

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: P915283

Luminaire Tested: DFN2DIP-TR3F0-030D050US927-RLLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P915283
REPORT IS A COMBINATION OF REPORTS P901820 AND P898751
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-030D050US927-RLLONL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

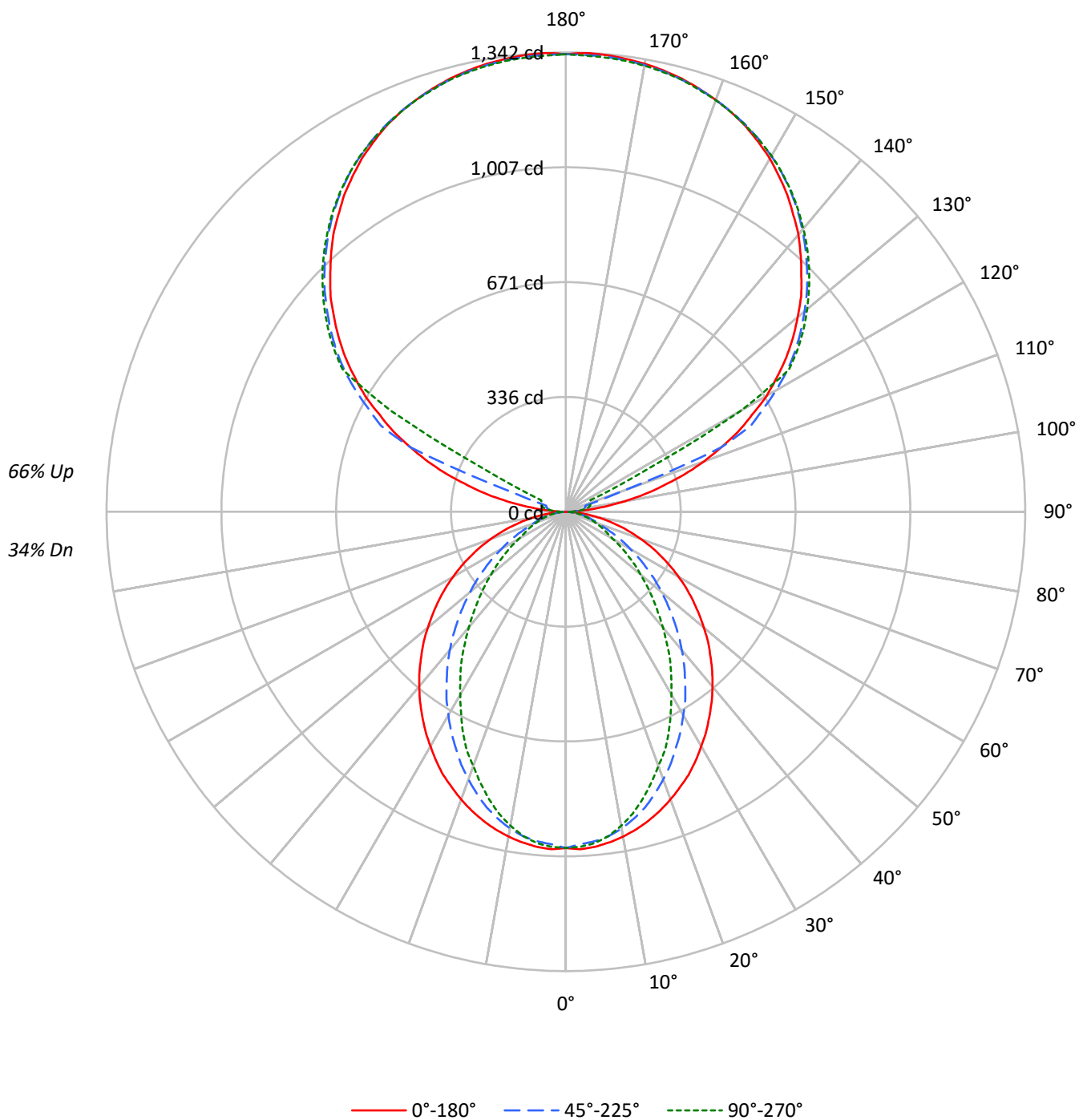
Lumens per Lamp: N/A
Luminaire Lumens: 5941.4 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 61.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41
1	95	90	87	83	85	82	79	76	66	64	62	51	49	48	37	36	36
2	86	79	74	69	78	72	67	63	58	54	52	45	43	41	33	32	30
3	79	70	63	58	71	63	58	53	51	47	44	40	37	35	30	28	26
4	72	62	55	49	65	56	50	45	46	41	37	36	33	30	27	25	23
5	66	55	48	42	60	50	44	39	41	36	32	32	29	26	24	22	20
6	61	50	42	36	55	45	39	34	37	32	28	29	26	23	22	20	18
7	57	45	37	32	51	41	34	30	34	29	25	27	23	20	20	18	16
8	52	41	33	28	47	37	31	26	31	26	22	24	21	18	19	16	14
9	49	37	30	25	44	34	28	23	28	23	20	22	19	16	17	15	13
10	46	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1224	1224	1224
5°	1225	1204	1211
10°	1212	1179	1171
15°	1195	1139	1110
20°	1172	1084	1034
25°	1149	1023	961
30°	1118	961	869
35°	1087	893	788
40°	1056	824	696
45°	1020	747	612
50°	983	670	530
55°	944	587	452
60°	899	501	371
65°	847	413	333
70°	784	332	300
75°	704	290	271
80°	590	240	232
85°	401	156	170

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1020 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.1	1.5
10°-20°	252.7	4.3
20°-30°	354.8	6.0
30°-40°	386.8	6.5
40°-50°	355.5	6.0
50°-60°	279.2	4.7
60°-70°	181.7	3.1
70°-80°	93.5	1.6
80°-90°	26.2	0.4
90°-100°	44.1	0.7
100°-110°	164.3	2.8
110°-120°	435.8	7.3
120°-130°	722.8	12.2
130°-140°	767.8	12.9
140°-150°	713.6	12.0
150°-160°	573.7	9.7
160°-170°	369.7	6.2
170°-180°	127.2	2.1
0°-30°	699.6	11.8
0°-40°	1086.3	18.3
0°-60°	1720.9	29.0
0°-90°	2022.4	34.0
90°-120°	644.2	10.8
90°-150°	2848.4	47.9
90°-180°	3919.0	66.0
0°-180°	5941.4	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°	1	12	19	24	26	6
95°	63	31	38	43	42	74
105°	294	323	59	70	74	314
115°	556	573	597	149	79	548
125°	786	799	817	824	827	701
135°	973	989	997	1007	1005	752
145°	1129	1128	1144	1151	1146	706
155°	1243	1234	1246	1252	1244	573
165°	1310	1304	1307	1314	1307	370
175°	1340	1333	1335	1342	1332	127
180°	1337	1337	1337	1337	1337	

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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°	1.0	11.6	19.3	24.2	26.1
92.5°	24.2	20.4	23.2	25.2	26.1
95°	62.8	30.9	37.7	42.6	41.6
97.5°	113.1	33.9	49.3	52.3	53.2
100°	171.3	38.7	55.1	62.8	64.8
102.5°	235.0	233.1	57.1	67.7	70.7
105°	294.1	323.1	59.0	69.6	73.5
107.5°	362.7	386.8	61.0	71.5	75.5
110°	428.6	448.8	169.3	72.6	76.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	490.4	507.8	491.4	74.5	77.4
115°	556.2	572.6	596.8	149.0	79.4
117.5°	613.2	632.6	649.1	510.6	257.3
120°	677.1	691.6	709.0	720.6	590.0
122.5°	731.2	746.7	766.1	771.9	772.9
125°	786.3	799.0	817.4	824.1	827.0
127.5°	836.6	850.2	864.8	874.4	875.4
130°	884.1	899.6	910.1	920.8	920.0
132.5°	932.5	945.1	955.6	964.4	963.5
135°	973.1	988.6	997.2	1007.0	1005.0
137.5°	1015.6	1027.2	1037.0	1046.6	1043.8
140°	1057.2	1065.0	1075.5	1084.3	1079.5
142.5°	1092.1	1098.9	1111.4	1119.1	1114.3
145°	1128.9	1127.8	1144.2	1151.0	1146.2
147.5°	1160.7	1157.8	1174.3	1179.1	1175.3
150°	1191.7	1184.9	1200.4	1206.2	1201.3
152.5°	1217.7	1210.1	1224.6	1230.4	1223.6
155°	1242.9	1234.3	1245.9	1251.6	1244.0
157.5°	1263.2	1255.5	1264.2	1271.1	1263.2
160°	1280.7	1274.9	1280.7	1286.4	1279.7
162.5°	1296.1	1290.4	1295.1	1301.9	1293.2
165°	1309.6	1303.9	1306.8	1313.5	1306.8
167.5°	1320.3	1314.5	1317.5	1324.2	1315.5
170°	1329.0	1323.2	1325.2	1331.9	1323.2
172.5°	1334.8	1329.0	1331.0	1337.8	1329.0
175°	1339.7	1332.8	1334.8	1341.6	1331.9
177.5°	1341.6	1334.8	1335.9	1342.6	1333.9
180°	1336.7	1336.7	1336.7	1336.7	1336.7

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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	6.09	6.81	7.18	7.89	9.38	2.07	2.79	3.16	3.87	5.35
	3H	7.75	8.39	8.85	9.48	10.99	3.24	3.88	4.34	4.97	6.48
	4H	8.35	8.95	9.46	10.05	11.56	3.68	4.29	4.79	5.38	6.89
	6H	8.76	9.31	9.87	10.41	11.93	3.99	4.55	5.11	5.65	7.17
	8H	8.88	9.41	10.00	10.52	12.03	4.08	4.61	5.20	5.72	7.23
	12H	8.93	9.43	10.05	10.54	12.07	4.12	4.62	5.24	5.73	7.26
4H	2H	6.09	6.70	7.21	7.79	9.30	2.65	3.25	3.76	4.34	5.85
	3H	7.90	8.41	9.02	9.53	11.05	3.98	4.48	5.10	5.60	7.12
	4H	8.58	9.05	9.71	10.16	11.70	4.52	4.98	5.64	6.09	7.63
	6H	9.08	9.48	10.22	10.61	12.15	4.92	5.32	6.05	6.45	7.98
	8H	9.25	9.62	10.38	10.75	12.29	5.05	5.42	6.18	6.54	8.09
	12H	9.34	9.67	10.48	10.81	12.36	5.10	5.44	6.25	6.57	8.13
8H	4H	8.54	8.91	9.67	10.04	11.58	4.78	5.15	5.91	6.28	7.83
	6H	9.09	9.40	10.25	10.56	12.11	5.29	5.59	6.44	6.76	8.30
	8H	9.30	9.57	10.46	10.72	12.28	5.47	5.74	6.63	6.89	8.45
	12H	9.43	9.66	10.59	10.81	12.41	5.58	5.82	6.75	6.96	8.56
12H	4H	8.49	8.82	9.64	9.96	11.51	4.78	5.12	5.93	6.25	7.81
	6H	9.07	9.33	10.23	10.48	12.05	5.33	5.60	6.49	6.75	8.31
	8H	9.28	9.51	10.44	10.65	12.25	5.53	5.77	6.70	6.91	8.51

END OF REPORT