

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: P915326

Luminaire Tested: DFN2DIP-TR3F0-050D030US927-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P915326
REPORT IS A COMBINATION OF REPORTS P900276 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-050D030US927-RLLFLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

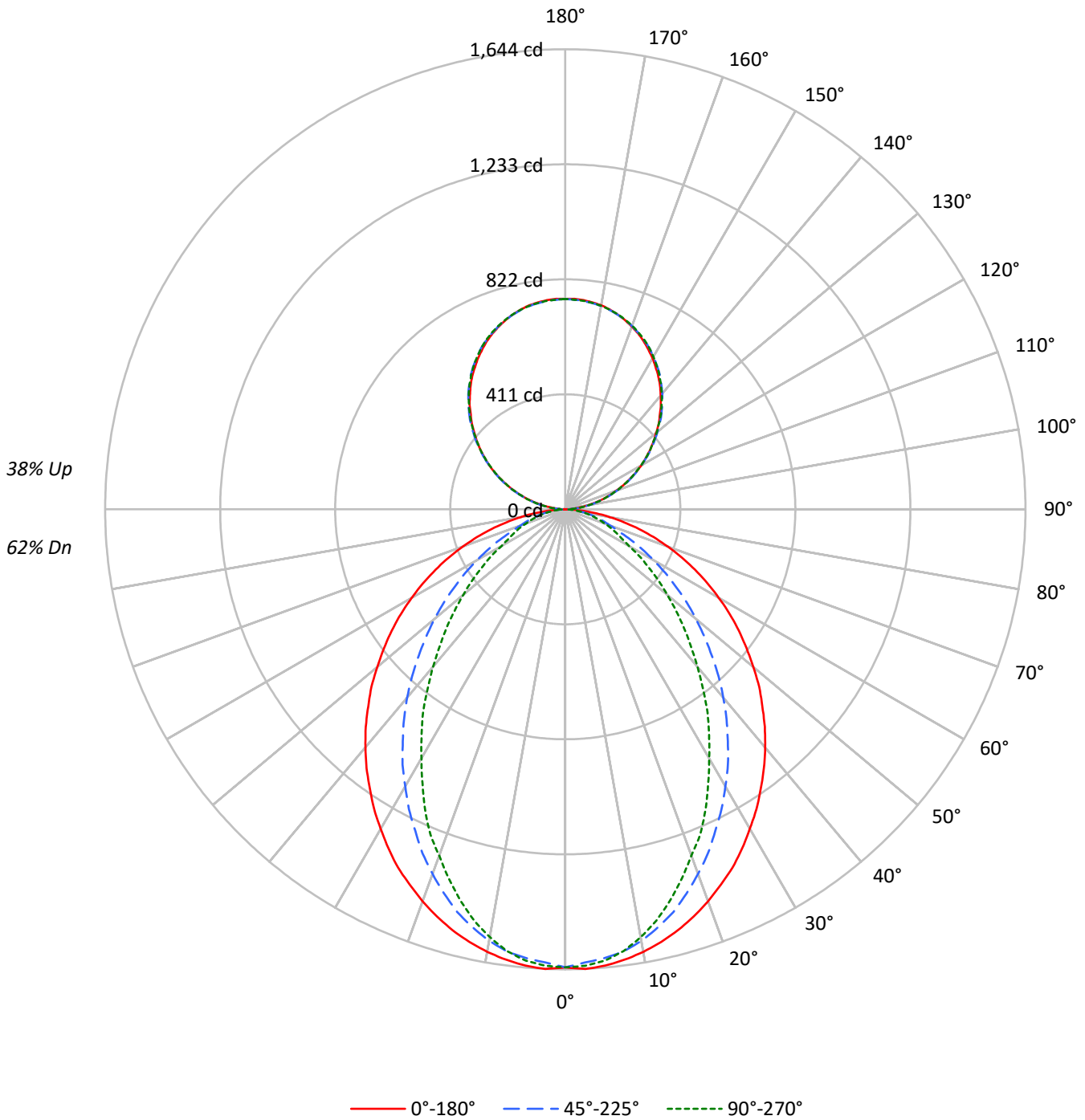
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5470.0 lumens
Efficiency: N/A
Efficacy: 80.3 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: Semi-Direct

Input Watts (W): 68.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P915326
CATALOG NUMBER: DFN2DIP-TR3F0-050D030US927-RLLFLL

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		0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10		0
RCR																			
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67		62
1	101	97	93	90	94	91	88	85	80	77	75	69	68	66	60	59	58		53
2	92	85	79	74	86	80	75	70	71	67	63	62	59	56	53	51	49		45
3	85	75	68	63	79	71	65	60	63	58	54	55	51	48	48	45	43		39
4	78	67	60	54	73	63	57	51	56	51	46	49	45	42	43	40	37		34
5	72	60	52	46	67	57	50	44	51	45	41	45	40	37	39	36	33		30
6	66	54	46	41	62	51	44	39	46	40	36	41	36	32	36	32	29		27
7	62	49	42	36	58	47	40	35	42	36	32	37	33	29	33	29	26		24
8	57	45	37	32	54	43	36	31	38	33	28	34	30	26	30	27	24		22
9	53	41	34	29	50	39	32	28	35	30	26	32	27	24	28	24	22		20
10	50	38	31	26	47	36	30	25	33	27	23	29	25	22	26	22	20		18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2040	2040	2040
5°	2042	2006	2019
10°	2021	1965	1952
15°	1992	1898	1849
20°	1954	1807	1724
25°	1915	1705	1602
30°	1863	1601	1449
35°	1812	1489	1314
40°	1761	1373	1160
45°	1701	1245	1020
50°	1639	1116	883
55°	1573	978	753
60°	1498	835	618
65°	1411	689	555
70°	1306	553	500
75°	1174	483	452
80°	982	401	388
85°	669	259	283

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1701 cd/sqm



TEST NUMBER: P915326

CATALOG NUMBER: DFN2DIP-TR3F0-050D030US927-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.4	2.8
10°-20°	421.2	7.7
20°-30°	591.3	10.8
30°-40°	644.6	11.8
40°-50°	592.4	10.8
50°-60°	465.3	8.5
60°-70°	302.9	5.5
70°-80°	155.9	2.8
80°-90°	41.9	0.8
90°-100°	46.5	0.9
100°-110°	147.8	2.7
110°-120°	252.9	4.6
120°-130°	332.6	6.1
130°-140°	373.3	6.8
140°-150°	366.1	6.7
150°-160°	307.1	5.6
160°-170°	203.7	3.7
170°-180°	71.2	1.3
0°-30°	1165.9	21.3
0°-40°	1810.5	33.1
0°-60°	2868.2	52.4
0°-90°	3368.9	61.6
90°-120°	447.2	8.2
90°-150°	1519.2	27.8
90°-180°	2101.0	38.4
0°-180°	5470.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1637	1637	1637	1637	1637	
5°	1637	1630	1610	1624	1619	155
15°	1557	1541	1490	1462	1448	439
25°	1413	1366	1268	1207	1185	650
35°	1218	1142	1012	918	886	762
45°	996	896	741	636	600	769
55°	757	641	481	393	364	676
65°	511	391	258	208	203	507
75°	273	169	118	108	107	288
85°	64	33	28	28	28	73
90°	1	8	22	21	22	5
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1637.0	1637.0	1637.0	1637.0	1637.0
2.5°	1644.4	1637.0	1620.7	1635.6	1632.6
5°	1637.0	1629.7	1610.3	1623.7	1619.3
7.5°	1623.7	1614.9	1594.1	1600.0	1592.5
10°	1605.9	1595.5	1566.0	1561.5	1552.6
12.5°	1583.7	1570.4	1530.3	1521.5	1505.1
15°	1557.0	1540.7	1490.4	1462.3	1447.5
17.5°	1525.9	1502.2	1439.9	1407.4	1383.6
20°	1490.4	1460.7	1386.6	1349.7	1317.0
22.5°	1451.9	1417.8	1331.8	1281.5	1259.3
25°	1413.3	1365.9	1268.1	1207.4	1185.1
27.5°	1367.5	1317.0	1208.9	1139.2	1105.2
30°	1318.6	1262.2	1143.7	1068.2	1028.1
32.5°	1271.1	1202.9	1081.6	992.6	955.5
35°	1217.8	1142.2	1011.9	918.5	885.9
37.5°	1165.9	1084.4	946.7	844.4	807.5
40°	1111.1	1022.3	878.4	773.3	734.8
42.5°	1054.9	960.0	810.4	700.7	663.8
45°	995.6	896.3	740.8	635.5	599.9
47.5°	939.3	834.2	674.1	568.9	536.3
50°	877.1	771.9	608.9	506.6	475.6
52.5°	816.3	705.1	546.7	448.9	420.8
55°	757.0	641.4	481.4	392.6	364.5
57.5°	696.3	577.8	423.7	340.8	317.0
60°	634.1	515.6	362.9	287.5	263.7
62.5°	573.4	454.9	311.1	240.0	228.2
65°	511.1	391.1	257.8	207.5	203.0
67.5°	451.9	331.8	207.5	182.2	177.8
70°	389.7	274.1	171.8	157.0	151.1
72.5°	330.4	220.7	143.7	131.9	128.9
75°	272.6	168.8	118.5	108.1	106.7
77.5°	214.8	119.9	93.4	87.4	84.4
80°	161.4	86.0	71.1	65.2	65.2
82.5°	112.6	57.8	48.9	45.9	45.9
85°	63.7	32.6	28.1	28.1	28.1
87.5°	23.8	11.8	11.8	10.4	10.4
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: P915326

CATALOG NUMBER: DFN2DIP-TR3F0-050D030US927-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



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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	10.59	11.52	11.45	12.40	13.50	6.57	7.50	7.42	8.38	9.47
	3H	12.27	13.10	13.14	13.99	15.11	7.76	8.59	8.63	9.48	10.60
	4H	12.87	13.66	13.76	14.55	15.69	8.21	9.00	9.10	9.89	11.02
	6H	13.29	14.02	14.19	14.92	16.06	8.53	9.26	9.43	10.15	11.30
	8H	13.42	14.11	14.32	15.02	16.17	8.62	9.31	9.53	10.23	11.37
	12H	13.48	14.14	14.39	15.04	16.22	8.67	9.32	9.58	10.23	11.40
4H	2H	10.62	11.41	11.51	12.30	13.43	7.17	7.96	8.06	8.85	9.98
	3H	12.45	13.10	13.35	14.02	15.17	8.52	9.18	9.42	10.10	11.25
	4H	13.14	13.73	14.05	14.65	15.83	9.07	9.67	9.98	10.58	11.76
	6H	13.65	14.16	14.58	15.10	16.28	9.49	10.00	10.42	10.94	12.12
	8H	13.82	14.30	14.75	15.24	16.43	9.62	10.10	10.55	11.03	12.22
	12H	13.91	14.35	14.86	15.30	16.50	9.68	10.11	10.63	11.07	12.26
8H	4H	13.11	13.59	14.04	14.53	15.72	9.35	9.83	10.28	10.77	11.96
	6H	13.67	14.07	14.63	15.04	16.23	9.87	10.26	10.82	11.24	12.43
	8H	13.88	14.23	14.85	15.20	16.41	10.05	10.40	11.02	11.37	12.58
	12H	14.02	14.33	14.99	15.29	16.54	10.17	10.48	11.14	11.44	12.70
12H	4H	13.07	13.50	14.02	14.45	15.65	9.36	9.79	10.31	10.75	11.94
	6H	13.64	14.00	14.61	14.96	16.17	9.91	10.26	10.88	11.23	12.44
	8H	13.86	14.17	14.83	15.13	16.39	10.12	10.43	11.09	11.39	12.65