

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: P915194

Luminaire Tested: DFN2DIP-TR2F0-030D020US927-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P915194
REPORT IS A COMBINATION OF REPORTS P900224 AND P897145
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR2F0-030D020US927-RLLFLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

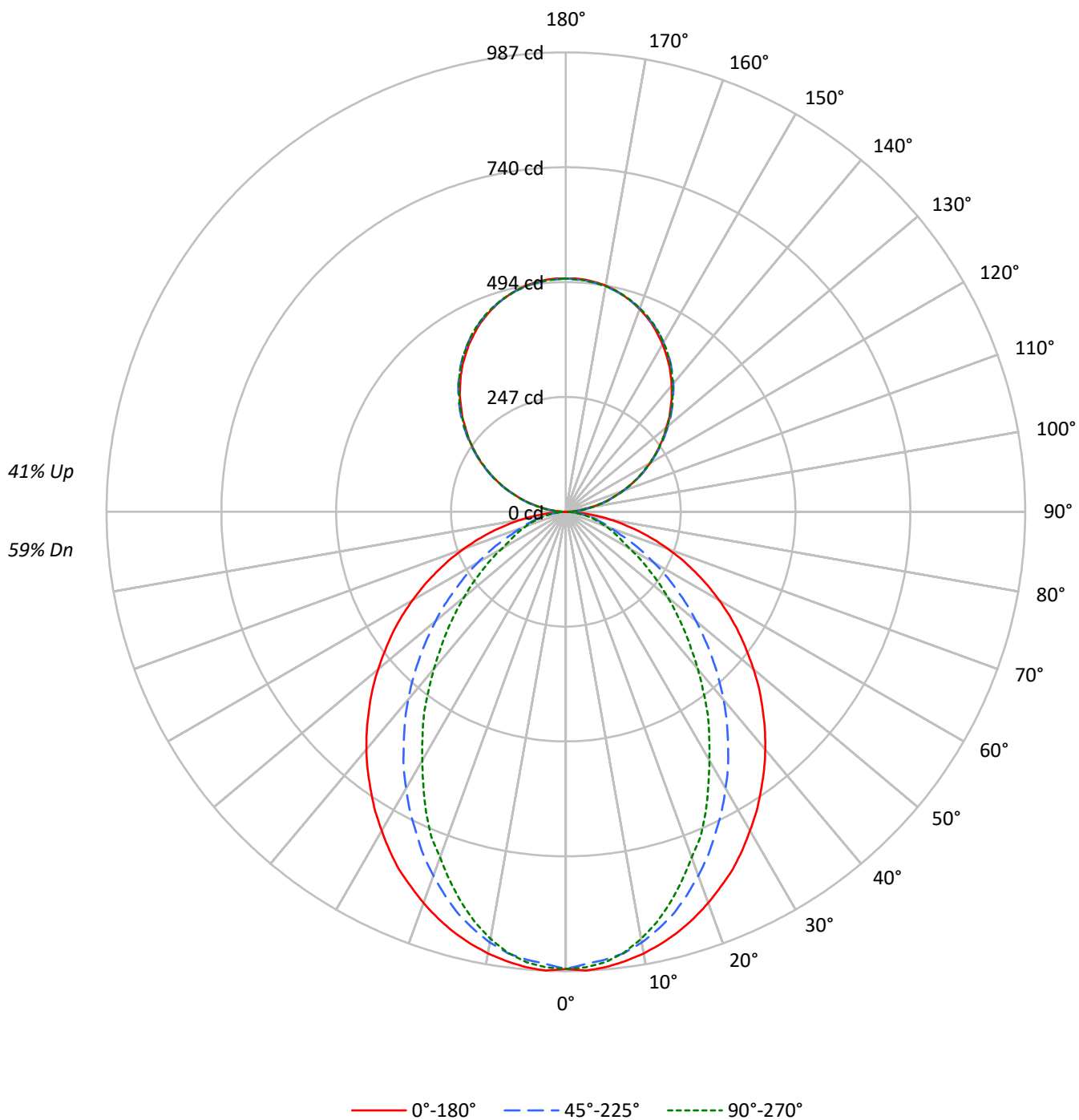
Lumens per Lamp: N/A
Luminaire Lumens: 3422.2 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.04' x L: 2.36' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 40.5
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: P915194

CATALOG NUMBER: DFN2DIP-TR2F0-030D020US927-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P915194

CATALOG NUMBER: DFN2DIP-TR2F0-030D020US927-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°	2191	2191	2191
5°	2191	2151	2166
10°	2166	2104	2092
15°	2133	2030	1980
20°	2090	1929	1843
25°	2047	1818	1711
30°	1989	1704	1545
35°	1932	1582	1400
40°	1875	1456	1233
45°	1808	1317	1083
50°	1738	1177	935
55°	1665	1028	795
60°	1581	874	651
65°	1484	717	582
70°	1366	571	521
75°	1217	494	466
80°	1004	401	393
85°	659	249	277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1808 cd/sqm

TEST NUMBER: P915194

CATALOG NUMBER: DFN2DIP-TR2F0-030D020US927-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.1	2.7
10°-20°	252.7	7.4
20°-30°	354.8	10.4
30°-40°	386.8	11.3
40°-50°	355.5	10.4
50°-60°	279.2	8.2
60°-70°	181.7	5.3
70°-80°	93.5	2.7
80°-90°	25.3	0.7
90°-100°	31.0	0.9
100°-110°	98.5	2.9
110°-120°	168.6	4.9
120°-130°	221.7	6.5
130°-140°	248.9	7.3
140°-150°	244.1	7.1
150°-160°	204.7	6.0
160°-170°	135.8	4.0
170°-180°	47.5	1.4
0°-30°	699.6	20.4
0°-40°	1086.3	31.7
0°-60°	1720.9	50.3
0°-90°	2021.5	59.1
90°-120°	298.1	8.7
90°-150°	1012.8	29.6
90°-180°	1401.0	40.9
0°-180°	3422.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	982	982	982	982	982	
5°	982	978	966	974	972	93
15°	934	924	894	877	868	263
25°	848	820	761	724	711	390
35°	731	685	607	551	532	457
45°	597	538	444	381	360	461
55°	454	385	289	236	219	406
65°	307	235	155	124	122	304
75°	164	101	71	65	64	173
85°	38	20	17	17	17	44
90°	0	6	15	14	14	3
95°	22	26	27	27	26	25
105°	91	92	93	94	94	96
115°	169	172	171	170	169	167
125°	246	250	249	247	247	220
135°	318	323	324	323	322	246
145°	386	389	392	392	391	241
155°	442	443	444	447	445	203
165°	481	480	480	483	481	136
175°	500	499	498	501	498	48
180°	501	501	501	501	501	

TEST NUMBER: P915194

CATALOG NUMBER: DFN2DIP-TR2F0-030D020US927-RLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	982.2	982.2	982.2	982.2	982.2
2.5°	986.7	982.2	972.4	981.4	979.6
5°	982.2	977.8	966.2	974.2	971.5
7.5°	974.2	968.9	956.5	960.0	955.5
10°	963.5	957.4	939.6	936.8	931.6
12.5°	950.2	942.2	918.2	912.9	903.1
15°	934.2	924.4	894.2	877.3	868.5
17.5°	915.5	901.3	864.0	844.5	830.2
20°	894.2	876.4	831.9	809.8	790.2
22.5°	871.2	850.6	799.1	768.9	755.6
25°	848.0	819.5	760.9	724.4	711.1
27.5°	820.5	790.2	725.3	683.6	663.1
30°	791.2	757.3	686.2	641.0	616.9
32.5°	762.6	721.8	649.0	595.6	573.3
35°	730.7	685.3	607.1	551.1	531.6
37.5°	699.6	650.6	568.0	506.6	484.5
40°	666.7	613.4	527.1	464.0	440.9
42.5°	632.9	576.1	486.2	420.4	398.2
45°	597.4	537.7	444.5	381.3	360.0
47.5°	563.6	500.5	404.5	341.3	321.8
50°	526.2	463.1	365.4	304.0	285.3
52.5°	489.7	423.1	328.0	269.3	252.5
55°	454.2	384.8	288.8	235.6	218.7
57.5°	417.8	346.7	254.3	204.5	190.2
60°	380.4	309.3	217.8	172.5	158.3
62.5°	344.0	272.9	186.6	144.0	137.0
65°	306.7	234.6	154.6	124.5	121.8
67.5°	271.2	199.1	124.5	109.3	106.6
70°	233.8	164.5	103.1	94.2	90.6
72.5°	198.2	132.4	86.2	79.1	77.3
75°	163.5	101.3	71.1	64.9	64.0
77.5°	128.9	71.9	56.0	52.4	50.6
80°	96.9	51.6	42.6	39.1	39.1
82.5°	67.5	34.7	29.3	27.6	27.6
85°	38.2	19.5	16.9	16.9	16.9
87.5°	14.3	7.1	7.1	6.3	6.3
90°	0.5	5.5	14.8	13.9	14.3
92.5°	9.3	12.7	13.2	13.6	13.6
95°	22.0	26.3	27.0	27.0	26.3
97.5°	36.7	40.6	42.3	42.3	42.3
100°	53.6	57.1	58.3	58.3	57.8
102.5°	71.5	74.0	75.7	76.1	75.7
105°	90.9	92.1	93.1	93.8	93.8
107.5°	110.3	112.1	112.1	112.4	110.3
110°	129.0	131.4	131.4	131.4	130.2

TEST NUMBER: P915194

CATALOG NUMBER: DFN2DIP-TR2F0-030D020US927-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	149.2	151.8	151.4	150.1	149.2
115°	169.2	171.6	170.9	170.4	169.2
117.5°	189.0	192.3	190.2	189.0	187.7
120°	208.9	212.2	208.9	208.9	207.6
122.5°	227.0	231.2	229.2	228.0	227.0
125°	246.1	249.9	248.7	247.3	246.8
127.5°	264.7	269.3	267.7	265.9	264.7
130°	282.0	287.5	286.7	285.8	284.2
132.5°	301.5	305.8	306.0	304.0	302.7
135°	318.3	323.0	323.8	323.4	322.2
137.5°	337.0	340.8	341.6	341.3	339.4
140°	353.5	357.3	359.4	359.4	357.7
142.5°	370.4	374.1	375.4	375.8	374.1
145°	386.4	389.4	391.9	392.3	390.6
147.5°	400.8	404.6	406.4	407.1	405.4
150°	415.6	418.1	419.8	421.1	419.8
152.5°	428.7	431.3	433.4	435.1	433.4
155°	441.9	443.1	444.4	446.6	445.2
157.5°	453.2	454.1	454.9	457.9	455.7
160°	463.3	464.2	464.7	467.2	465.4
162.5°	472.7	472.7	473.1	476.0	473.9
165°	480.7	480.2	480.2	483.2	481.2
167.5°	487.9	486.6	486.6	489.6	487.5
170°	493.4	492.2	491.7	494.7	492.2
172.5°	497.2	495.9	495.5	498.5	495.9
175°	500.2	499.0	498.0	501.1	498.5
177.5°	501.8	500.7	499.7	502.2	499.7
180°	501.1	501.1	501.1	501.1	501.1

TEST NUMBER: P915194

CATALOG NUMBER: DFN2DIP-TR2F0-030D020US927-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	10.55	11.46	11.43	12.36	13.50	6.53	7.44	7.41	8.34	9.48
	3H	12.21	13.02	13.10	13.93	15.10	7.71	8.52	8.61	9.43	10.60
	4H	12.81	13.57	13.72	14.49	15.66	8.15	8.92	9.06	9.83	11.01
	6H	13.21	13.92	14.13	14.84	16.03	8.46	9.17	9.39	10.09	11.28
	8H	13.33	14.00	14.26	14.94	16.13	8.55	9.22	9.48	10.16	11.34
	12H	13.39	14.03	14.32	14.96	16.17	8.59	9.23	9.52	10.16	11.37
4H	2H	10.57	11.34	11.49	12.26	13.43	7.12	7.89	8.04	8.80	9.98
	3H	12.38	13.02	13.31	13.97	15.15	8.46	9.10	9.39	10.04	11.23
	4H	13.06	13.64	14.00	14.58	15.80	9.00	9.58	9.94	10.52	11.73
	6H	13.56	14.06	14.51	15.02	16.24	9.40	9.91	10.35	10.87	12.08
	8H	13.72	14.19	14.67	15.14	16.37	9.53	9.99	10.48	10.95	12.18
	12H	13.81	14.23	14.78	15.20	16.43	9.59	10.01	10.56	10.98	12.21
8H	4H	13.03	13.50	13.98	14.45	15.68	9.27	9.74	10.22	10.70	11.92
	6H	13.57	13.96	14.55	14.96	16.18	9.77	10.16	10.75	11.15	12.38
	8H	13.77	14.12	14.76	15.10	16.35	9.95	10.29	10.94	11.28	12.52
	12H	13.90	14.20	14.89	15.18	16.47	10.06	10.36	11.05	11.34	12.63
12H	4H	12.98	13.41	13.95	14.38	15.61	9.28	9.70	10.25	10.67	11.90
	6H	13.55	13.89	14.53	14.88	16.12	9.81	10.15	10.80	11.14	12.39
	8H	13.75	14.06	14.74	15.04	16.33	10.01	10.31	11.00	11.29	12.59