

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: P930951

Luminaire Tested: DFN2DS-SQ3F0-060DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930951
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-060DS935-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

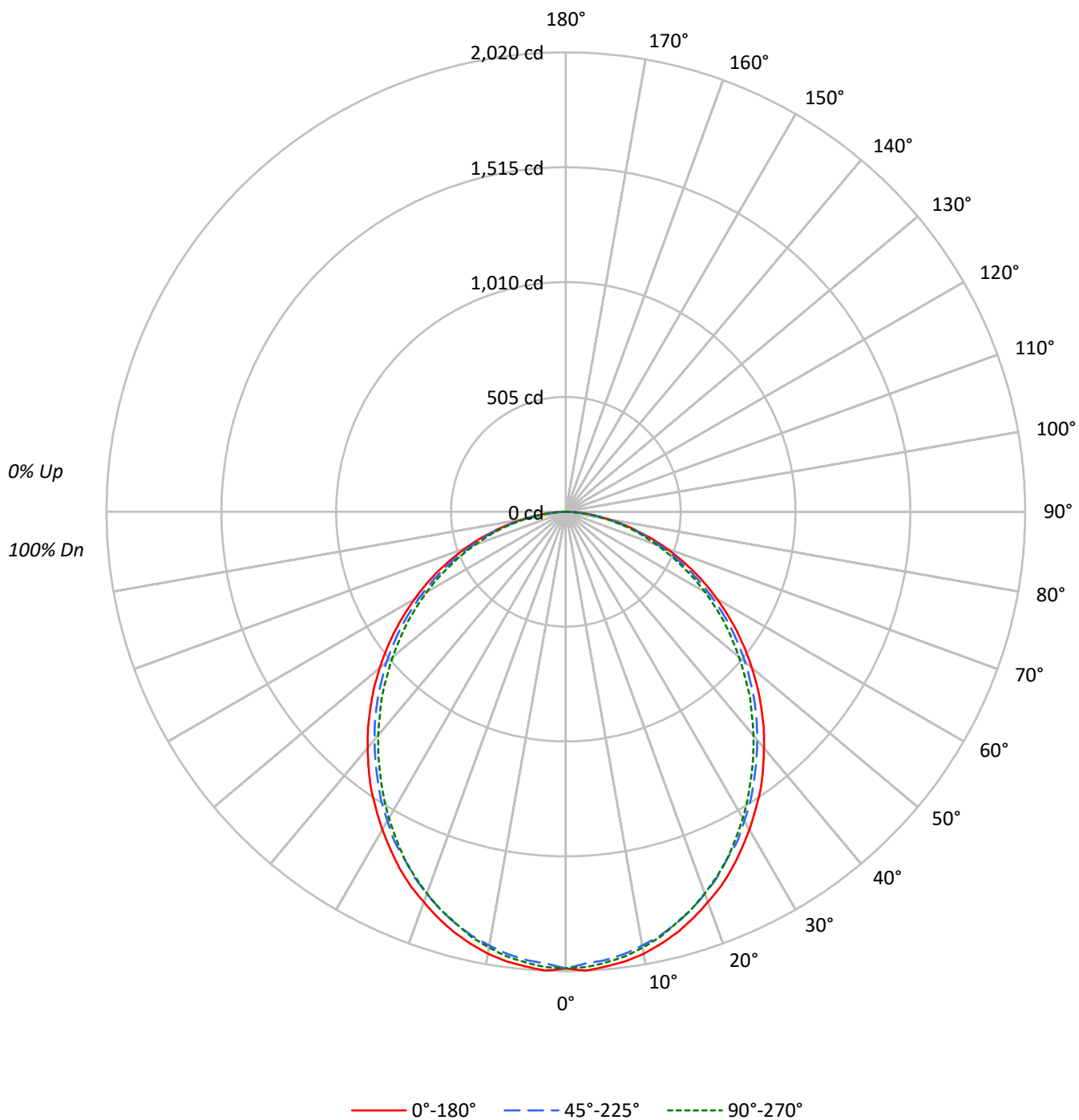
Lumens per Lamp: N/A
Luminaire Lumens: 5108.4 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 59.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2301	2301	2301
5°	2309	2276	2290
10°	2296	2253	2264
15°	2267	2224	2222
20°	2227	2180	2178
25°	2187	2126	2126
30°	2136	2077	2059
35°	2088	2017	1988
40°	2027	1958	1920
45°	1968	1899	1852
50°	1903	1838	1772
55°	1836	1767	1701
60°	1761	1682	1619
65°	1680	1597	1523
70°	1578	1494	1423
75°	1435	1375	1342
80°	1275	1235	1172
85°	1039	990	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1968 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.0	3.7
10°-20°	531.7	10.4
20°-30°	781.4	15.3
30°-40°	907.5	17.8
40°-50°	906.4	17.7
50°-60°	790.4	15.5
60°-70°	584.3	11.4
70°-80°	330.6	6.5
80°-90°	87.2	1.7
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°	1502.1	29.4
0°-40°	2409.6	47.2
0°-60°	4106.3	80.4
0°-90°	5108.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5108.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2008	2008	2008	2008	2008	
5°	2008	2000	1979	1994	1991	191
15°	1911	1900	1875	1882	1873	538
25°	1730	1714	1682	1685	1682	796
35°	1492	1473	1442	1430	1421	932
45°	1214	1201	1172	1151	1143	937
55°	919	907	884	861	852	822
65°	620	608	589	572	562	613
75°	324	321	311	299	303	346
85°	79	77	75	69	68	93
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2007.8	2007.8	2007.8	2007.8	2007.8
2.5°	2019.5	2009.8	1988.5	2007.8	2004.1
5°	2007.8	2000.2	1978.9	1994.3	1990.6
7.5°	1994.3	1982.8	1961.5	1977.1	1973.2
10°	1973.2	1959.7	1936.5	1951.9	1946.1
12.5°	1944.1	1932.6	1909.5	1919.1	1915.2
15°	1911.3	1899.8	1874.6	1882.5	1872.8
17.5°	1870.8	1859.3	1834.1	1843.7	1834.1
20°	1826.3	1814.9	1787.8	1793.5	1786.0
22.5°	1782.1	1764.6	1739.4	1739.4	1735.6
25°	1729.8	1714.5	1681.6	1685.3	1681.6
27.5°	1671.8	1658.3	1633.3	1627.6	1618.0
30°	1614.1	1598.5	1569.7	1563.9	1556.1
32.5°	1552.2	1540.8	1509.8	1498.1	1490.4
35°	1492.4	1473.2	1442.2	1430.5	1420.9
37.5°	1424.8	1407.4	1376.5	1362.9	1353.3
40°	1355.4	1339.8	1308.9	1291.7	1283.9
42.5°	1287.8	1272.2	1241.5	1222.1	1210.5
45°	1214.5	1200.9	1171.8	1150.8	1142.9
47.5°	1142.9	1129.4	1098.6	1077.2	1065.7
50°	1067.6	1058.0	1031.0	1003.9	994.2
52.5°	994.2	980.7	955.7	934.5	921.0
55°	919.1	907.4	884.3	861.1	851.5
57.5°	843.7	834.1	808.9	785.8	778.0
60°	768.3	760.8	733.8	712.4	706.7
62.5°	695.0	681.5	662.2	642.9	635.2
65°	619.8	608.2	588.9	571.5	561.8
67.5°	542.6	532.8	515.6	502.1	494.2
70°	471.1	463.4	445.9	432.4	424.8
72.5°	397.8	390.0	380.4	366.9	361.1
75°	324.2	320.6	310.7	299.3	303.2
77.5°	258.7	250.9	247.0	241.3	235.6
80°	193.2	191.1	187.2	181.5	177.6
82.5°	131.3	131.3	129.4	121.7	121.7
85°	79.0	77.2	75.3	69.4	67.6
87.5°	34.8	31.0	27.0	21.3	19.3
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	14.18	15.79	14.54	16.10	16.42	13.73	15.34	14.10	15.66	15.97
	3H	15.93	17.38	16.30	17.71	18.07	15.44	16.89	15.81	17.22	17.58
	4H	16.57	17.94	16.97	18.29	18.67	16.08	17.45	16.48	17.80	18.17
	6H	17.04	18.31	17.45	18.68	19.07	16.54	17.81	16.95	18.17	18.57
	8H	17.19	18.40	17.61	18.79	19.18	16.68	17.89	17.11	18.28	18.68
	12H	17.28	18.44	17.71	18.82	19.25	16.76	17.92	17.19	18.31	18.73
4H	2H	14.74	16.11	15.14	16.45	16.83	14.39	15.75	14.78	16.10	16.48
	3H	16.71	17.86	17.12	18.26	18.66	16.31	17.45	16.72	17.85	18.25
	4H	17.49	18.53	17.92	18.94	19.38	17.07	18.10	17.50	18.52	18.95
	6H	18.09	18.99	18.54	19.43	19.89	17.65	18.56	18.11	19.00	19.46
	8H	18.28	19.12	18.74	19.56	20.03	17.84	18.68	18.30	19.13	19.59
	12H	18.41	19.17	18.89	19.64	20.11	17.96	18.72	18.44	19.19	19.66
8H	4H	17.76	18.61	18.22	19.05	19.52	17.39	18.24	17.85	18.68	19.14
	6H	18.48	19.18	18.97	19.67	20.14	18.10	18.80	18.59	19.29	19.76
	8H	18.74	19.37	19.25	19.87	20.36	18.34	18.98	18.85	19.48	19.97
	12H	18.94	19.49	19.44	19.98	20.55	18.52	19.08	19.03	19.57	20.13
12H	4H	17.79	18.55	18.27	19.02	19.49	17.42	18.18	17.90	18.66	19.13
	6H	18.52	19.15	19.03	19.66	20.15	18.15	18.79	18.66	19.29	19.78
	8H	18.84	19.39	19.34	19.88	20.45	18.46	19.02	18.97	19.51	20.07