	6H	14.15	14.65	15.10	15.62	16.83	9.97	10.47	10.92	11.44	12.65
	8H	14.33	14.79	15.28	15.75	16.98	10.10	10.57	11.05	11.52	12.75
	12H	14.42	14.84	15.39	15.82	17.05	10.17	10.59	11.14	11.56	12.79
8H	4H	13.61	14.08	14.56	15.03	16.26	9.84	10.31	10.79	11.26	12.49
	6H	14.17	14.56	15.15	15.56	16.78	10.35	10.74	11.33	11.74	12.96
	8H	14.39	14.73	15.37	15.71	16.96	10.54	10.88	11.52	11.87	13.11
	12H	14.52	14.82	15.51	15.80	17.10	10.66	10.96	11.64	11.94	13.23
12H	4H	13.57	13.99	14.54	14.96	16.19	9.85	10.27	10.82	11.24	12.47
	6H	14.15	14.49	15.13	15.48	16.72	10.40	10.74	11.39	11.73	12.97
	8H	14.37	14.67	15.36	15.65	16.94	10.61	10.91	11.60	11.89	13.18