

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: P920666

Luminaire Tested: DFN2DIP-TR2F0-030D060US935-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P920666
REPORT IS A COMBINATION OF REPORTS P900264 AND P897145
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR2F0-030D060US935-RLLFLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

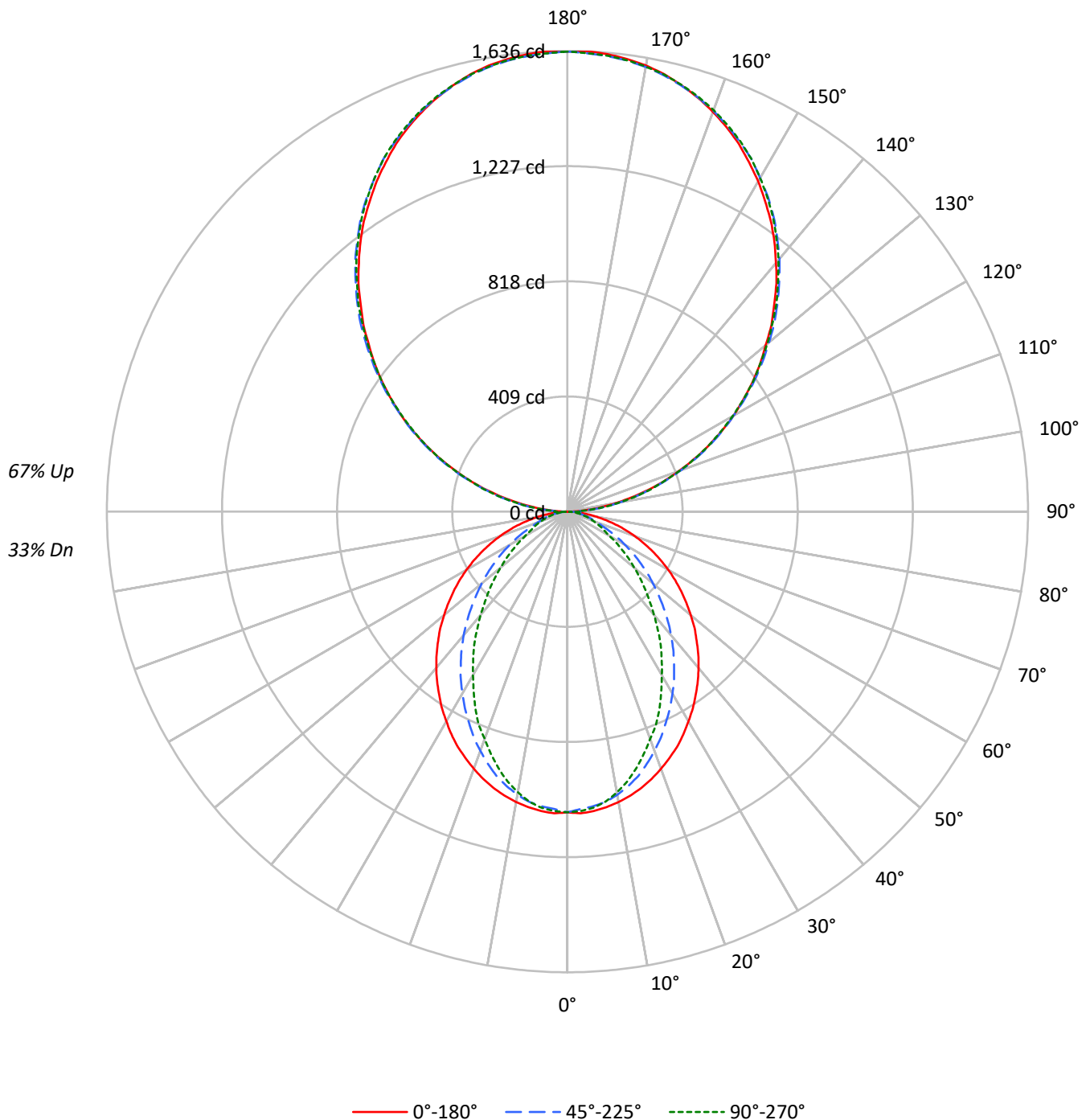
Lumens per Lamp: N/A
Luminaire Lumens: 6767.4 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.04' x L: 2.36' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 73.6
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: P920666

CATALOG NUMBER: DFN2DIP-TR2F0-030D060US935-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P920666

CATALOG NUMBER: DFN2DIP-TR2F0-030D060US935-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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40
1	94	90	86	83	85	81	78	75	65	63	61	50	48	47	36	35	34
2	86	79	73	68	77	71	67	62	57	54	51	44	42	40	32	31	29
3	79	70	63	57	71	63	57	52	51	46	43	39	36	34	29	27	25
4	72	62	54	49	65	56	50	45	45	41	37	35	32	29	26	24	22
5	66	55	47	42	59	50	43	38	40	36	32	32	28	26	23	21	19
6	61	49	42	36	55	45	38	33	36	32	28	29	25	23	21	19	17
7	56	45	37	32	51	41	34	29	33	28	25	26	23	20	19	17	15
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	16	14
9	49	37	30	25	44	34	27	23	28	23	20	22	19	16	17	14	13
10	45	34	27	22	41	31	25	21	25	21	18	20	17	15	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2381	2381	2381
5°	2381	2338	2354
10°	2354	2287	2274
15°	2318	2206	2151
20°	2272	2097	2003
25°	2224	1976	1859
30°	2162	1852	1679
35°	2100	1719	1521
40°	2037	1582	1340
45°	1965	1431	1176
50°	1889	1279	1017
55°	1810	1118	864
60°	1718	950	707
65°	1613	779	632
70°	1484	620	566
75°	1322	537	507
80°	1091	435	427
85°	716	270	300

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 2134 cd/sqm

TEST NUMBER: P920666

CATALOG NUMBER: DFN2DIP-TR2F0-030D060US935-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.1	1.5
10°-20°	274.7	4.1
20°-30°	385.6	5.7
30°-40°	420.3	6.2
40°-50°	386.3	5.7
50°-60°	303.4	4.5
60°-70°	197.5	2.9
70°-80°	101.7	1.5
80°-90°	30.6	0.5
90°-100°	101.1	1.5
100°-110°	321.2	4.7
110°-120°	549.7	8.1
120°-130°	723.0	10.7
130°-140°	811.5	12.0
140°-150°	795.8	11.8
150°-160°	667.5	9.9
160°-170°	442.7	6.5
170°-180°	154.7	2.3
0°-30°	760.3	11.2
0°-40°	1180.7	17.4
0°-60°	1870.4	27.6
0°-90°	2200.2	32.5
90°-120°	972.0	14.4
90°-150°	3302.3	48.8
90°-180°	4567.0	67.5
0°-180°	6767.4	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°	2	18	48	45	47	7
95°	72	86	88	88	86	80
105°	296	300	303	306	306	313
115°	552	560	557	556	552	546
125°	802	815	811	806	805	717
135°	1038	1053	1056	1055	1051	802
145°	1260	1270	1278	1279	1274	787
155°	1441	1445	1449	1456	1452	663
165°	1567	1566	1566	1576	1569	442
175°	1631	1627	1624	1634	1625	155
180°	1634	1634	1634	1634	1634	

TEST NUMBER: P920666

CATALOG NUMBER: DFN2DIP-TR2F0-030D060US935-RLLFLL

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°	1.5	17.7	48.3	45.3	46.8
92.5°	30.6	41.4	42.9	44.3	44.3
95°	71.9	85.7	88.2	88.2	85.7
97.5°	119.7	132.5	137.9	137.9	137.9
100°	174.9	186.1	190.1	190.1	188.6
102.5°	233.0	241.3	246.8	248.2	246.8
105°	296.5	300.5	303.4	305.9	305.9
107.5°	359.6	365.5	365.5	366.4	359.6
110°	420.7	428.5	428.5	428.5	424.6

TEST NUMBER: P920666

CATALOG NUMBER: DFN2DIP-TR2F0-030D060US935-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	486.6	495.0	493.5	489.6	486.6
115°	551.6	559.6	557.1	555.6	551.6
117.5°	616.2	627.1	620.1	616.2	612.3
120°	681.2	692.1	681.2	681.2	676.7
122.5°	740.3	754.1	747.2	743.3	740.3
125°	802.4	814.7	810.7	806.3	804.9
127.5°	863.0	878.2	872.8	866.9	863.0
130°	919.6	937.4	934.9	931.9	926.5
132.5°	983.2	996.9	997.9	991.0	987.0
135°	1037.8	1053.1	1056.0	1054.6	1050.6
137.5°	1098.9	1111.2	1113.7	1112.7	1106.8
140°	1152.6	1164.9	1171.8	1171.8	1166.4
142.5°	1207.7	1220.0	1224.0	1225.5	1220.0
145°	1260.0	1269.8	1277.7	1279.2	1273.8
147.5°	1306.7	1319.0	1325.0	1327.4	1322.0
150°	1355.0	1363.4	1368.8	1373.2	1368.8
152.5°	1397.8	1406.3	1413.2	1418.6	1413.2
155°	1440.7	1444.7	1449.1	1456.0	1451.6
157.5°	1477.6	1480.7	1483.1	1493.0	1486.1
160°	1510.7	1513.6	1515.1	1523.4	1517.6
162.5°	1541.2	1541.2	1542.6	1552.0	1545.1
165°	1567.3	1565.8	1565.8	1575.7	1568.8
167.5°	1591.0	1586.6	1586.6	1596.4	1589.5
170°	1608.7	1604.7	1603.3	1613.1	1604.7
172.5°	1621.0	1617.0	1615.6	1625.4	1617.0
175°	1630.8	1626.9	1623.9	1633.8	1625.4
177.5°	1636.2	1632.4	1629.4	1637.7	1629.4
180°	1633.8	1633.8	1633.8	1633.8	1633.8

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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	8.13	8.84	9.23	9.93	11.43	4.11	4.82	5.21	5.91	7.41
	3H	9.78	10.41	10.88	11.51	13.03	5.28	5.91	6.38	7.01	8.53
	4H	10.36	10.96	11.48	12.06	13.59	5.71	6.31	6.83	7.41	8.94
	6H	10.76	11.31	11.88	12.41	13.95	6.01	6.56	7.14	7.67	9.20
	8H	10.87	11.39	12.00	12.51	14.04	6.09	6.61	7.22	7.73	9.26
	12H	10.92	11.42	12.05	12.53	14.08	6.12	6.62	7.26	7.73	9.29
4H	2H	8.13	8.73	9.26	9.83	11.36	4.68	5.28	5.80	6.38	7.91
	3H	9.92	10.42	11.05	11.55	13.09	6.00	6.50	7.13	7.63	9.16
	4H	10.59	11.05	11.72	12.17	13.72	6.53	6.99	7.66	8.10	9.66
	6H	11.08	11.47	12.22	12.61	14.16	6.92	7.32	8.06	8.46	10.01
	8H	11.24	11.60	12.38	12.73	14.30	7.04	7.41	8.18	8.54	10.11
	12H	11.31	11.64	12.47	12.79	14.36	7.09	7.42	8.25	8.57	10.14
8H	4H	10.54	10.91	11.68	12.04	13.61	6.79	7.15	7.93	8.28	9.85
	6H	11.08	11.38	12.24	12.56	14.12	7.28	7.58	8.44	8.75	10.32
	8H	11.28	11.54	12.45	12.70	14.28	7.46	7.72	8.62	8.87	10.46
	12H	11.40	11.63	12.57	12.78	14.40	7.56	7.79	8.73	8.94	10.56
12H	4H	10.49	10.82	11.65	11.97	13.54	6.78	7.11	7.94	8.26	9.83
	6H	11.05	11.32	12.22	12.47	14.05	7.32	7.58	8.49	8.74	10.32
	8H	11.25	11.48	12.42	12.63	14.25	7.51	7.74	8.68	8.89	10.51

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

8 of 8