

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: P931368

Luminaire Tested: DFN2DS-TR3F0-050DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931368
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-TR3F0-050DS940-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

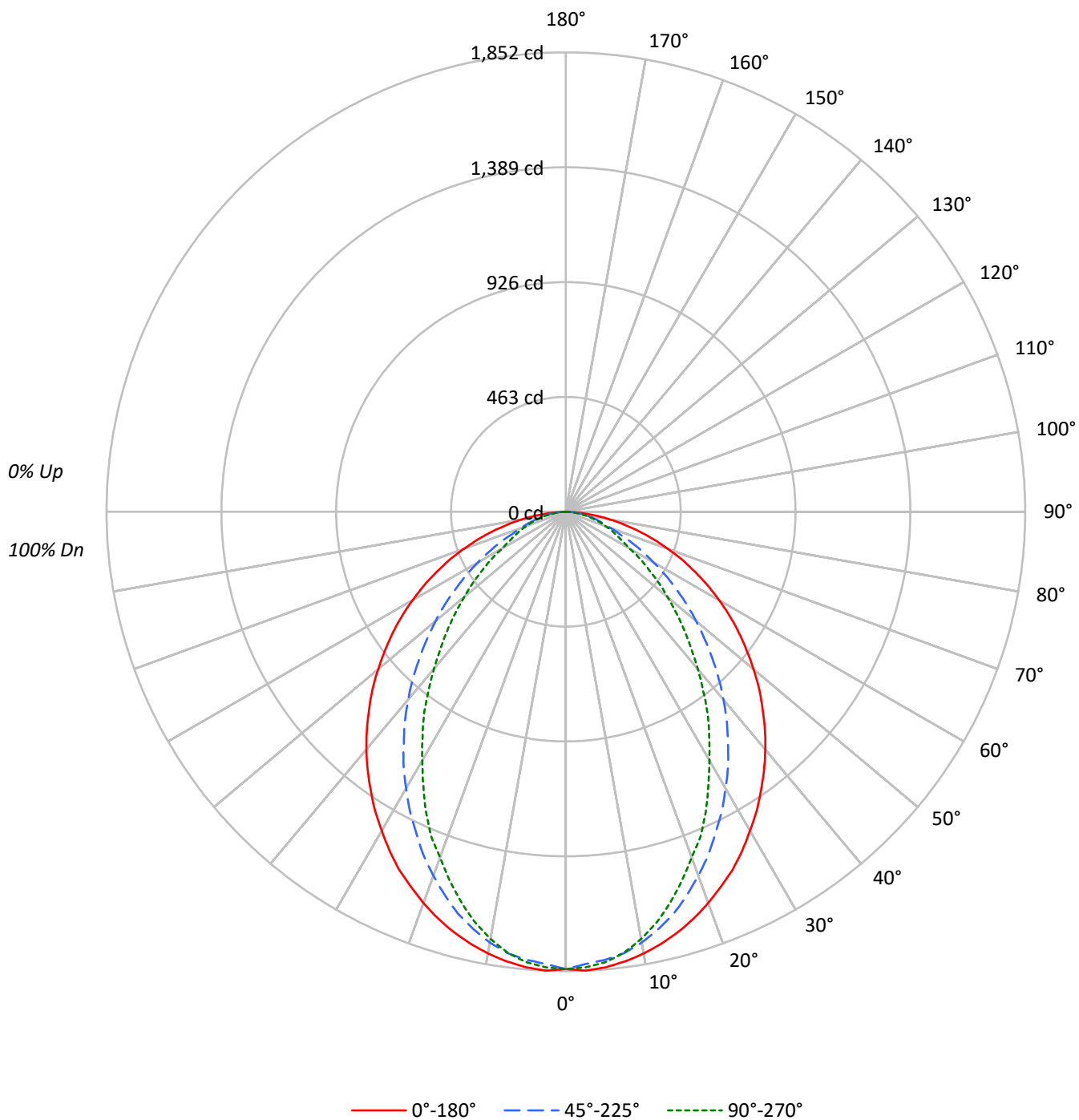
Lumens per Lamp: N/A
Luminaire Lumens: 3791.0 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 49.6
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

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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°	2297	2297	2297
5°	2306	2268	2281
10°	2288	2231	2212
15°	2262	2165	2103
20°	2225	2071	1967
25°	2188	1963	1835
30°	2136	1853	1666
35°	2086	1733	1517
40°	2035	1609	1346
45°	1976	1470	1190
50°	1915	1329	1038
55°	1852	1178	892
60°	1779	1018	740
65°	1697	856	674
70°	1599	705	620
75°	1478	642	579
80°	1305	574	527
85°	1025	453	453

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1976 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.8	4.6
10°-20°	474.3	12.5
20°-30°	665.8	17.6
30°-40°	725.8	19.1
40°-50°	667.1	17.6
50°-60°	523.9	13.8
60°-70°	341.0	9.0
70°-80°	175.5	4.6
80°-90°	44.8	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°	1312.9	34.6
0°-40°	2038.7	53.8
0°-60°	3229.7	85.2
0°-90°	3791.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3791.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1843	1843	1843	1843	1843	
5°	1843	1835	1813	1828	1823	175
15°	1753	1735	1678	1646	1630	494
25°	1591	1538	1428	1360	1334	732
35°	1371	1286	1139	1034	998	858
45°	1121	1009	834	716	676	866
55°	852	722	542	442	410	762
65°	576	440	290	234	228	571
75°	307	190	133	122	120	325
85°	72	37	32	32	32	86
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1843.3	1843.3	1843.3	1843.3	1843.3
2.5°	1851.6	1843.3	1824.9	1841.7	1838.3
5°	1843.3	1835.0	1813.3	1828.2	1823.3
7.5°	1828.2	1818.3	1795.0	1801.6	1793.2
10°	1808.3	1796.6	1763.3	1758.2	1748.2
12.5°	1783.3	1768.3	1723.2	1713.3	1694.8
15°	1753.2	1734.9	1678.2	1646.5	1629.9
17.5°	1718.2	1691.5	1621.4	1584.7	1558.0
20°	1678.2	1644.8	1561.4	1519.8	1483.0
22.5°	1634.9	1596.4	1499.6	1443.0	1418.0
25°	1591.4	1538.0	1427.9	1359.6	1334.4
27.5°	1539.8	1483.0	1361.2	1282.8	1244.4
30°	1484.7	1421.2	1287.8	1202.8	1157.6
32.5°	1431.3	1354.5	1217.8	1117.7	1075.9
35°	1371.3	1286.2	1139.4	1034.3	997.5
37.5°	1312.8	1221.1	1066.0	950.8	909.2
40°	1251.1	1151.1	989.1	870.8	827.4
42.5°	1187.8	1081.0	912.5	789.0	747.4
45°	1121.1	1009.2	834.1	715.6	675.5
47.5°	1057.6	939.3	759.1	640.5	603.9
50°	987.6	869.2	685.7	570.4	535.6
52.5°	919.1	794.0	615.6	505.5	473.8
55°	852.4	722.3	542.1	442.1	410.4
57.5°	784.1	650.6	477.1	383.7	357.0
60°	714.0	580.5	408.6	323.7	296.9
62.5°	645.6	512.2	350.3	270.3	257.0
65°	575.5	440.4	290.3	233.6	228.5
67.5°	508.8	373.7	233.6	205.2	200.2
70°	438.8	308.6	193.5	176.8	170.1
72.5°	372.1	248.5	161.8	148.5	145.1
75°	306.9	190.1	133.4	121.8	120.2
77.5°	241.9	135.0	105.2	98.4	95.0
80°	181.8	96.8	80.0	73.4	73.4
82.5°	126.8	65.1	55.0	51.6	51.6
85°	71.7	36.7	31.7	31.7	31.7
87.5°	26.8	13.3	13.3	11.7	11.7
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	14.12	15.65	14.49	15.96	16.27	10.08	11.61	10.45	11.92	12.23
	3H	15.89	17.25	16.27	17.58	17.94	11.35	12.72	11.73	13.04	13.40
	4H	16.56	17.84	16.96	18.19	18.56	11.85	13.13	12.25	13.48	13.86
	6H	17.04	18.23	17.46	18.59	18.99	12.23	13.42	12.64	13.78	14.17
	8H	17.21	18.34	17.64	18.73	19.13	12.36	13.48	12.78	13.87	14.27
	12H	17.31	18.39	17.74	18.77	19.20	12.44	13.52	12.87	13.90	14.33
4H	2H	14.23	15.51	14.63	15.86	16.24	10.78	12.06	11.18	12.41	12.79
	3H	16.16	17.22	16.57	17.62	18.03	12.22	13.29	12.63	13.69	14.09
	4H	16.91	17.87	17.34	18.28	18.72	12.82	13.78	13.26	14.20	14.63
	6H	17.50	18.33	17.96	18.78	19.24	13.31	14.14	13.77	14.59	15.05
	8H	17.72	18.49	18.18	18.94	19.41	13.47	14.25	13.94	14.69	15.16
	12H	17.87	18.57	18.35	19.04	19.51	13.59	14.28	14.07	14.76	15.23
8H	4H	16.93	17.71	17.40	18.16	18.62	13.18	13.95	13.64	14.40	14.87
	6H	17.57	18.21	18.07	18.71	19.18	13.76	14.41	14.26	14.90	15.37
	8H	17.82	18.40	18.34	18.91	19.40	13.98	14.56	14.50	15.07	15.56
	12H	18.03	18.54	18.54	19.03	19.59	14.16	14.67	14.67	15.16	15.73
12H	4H	16.92	17.61	17.40	18.09	18.56	13.22	13.91	13.70	14.39	14.86
	6H	17.55	18.13	18.07	18.64	19.13	13.83	14.40	14.34	14.91	15.40
	8H	17.84	18.35	18.35	18.84	19.40	14.10	14.61	14.61	15.10	15.67