

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: P931384

Luminaire Tested: DFN2DS-TR3F0-060DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931384
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR3F0-060DS935-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

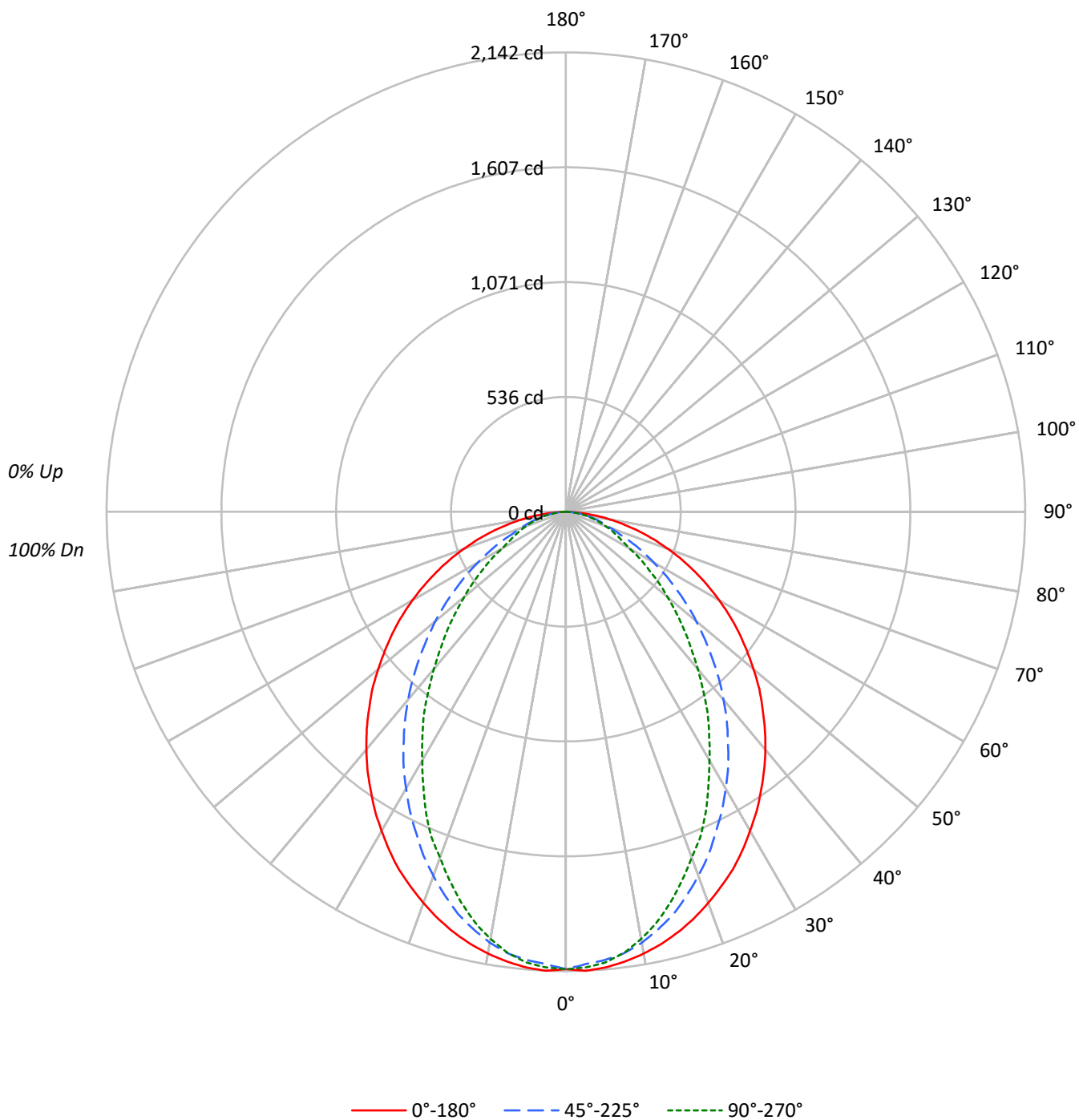
Lumens per Lamp: N/A
Luminaire Lumens: 4386.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 61.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2657	2657	2657
5°	2668	2624	2639
10°	2647	2581	2559
15°	2617	2505	2433
20°	2575	2395	2275
25°	2532	2272	2123
30°	2472	2144	1927
35°	2413	2005	1755
40°	2355	1862	1557
45°	2286	1701	1377
50°	2215	1538	1201
55°	2143	1363	1032
60°	2059	1178	856
65°	1963	990	780
70°	1849	815	717
75°	1710	743	670
80°	1509	664	610
85°	1185	523	523

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2286 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.9	4.6
10°-20°	548.7	12.5
20°-30°	770.3	17.6
30°-40°	839.7	19.1
40°-50°	771.8	17.6
50°-60°	606.1	13.8
60°-70°	394.5	9.0
70°-80°	203.1	4.6
80°-90°	51.8	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1518.9	34.6
0°-40°	2358.6	53.8
0°-60°	3736.5	85.2
0°-90°	4386.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4386.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2133	2133	2133	2133	2133	
5°	2133	2123	2098	2115	2110	202
15°	2028	2007	1942	1905	1886	572
25°	1841	1779	1652	1573	1544	847
35°	1586	1488	1318	1197	1154	993
45°	1297	1168	965	828	782	1002
55°	986	836	627	512	475	881
65°	666	510	336	270	264	660
75°	355	220	154	141	139	376
85°	83	42	37	37	37	99
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2132.6	2132.6	2132.6	2132.6	2132.6
2.5°	2142.3	2132.6	2111.3	2130.7	2126.9
5°	2132.6	2123.0	2097.8	2115.3	2109.5
7.5°	2115.3	2103.7	2076.7	2084.3	2074.7
10°	2092.0	2078.5	2040.1	2034.2	2022.6
12.5°	2063.2	2045.8	1993.6	1982.1	1960.8
15°	2028.4	2007.1	1941.5	1904.9	1885.6
17.5°	1987.9	1956.9	1875.8	1833.4	1802.6
20°	1941.5	1902.8	1806.4	1758.3	1715.7
22.5°	1891.4	1846.9	1735.0	1669.4	1640.5
25°	1841.3	1779.4	1652.1	1573.0	1544.0
27.5°	1781.5	1715.7	1574.8	1484.1	1439.7
30°	1717.8	1644.2	1489.9	1391.6	1339.4
32.5°	1655.9	1567.1	1409.0	1293.1	1244.8
35°	1586.5	1488.1	1318.3	1196.6	1154.0
37.5°	1518.9	1412.6	1233.3	1100.0	1051.9
40°	1447.5	1331.8	1144.4	1007.4	957.3
42.5°	1374.2	1250.7	1055.7	912.8	864.7
45°	1297.0	1167.5	965.1	827.8	781.6
47.5°	1223.7	1086.7	878.2	741.1	698.7
50°	1142.6	1005.6	793.3	660.0	619.6
52.5°	1063.3	918.6	712.2	584.8	548.2
55°	986.2	835.7	627.2	511.5	474.8
57.5°	907.1	752.7	552.0	443.9	413.0
60°	826.0	671.7	472.8	374.5	343.6
62.5°	747.0	592.6	405.2	312.7	297.3
65°	665.9	509.5	335.8	270.3	264.4
67.5°	588.7	432.2	270.3	237.4	231.6
70°	507.6	357.1	223.8	204.6	196.8
72.5°	430.4	287.5	187.1	171.8	167.9
75°	355.1	219.9	154.4	140.9	139.1
77.5°	279.9	156.3	121.6	113.9	110.0
80°	210.3	112.0	92.5	85.0	85.0
82.5°	146.6	75.3	63.6	59.8	59.8
85°	82.9	42.4	36.6	36.6	36.6
87.5°	31.0	15.4	15.4	13.5	13.5
90°	0.0	0.0	0.0	0.0	0.0

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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	14.63	16.15	15.00	16.47	16.78	10.59	12.11	10.96	12.43	12.74
	3H	16.40	17.76	16.77	18.09	18.45	11.86	13.22	12.23	13.55	13.91
	4H	17.06	18.34	17.46	18.69	19.07	12.36	13.64	12.76	13.99	14.37
	6H	17.55	18.73	17.96	19.10	19.49	12.74	13.92	13.15	14.29	14.68
	8H	17.72	18.84	18.14	19.23	19.63	12.86	13.99	13.29	14.38	14.78
	12H	17.82	18.90	18.25	19.28	19.71	12.94	14.02	13.38	14.41	14.83
4H	2H	14.73	16.01	15.13	16.36	16.74	11.29	12.57	11.69	12.92	13.29
	3H	16.67	17.73	17.08	18.13	18.53	12.73	13.79	13.14	14.19	14.59
	4H	17.42	18.37	17.85	18.79	19.23	13.33	14.29	13.76	14.70	15.14
	6H	18.01	18.84	18.47	19.28	19.74	13.82	14.65	14.28	15.09	15.55
	8H	18.22	19.00	18.69	19.44	19.91	13.98	14.76	14.44	15.20	15.67
	12H	18.38	19.07	18.86	19.55	20.02	14.10	14.79	14.58	15.27	15.74
8H	4H	17.44	18.22	17.90	18.66	19.13	13.68	14.46	14.15	14.90	15.37
	6H	18.08	18.72	18.58	19.21	19.69	14.27	14.91	14.77	15.40	15.88
	8H	18.33	18.91	18.84	19.42	19.90	14.49	15.07	15.00	15.58	16.07
	12H	18.53	19.04	19.04	19.53	20.10	14.67	15.18	15.18	15.67	16.24
12H	4H	17.43	18.12	17.91	18.60	19.07	13.73	14.42	14.21	14.90	15.37
	6H	18.06	18.64	18.57	19.15	19.63	14.33	14.91	14.85	15.42	15.91
	8H	18.34	18.85	18.85	19.35	19.91	14.61	15.12	15.12	15.61	16.17