

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: P926213

Luminaire Tested: DFN2DIP-TR3F0-040D030US950-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P926213
REPORT IS A COMBINATION OF REPORTS P901794 AND P898751
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-040D030US950-RLLONL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

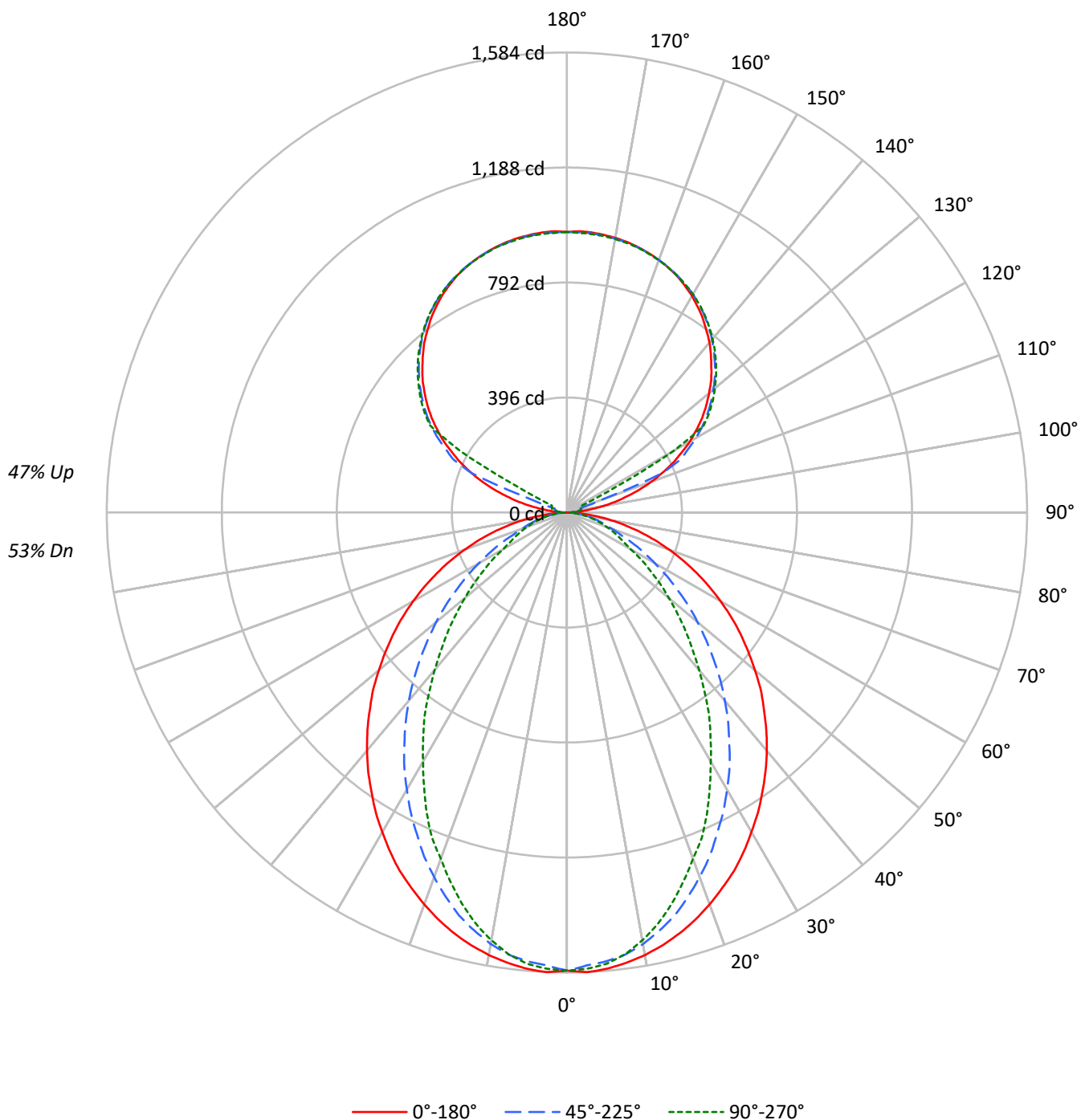
Lumens per Lamp: N/A
Luminaire Lumens: 6077.0 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 57.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P926213

CATALOG NUMBER: DFN2DIP-TR3F0-040D030US950-RLLONL

Luminous Intensity Polar Plot



TEST NUMBER: P926213

CATALOG NUMBER: DFN2DIP-TR3F0-040D030US950-RLLONL

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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59
1	99	95	91	88	92	88	85	82	76	73	71	64	62	61	53	52	51
2	91	83	78	73	84	78	73	68	67	63	60	57	54	52	47	45	44
3	83	74	67	61	77	69	63	58	59	55	51	51	47	44	42	40	38
4	76	66	58	52	70	61	55	49	53	48	44	45	42	38	38	35	33
5	70	59	51	45	65	55	48	43	48	42	38	41	37	34	35	32	29
6	65	53	45	39	60	50	43	37	43	38	34	37	33	30	32	28	26
7	60	48	40	35	56	45	38	33	39	34	30	34	30	26	29	26	23
8	56	44	36	31	52	41	34	29	36	31	27	31	27	24	27	24	21
9	52	40	33	28	48	38	31	26	33	28	24	29	25	22	25	22	19
10	49	37	30	25	45	35	28	24	31	25	22	27	23	20	23	20	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1965	1965	1965
5°	1967	1932	1945
10°	1947	1893	1881
15°	1919	1829	1782
20°	1882	1741	1660
25°	1845	1643	1543
30°	1795	1542	1396
35°	1746	1435	1266
40°	1696	1323	1117
45°	1638	1200	983
50°	1579	1075	851
55°	1516	943	725
60°	1443	804	596
65°	1360	663	535
70°	1258	532	482
75°	1130	466	436
80°	946	385	374
85°	644	250	273

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1638 cd/sqm

TEST NUMBER: P926213

CATALOG NUMBER: DFN2DIP-TR3F0-040D030US950-RLLONL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	2.4
10°-20°	405.8	6.7
20°-30°	569.7	9.4
30°-40°	621.0	10.2
40°-50°	570.8	9.4
50°-60°	448.2	7.4
60°-70°	291.8	4.8
70°-80°	150.2	2.5
80°-90°	40.1	0.7
90°-100°	31.9	0.5
100°-110°	118.7	2.0
110°-120°	314.9	5.2
120°-130°	522.3	8.6
130°-140°	554.8	9.1
140°-150°	515.6	8.5
150°-160°	414.5	6.8
160°-170°	267.1	4.4
170°-180°	91.9	1.5
0°-30°	1123.3	18.5
0°-40°	1744.3	28.7
0°-60°	2763.3	45.5
0°-90°	3245.3	53.4
90°-120°	465.5	7.7
90°-150°	2058.1	33.9
90°-180°	2832.0	46.6
0°-180°	6077.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1577	1577	1577	1577	1577	
5°	1577	1570	1551	1564	1560	150
15°	1500	1484	1436	1409	1395	423
25°	1362	1316	1222	1163	1142	626
35°	1173	1100	975	885	853	734
45°	959	864	714	612	578	741
55°	729	618	464	378	351	652
65°	492	377	248	200	196	488
75°	262	163	114	104	103	278
85°	61	31	27	27	27	70
90°	1	8	14	18	19	6
95°	45	22	27	31	30	54
105°	212	233	43	50	53	227
115°	402	414	431	108	57	396
125°	568	577	591	596	598	507
135°	703	714	721	728	726	543
145°	816	815	827	832	828	510
155°	898	892	900	904	899	414
165°	946	942	944	949	944	267
175°	968	963	964	969	962	92
180°	966	966	966	966	966	

TEST NUMBER: P926213

CATALOG NUMBER: DFN2DIP-TR3F0-040D030US950-RLLONL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1577.2	1577.2	1577.2	1577.2	1577.2
2.5°	1584.3	1577.2	1561.4	1575.8	1572.9
5°	1577.2	1570.0	1551.4	1564.3	1560.1
7.5°	1564.3	1555.8	1535.8	1541.4	1534.3
10°	1547.2	1537.2	1508.7	1504.3	1495.9
12.5°	1525.8	1512.9	1474.3	1465.8	1450.1
15°	1500.1	1484.3	1435.9	1408.8	1394.6
17.5°	1470.1	1447.2	1387.2	1355.9	1333.0
20°	1435.9	1407.2	1335.9	1300.3	1268.8
22.5°	1398.8	1365.9	1283.0	1234.6	1213.3
25°	1361.6	1315.9	1221.7	1163.3	1141.7
27.5°	1317.5	1268.8	1164.6	1097.6	1064.7
30°	1270.3	1216.0	1101.8	1029.1	990.5
32.5°	1224.6	1158.9	1042.0	956.3	920.5
35°	1173.3	1100.4	974.9	884.9	853.4
37.5°	1123.3	1044.7	912.0	813.5	777.9
40°	1070.5	984.9	846.4	745.1	708.0
42.5°	1016.2	924.9	780.8	675.1	639.5
45°	959.2	863.5	713.7	612.3	578.0
47.5°	905.0	803.6	649.5	548.1	516.7
50°	845.0	743.6	586.6	488.1	458.2
52.5°	786.4	679.3	526.7	432.4	405.4
55°	729.3	618.0	463.8	378.3	351.2
57.5°	670.9	556.7	408.2	328.3	305.5
60°	610.8	496.7	349.6	276.9	254.1
62.5°	552.5	438.3	299.7	231.2	219.9
65°	492.5	376.7	248.3	199.9	195.5
67.5°	435.4	319.7	199.9	175.5	171.2
70°	375.4	264.1	165.5	151.3	145.5
72.5°	318.3	212.6	138.4	127.1	124.2
75°	262.5	162.7	114.2	104.2	102.8
77.5°	207.0	115.5	90.0	84.2	81.3
80°	155.5	82.8	68.4	62.9	62.9
82.5°	108.5	55.7	47.1	44.2	44.2
85°	61.3	31.4	27.1	27.1	27.1
87.5°	22.9	11.4	11.4	10.0	10.0
90°	0.7	8.4	13.9	17.6	18.8
92.5°	17.6	14.7	16.8	18.2	18.8
95°	45.4	22.3	27.2	30.8	30.1
97.5°	81.8	24.5	35.6	37.8	38.4
100°	123.7	28.0	39.9	45.4	46.8
102.5°	169.8	168.5	41.2	48.8	51.0
105°	212.5	233.4	42.6	50.3	53.1
107.5°	262.1	279.5	44.1	51.7	54.6
110°	309.7	324.3	122.3	52.5	55.2



TEST NUMBER: P926213

CATALOG NUMBER: DFN2DIP-TR3F0-040D030US950-RLLONL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	354.4	366.9	355.1	53.8	55.9
115°	401.8	413.7	431.2	107.6	57.3
117.5°	443.1	457.1	469.0	369.0	185.9
120°	489.2	499.7	512.3	520.7	426.3
122.5°	528.3	539.6	553.6	557.7	558.5
125°	568.2	577.3	590.6	595.5	597.6
127.5°	604.5	614.3	624.9	631.8	632.5
130°	638.8	650.1	657.7	665.3	664.7
132.5°	673.7	682.9	690.5	696.8	696.1
135°	703.1	714.4	720.6	727.6	726.2
137.5°	733.8	742.2	749.3	756.2	754.1
140°	763.9	769.5	777.1	783.4	780.0
142.5°	789.1	794.0	803.1	808.6	805.2
145°	815.7	814.9	826.8	831.7	828.2
147.5°	838.7	836.6	848.5	851.9	849.2
150°	861.1	856.2	867.4	871.5	868.0
152.5°	879.9	874.3	884.8	889.0	884.2
155°	898.1	891.9	900.2	904.4	898.9
157.5°	912.8	907.3	913.6	918.4	912.8
160°	925.4	921.2	925.4	929.6	924.6
162.5°	936.5	932.3	935.9	940.7	934.4
165°	946.3	942.2	944.3	949.1	944.3
167.5°	954.0	949.8	951.9	956.9	950.6
170°	960.3	956.1	957.5	962.4	956.1
172.5°	964.5	960.3	961.7	966.6	960.3
175°	967.9	963.1	964.5	969.4	962.4
177.5°	969.4	964.5	965.3	970.1	963.8
180°	965.9	965.9	965.9	965.9	965.9

TEST NUMBER: P926213

CATALOG NUMBER: DFN2DIP-TR3F0-040D030US950-RLONL

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	9.76	10.61	10.69	11.56	12.79	5.73	6.59	6.67	7.54	8.76
	3H	11.43	12.19	12.37	13.15	14.40	6.92	7.69	7.86	8.64	9.89
	4H	12.03	12.76	12.99	13.72	14.97	7.37	8.09	8.33	9.05	10.31
	6H	12.44	13.11	13.42	14.08	15.35	7.68	8.35	8.65	9.32	10.59
	8H	12.57	13.20	13.55	14.19	15.45	7.77	8.41	8.75	9.39	10.66
	12H	12.63	13.23	13.61	14.21	15.50	7.81	8.42	8.80	9.39	10.69
4H	2H	9.78	10.50	10.74	11.46	12.72	6.33	7.05	7.29	8.01	9.27
	3H	11.60	12.20	12.57	13.19	14.46	7.67	8.27	8.65	9.27	10.54
	4H	12.28	12.83	13.27	13.82	15.11	8.22	8.77	9.20	9.75	11.05
	6H	12.79	13.26	13.79	14.27	15.57	8.63	9.10	9.63	10.11	11.41
	8H	12.96	13.40	13.96	14.40	15.71	8.76	9.20	9.76	10.20	11.51
	12H	13.05	13.45	14.07	14.47	15.78	8.82	9.22	9.84	10.24	11.55
8H	4H	12.25	12.69	13.25	13.69	15.00	8.49	8.93	9.49	9.94	11.24
	6H	12.81	13.17	13.83	14.22	15.52	9.00	9.37	10.03	10.41	11.72
	8H	13.02	13.34	14.05	14.37	15.69	9.19	9.51	10.22	10.54	11.87
	12H	13.15	13.44	14.19	14.46	15.83	9.31	9.59	10.34	10.61	11.98
12H	4H	12.20	12.60	13.22	13.62	14.93	8.50	8.90	9.51	9.91	11.23
	6H	12.78	13.11	13.81	14.13	15.46	9.05	9.37	10.08	10.40	11.73
	8H	13.00	13.28	14.03	14.30	15.67	9.26	9.54	10.29	10.56	11.93

END OF REPORT