

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: P913766

Luminaire Tested: DFN2DIP-PN2F0-020D030US927-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P913766
REPORT IS A COMBINATION OF REPORTS P899472 AND P896349
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN2F0-020D030US927-RLLFLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

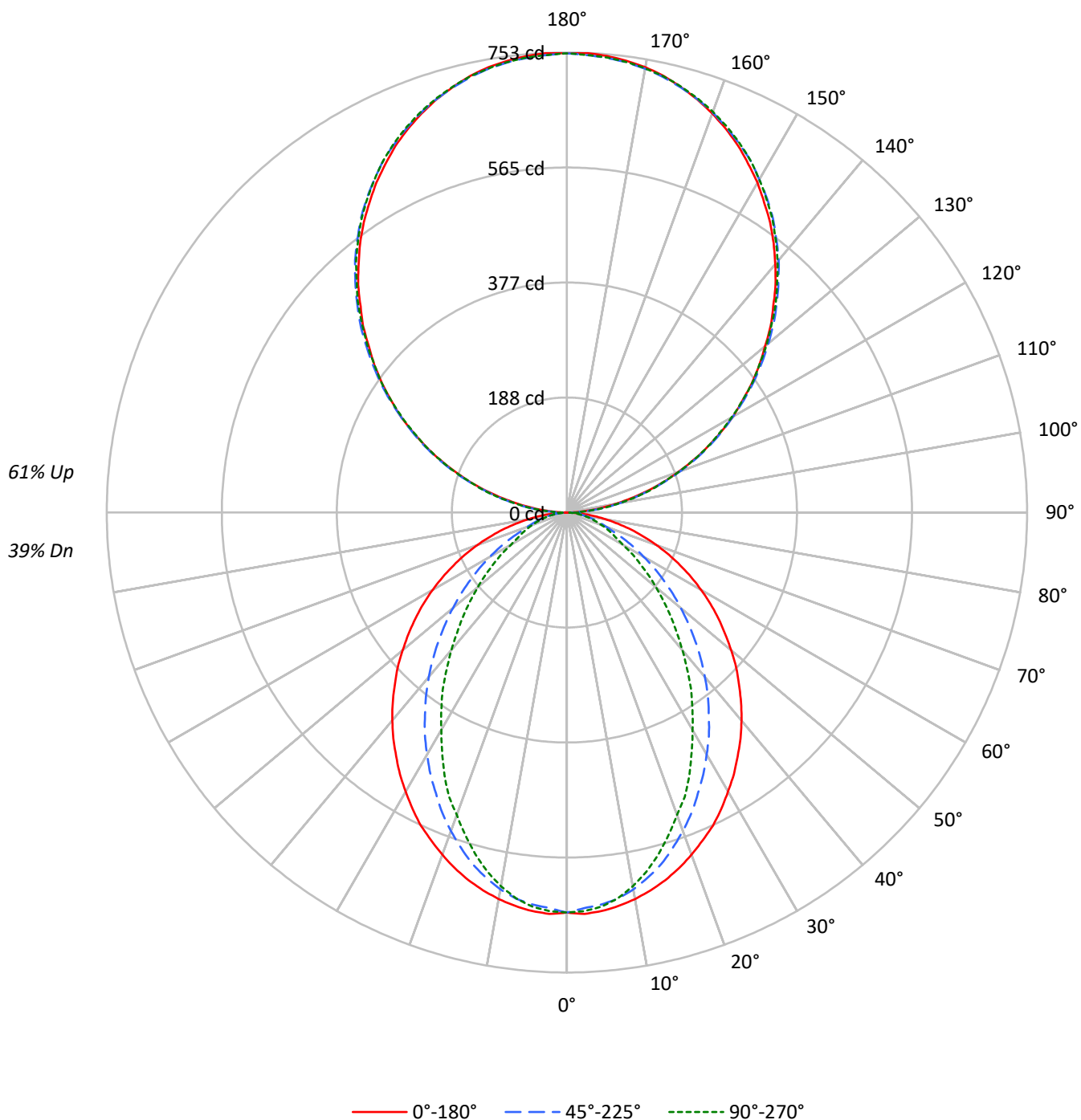
Lumens per Lamp: N/A
Luminaire Lumens: 3450.0 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.17' x L: 2.29' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 35.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P913766

CATALOG NUMBER: DFN2DIP-PN2F0-020D030US927-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P913766

CATALOG NUMBER: DFN2DIP-PN2F0-020D030US927-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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46
1	96	92	88	85	87	83	80	78	68	66	64	54	53	51	41	40	40
2	87	80	75	70	79	73	68	64	60	57	54	48	46	44	37	35	34
3	80	71	64	58	73	65	59	54	53	49	46	43	40	37	33	31	29
4	73	63	55	50	66	58	51	46	48	43	39	38	35	32	30	27	26
5	67	56	48	43	61	52	45	40	43	38	34	35	31	28	27	24	22
6	62	51	43	37	56	46	40	35	39	33	30	31	28	25	25	22	20
7	57	46	38	33	52	42	35	30	35	30	26	29	25	22	22	20	18
8	53	41	34	29	49	38	32	27	32	27	23	26	22	20	21	18	16
9	50	38	31	26	45	35	29	24	29	24	21	24	20	18	19	17	15
10	46	35	28	23	42	32	26	22	27	22	19	22	19	16	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1418	1418	1418
5°	1418	1393	1403
10°	1402	1362	1355
15°	1380	1314	1282
20°	1352	1250	1194
25°	1324	1177	1109
30°	1286	1104	1002
35°	1250	1025	908
40°	1212	943	800
45°	1169	854	703
50°	1124	763	608
55°	1076	667	517
60°	1022	567	423
65°	958	465	379
70°	881	370	340
75°	784	321	305
80°	646	260	258
85°	421	161	182

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1169 cd/sqm

TEST NUMBER: P913766

CATALOG NUMBER: DFN2DIP-PN2F0-020D030US927-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	1.8
10°-20°	168.5	4.9
20°-30°	236.5	6.9
30°-40°	257.8	7.5
40°-50°	237.0	6.9
50°-60°	186.1	5.4
60°-70°	121.2	3.5
70°-80°	62.3	1.8
80°-90°	18.1	0.5
90°-100°	46.5	1.3
100°-110°	147.8	4.3
110°-120°	252.9	7.3
120°-130°	332.6	9.6
130°-140°	373.3	10.8
140°-150°	366.1	10.6
150°-160°	307.1	8.9
160°-170°	203.7	5.9
170°-180°	71.2	2.1
0°-30°	466.4	13.5
0°-40°	724.2	21.0
0°-60°	1147.3	33.3
0°-90°	1348.8	39.1
90°-120°	447.2	13.0
90°-150°	1519.2	44.0
90°-180°	2101.0	60.9
0°-180°	3450.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	655	652	644	650	648	62
15°	623	616	596	585	579	176
25°	565	546	507	483	474	260
35°	487	457	405	367	354	305
45°	398	358	296	254	240	308
55°	303	257	193	157	146	271
65°	204	156	103	83	81	203
75°	109	68	47	43	43	115
85°	25	13	11	11	11	29
90°	1	8	22	21	22	3
95°	33	40	41	41	40	37
105°	136	138	140	141	141	144
115°	254	257	256	256	254	251
125°	369	375	373	371	370	330
135°	477	484	486	485	483	369
145°	580	584	588	588	586	362
155°	663	665	667	670	668	305
165°	721	720	720	725	722	203
175°	750	748	747	752	748	71
180°	752	752	752	752	752	

TEST NUMBER: P913766

CATALOG NUMBER: DFN2DIP-PN2F0-020D030US927-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	654.8	654.8	654.8	654.8	654.8
2.5°	657.7	654.8	648.2	654.3	653.1
5°	654.8	651.9	644.1	649.5	647.7
7.5°	649.5	645.9	637.6	640.0	637.0
10°	642.4	638.2	626.4	624.6	621.1
12.5°	633.5	628.1	612.1	608.6	602.1
15°	622.8	616.2	596.1	584.9	579.0
17.5°	610.4	600.9	576.0	562.9	553.5
20°	596.1	584.2	554.7	539.9	526.8
22.5°	580.7	567.1	532.7	512.6	503.7
25°	565.4	546.4	507.2	483.0	474.0
27.5°	547.0	526.8	483.5	455.7	442.0
30°	527.4	504.9	457.5	427.3	411.2
32.5°	508.4	481.2	432.6	397.0	382.2
35°	487.1	456.9	404.8	367.4	354.3
37.5°	466.4	433.7	378.7	337.8	323.0
40°	444.4	408.9	351.4	309.3	293.9
42.5°	421.9	384.0	324.2	280.3	265.5
45°	398.2	358.5	296.4	254.2	240.0
47.5°	375.7	333.7	269.7	227.5	214.5
50°	350.9	308.8	243.6	202.6	190.3
52.5°	326.5	282.0	218.6	179.6	168.3
55°	302.8	256.6	192.6	157.1	145.8
57.5°	278.5	231.1	169.5	136.3	126.8
60°	253.7	206.2	145.2	115.0	105.5
62.5°	229.3	182.0	124.5	96.0	91.3
65°	204.5	156.5	103.1	83.0	81.2
67.5°	180.8	132.7	83.0	72.9	71.1
70°	155.8	109.6	68.7	62.8	60.4
72.5°	132.1	88.2	57.4	52.8	51.6
75°	109.0	67.5	47.4	43.3	42.7
77.5°	86.0	48.0	37.3	34.9	33.7
80°	64.6	34.4	28.4	26.1	26.1
82.5°	45.0	23.1	19.6	18.4	18.4
85°	25.4	13.0	11.2	11.2	11.2
87.5°	9.5	4.8	4.8	4.1	4.1
90°	0.7	8.2	22.2	20.8	21.5
92.5°	14.0	19.0	19.7	20.4	20.4
95°	33.1	39.5	40.6	40.6	39.5
97.5°	55.1	60.9	63.5	63.5	63.5
100°	80.4	85.6	87.5	87.5	86.8
102.5°	107.2	111.1	113.5	114.2	113.5
105°	136.4	138.2	139.6	140.7	140.7
107.5°	165.4	168.1	168.1	168.6	165.4
110°	193.5	197.2	197.2	197.2	195.4

TEST NUMBER: P913766

CATALOG NUMBER: DFN2DIP-PN2F0-020D030US927-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	223.9	227.8	227.0	225.2	223.9
115°	253.8	257.4	256.3	255.6	253.8
117.5°	283.4	288.4	285.3	283.4	281.6
120°	313.4	318.4	313.4	313.4	311.3
122.5°	340.6	346.9	343.7	341.9	340.6
125°	369.2	374.8	373.0	370.9	370.3
127.5°	397.0	404.0	401.6	398.8	397.0
130°	423.0	431.2	430.1	428.7	426.2
132.5°	452.3	458.6	459.1	455.9	454.1
135°	477.4	484.4	485.8	485.1	483.3
137.5°	505.5	511.2	512.3	511.9	509.1
140°	530.2	535.9	539.1	539.1	536.5
142.5°	555.6	561.3	563.1	563.8	561.3
145°	579.6	584.2	587.8	588.4	586.0
147.5°	601.2	606.8	609.5	610.7	608.2
150°	623.4	627.2	629.7	631.8	629.7
152.5°	643.1	646.9	650.1	652.6	650.1
155°	662.8	664.6	666.6	669.8	667.8
157.5°	679.8	681.1	682.3	686.8	683.7
160°	695.0	696.3	697.0	700.8	698.1
162.5°	709.0	709.0	709.7	714.0	710.8
165°	721.0	720.3	720.3	724.8	721.7
167.5°	731.9	729.8	729.8	734.4	731.2
170°	740.1	738.2	737.6	742.1	738.2
172.5°	745.7	743.9	743.2	747.7	743.9
175°	750.3	748.5	747.1	751.6	747.7
177.5°	752.7	750.9	749.6	753.4	749.6
180°	751.6	751.6	751.6	751.6	751.6

TEST NUMBER: P913766

CATALOG NUMBER: DFN2DIP-PN2F0-020D030US927-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	7.13	7.88	8.18	8.93	10.35	3.10	3.85	4.15	4.90	6.32
	3H	8.78	9.45	9.84	10.51	11.95	4.26	4.93	5.33	5.99	7.43
	4H	9.37	10.01	10.44	11.07	12.52	4.70	5.33	5.77	6.40	7.84
	6H	9.77	10.36	10.86	11.42	12.88	5.00	5.58	6.08	6.65	8.11
	8H	9.89	10.44	10.97	11.53	12.98	5.08	5.64	6.17	6.72	8.17
	12H	9.94	10.47	11.03	11.54	13.02	5.11	5.64	6.20	6.72	8.19
4H	2H	7.13	7.77	8.21	8.83	10.28	3.67	4.31	4.75	5.37	6.82
	3H	8.93	9.46	10.02	10.55	12.01	5.00	5.52	6.08	6.61	8.07
	4H	9.61	10.09	10.70	11.17	12.65	5.53	6.01	6.62	7.09	8.57
	6H	10.10	10.51	11.20	11.61	13.09	5.92	6.34	7.02	7.44	8.92
	8H	10.26	10.65	11.36	11.74	13.23	6.04	6.43	7.14	7.52	9.01
	12H	10.34	10.69	11.45	11.80	13.29	6.09	6.44	7.21	7.55	9.05
8H	4H	9.56	9.95	10.66	11.05	12.54	5.79	6.18	6.89	7.27	8.76
	6H	10.10	10.42	11.23	11.56	13.05	6.28	6.60	7.40	7.74	9.22
	8H	10.31	10.59	11.43	11.71	13.21	6.46	6.74	7.59	7.86	9.36
	12H	10.43	10.67	11.56	11.79	13.33	6.56	6.81	7.69	7.92	9.46
12H	4H	9.51	9.86	10.63	10.97	12.46	5.79	6.14	6.90	7.24	8.74
	6H	10.08	10.36	11.21	11.48	12.98	6.32	6.60	7.45	7.72	9.23
	8H	10.28	10.53	11.41	11.64	13.19	6.52	6.76	7.65	7.88	9.42