

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: P926151

Luminaire Tested: DFN2DIP-TR2F0-050D030US950-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P926151
REPORT IS A COMBINATION OF REPORTS P901758 AND P897145
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR2F0-050D030US950-RLLONL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

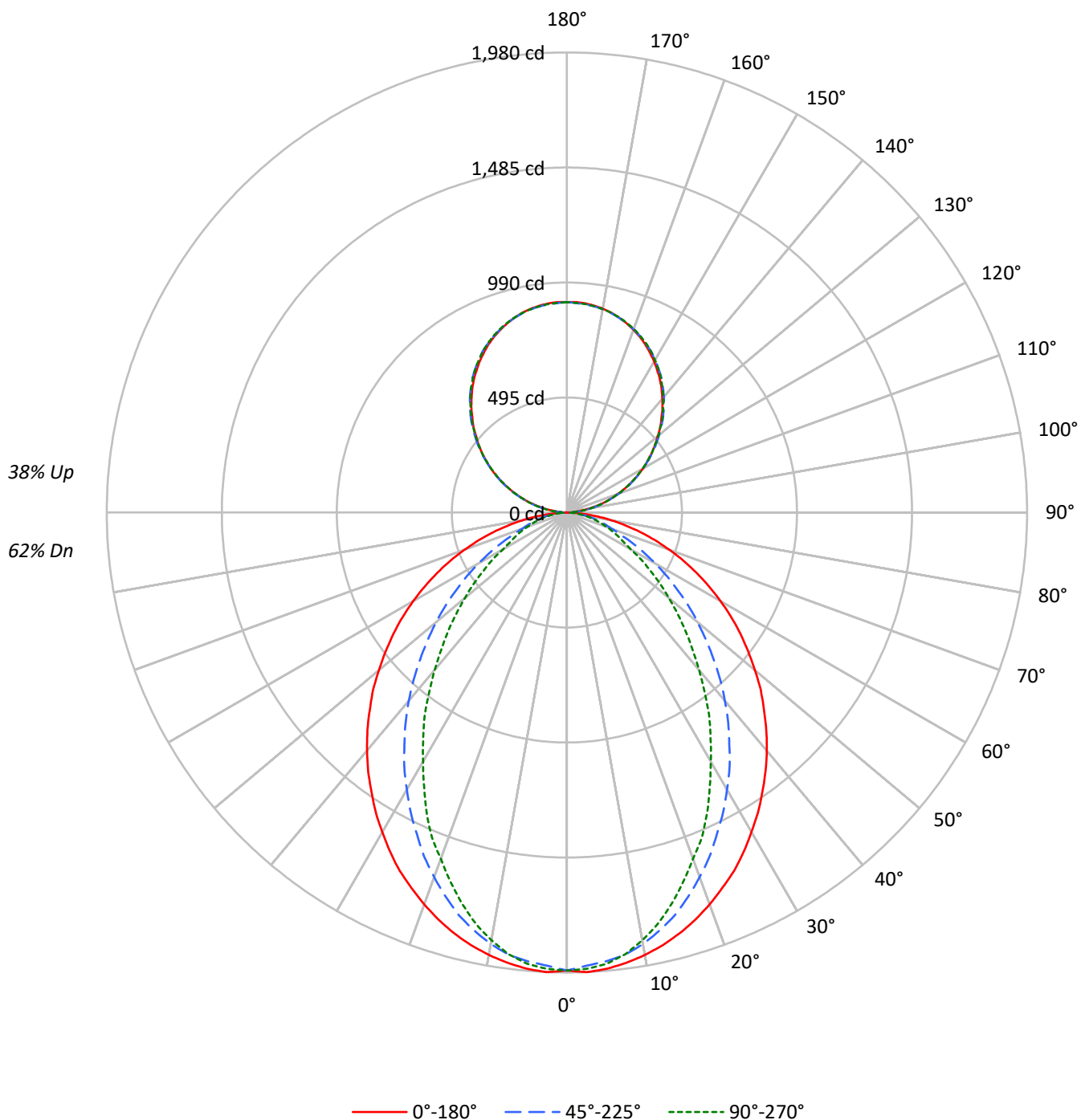
Lumens per Lamp: N/A
Luminaire Lumens: 6587.4 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.04' x L: 2.36' x H: 0.1')
CIE Type: Semi-Direct

Input Watts (W): 69.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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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°	4397	4397	4397
5°	4398	4318	4348
10°	4347	4223	4198
15°	4281	4074	3973
20°	4196	3873	3699
25°	4108	3649	3434
30°	3992	3420	3101
35°	3878	3175	2809
40°	3762	2922	2475
45°	3628	2643	2173
50°	3489	2363	1878
55°	3343	2064	1595
60°	3173	1753	1306
65°	2978	1439	1167
70°	2741	1146	1046
75°	2443	991	936
80°	2013	805	789
85°	1323	499	556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3628 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.8	2.8
10°-20°	507.2	7.7
20°-30°	712.1	10.8
30°-40°	776.3	11.8
40°-50°	713.5	10.8
50°-60°	560.3	8.5
60°-70°	364.7	5.5
70°-80°	187.7	2.8
80°-90°	50.5	0.8
90°-100°	56.0	0.9
100°-110°	178.0	2.7
110°-120°	304.6	4.6
120°-130°	400.5	6.1
130°-140°	449.6	6.8
140°-150°	440.9	6.7
150°-160°	369.8	5.6
160°-170°	245.3	3.7
170°-180°	85.7	1.3
0°-30°	1404.1	21.3
0°-40°	2180.4	33.1
0°-60°	3454.1	52.4
0°-90°	4057.1	61.6
90°-120°	538.5	8.2
90°-150°	1829.5	27.8
90°-180°	2530.0	38.4
0°-180°	6587.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1971	1971	1971	1971	1971	
5°	1971	1963	1939	1955	1950	187
15°	1875	1855	1795	1761	1743	528
25°	1702	1645	1527	1454	1427	783
35°	1467	1376	1219	1106	1067	918
45°	1199	1079	892	765	722	926
55°	912	772	580	473	439	815
65°	616	471	310	250	244	610
75°	328	203	143	130	128	347
85°	77	39	34	34	34	88
90°	1	10	27	25	26	6
95°	40	48	49	49	48	44
105°	164	166	168	169	169	173
115°	306	310	309	308	306	302
125°	445	451	449	447	446	397
135°	575	583	585	584	582	444
145°	698	704	708	709	706	436
155°	798	800	803	807	804	367
165°	868	868	868	873	869	245
175°	904	901	900	905	900	86
180°	905	905	905	905	905	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1971.4	1971.4	1971.4	1971.4	1971.4
2.5°	1980.3	1971.4	1951.8	1969.7	1966.1
5°	1971.4	1962.6	1939.3	1955.3	1950.1
7.5°	1955.3	1944.7	1919.7	1926.8	1917.8
10°	1933.9	1921.5	1885.9	1880.4	1869.7
12.5°	1907.2	1891.2	1842.9	1832.3	1812.6
15°	1875.1	1855.4	1794.9	1761.0	1743.1
17.5°	1837.6	1809.1	1734.1	1694.9	1666.3
20°	1794.9	1759.1	1669.9	1625.4	1586.0
22.5°	1748.5	1707.4	1603.9	1543.3	1516.6
25°	1702.0	1644.9	1527.2	1454.1	1427.2
27.5°	1646.8	1586.0	1455.8	1371.9	1330.9
30°	1587.9	1520.0	1377.3	1286.4	1238.1
32.5°	1530.8	1448.6	1302.5	1195.4	1150.7
35°	1466.6	1375.6	1218.6	1106.2	1066.9
37.5°	1404.1	1305.9	1140.1	1016.9	972.4
40°	1338.1	1231.1	1057.9	931.3	884.9
42.5°	1270.3	1156.2	975.9	843.8	799.4
45°	1199.0	1079.4	892.1	765.3	722.5
47.5°	1131.2	1004.6	811.9	685.1	645.9
50°	1056.3	929.6	733.3	610.1	572.8
52.5°	983.0	849.2	658.4	540.6	506.8
55°	911.6	772.5	579.7	472.8	438.9
57.5°	838.6	695.8	510.3	410.4	381.8
60°	763.6	620.9	437.0	346.2	317.6
62.5°	690.5	547.8	374.6	289.1	274.8
65°	615.5	471.0	310.4	249.9	244.4
67.5°	544.2	399.6	249.9	219.4	214.1
70°	469.3	330.1	206.9	189.1	181.9
72.5°	397.9	265.8	173.1	158.8	155.2
75°	328.3	203.3	142.7	130.2	128.5
77.5°	258.7	144.4	112.5	105.2	101.6
80°	194.4	103.5	85.6	78.5	78.5
82.5°	135.6	69.6	58.9	55.2	55.2
85°	76.7	39.2	33.9	33.9	33.9
87.5°	28.6	14.2	14.2	12.5	12.5
90°	0.9	9.8	26.7	25.1	25.9
92.5°	16.9	22.9	23.8	24.5	24.5
95°	39.9	47.5	48.8	48.8	47.5
97.5°	66.3	73.4	76.4	76.4	76.4
100°	96.8	103.1	105.3	105.3	104.6
102.5°	129.1	133.8	136.7	137.6	136.7
105°	164.3	166.5	168.1	169.4	169.4
107.5°	199.2	202.4	202.4	203.0	199.2
110°	233.1	237.5	237.5	237.5	235.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	269.6	274.3	273.4	271.2	269.6
115°	305.7	310.0	308.6	307.9	305.7
117.5°	341.3	347.4	343.5	341.3	339.1
120°	377.4	383.4	377.4	377.4	374.9
122.5°	410.1	417.8	413.9	411.7	410.1
125°	444.6	451.3	449.1	446.7	445.9
127.5°	478.0	486.5	483.6	480.2	478.0
130°	509.4	519.3	517.9	516.3	513.3
132.5°	544.6	552.3	552.8	549.0	546.8
135°	575.0	583.4	585.1	584.2	582.0
137.5°	608.7	615.6	617.0	616.5	613.1
140°	638.5	645.4	649.2	649.2	646.1
142.5°	669.1	675.9	678.1	679.0	675.9
145°	698.0	703.5	707.9	708.6	705.7
147.5°	724.0	730.8	734.0	735.4	732.4
150°	750.7	755.4	758.3	760.8	758.3
152.5°	774.5	779.0	782.9	785.9	782.9
155°	798.2	800.3	802.8	806.6	804.2
157.5°	818.6	820.2	821.7	827.1	823.3
160°	836.9	838.6	839.4	844.0	840.8
162.5°	853.8	853.8	854.7	859.8	856.0
165°	868.3	867.5	867.5	872.9	869.1
167.5°	881.4	878.9	878.9	884.4	880.5
170°	891.2	889.0	888.3	893.7	889.0
172.5°	898.0	895.9	895.0	900.5	895.9
175°	903.5	901.3	899.7	905.2	900.5
177.5°	906.5	904.3	902.7	907.3	902.7
180°	905.2	905.2	905.2	905.2	905.2

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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	13.18	14.12	14.04	14.99	16.09	9.16	10.10	10.02	10.97	12.07
	3H	14.84	15.68	15.71	16.56	17.69	10.34	11.18	11.22	12.06	13.19
	4H	15.44	16.23	16.33	17.12	18.26	10.79	11.58	11.68	12.47	13.60
	6H	15.85	16.57	16.75	17.47	18.62	11.10	11.83	12.00	12.72	13.87
	8H	15.97	16.66	16.87	17.57	18.72	11.19	11.88	12.09	12.79	13.94
	12H	16.02	16.68	16.93	17.59	18.76	11.23	11.88	12.14	12.79	13.96
4H	2H	13.21	14.00	14.10	14.89	16.02	9.76	10.55	10.65	11.44	12.57
	3H	15.02	15.68	15.92	16.60	17.75	11.10	11.75	12.00	12.68	13.83
	4H	15.70	16.29	16.61	17.21	18.39	11.64	12.23	12.55	13.15	14.33
	6H	16.20	16.71	17.12	17.65	18.83	12.04	12.56	12.97	13.50	14.68
	8H	16.36	16.84	17.29	17.78	18.97	12.17	12.65	13.10	13.58	14.77
	12H	16.45	16.88	17.40	17.83	19.03	12.23	12.66	13.18	13.61	14.81
8H	4H	15.67	16.15	16.60	17.09	18.28	11.91	12.39	12.84	13.33	14.52
	6H	16.21	16.61	17.17	17.59	18.78	12.41	12.81	13.37	13.79	14.97
	8H	16.42	16.77	17.38	17.73	18.94	12.59	12.94	13.56	13.91	15.12
	12H	16.54	16.85	17.51	17.81	19.07	12.70	13.01	13.67	13.97	15.23
12H	4H	15.63	16.06	16.57	17.01	18.21	11.92	12.35	12.87	13.30	14.50
	6H	16.19	16.54	17.15	17.51	18.71	12.45	12.81	13.42	13.77	14.98
	8H	16.40	16.71	17.36	17.67	18.92	12.65	12.96	13.62	13.92	15.18