

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: P931466

Luminaire Tested: DFN2DS-TR4F0-050DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931466
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-TR4F0-050DS840-RLL
Description: 4 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

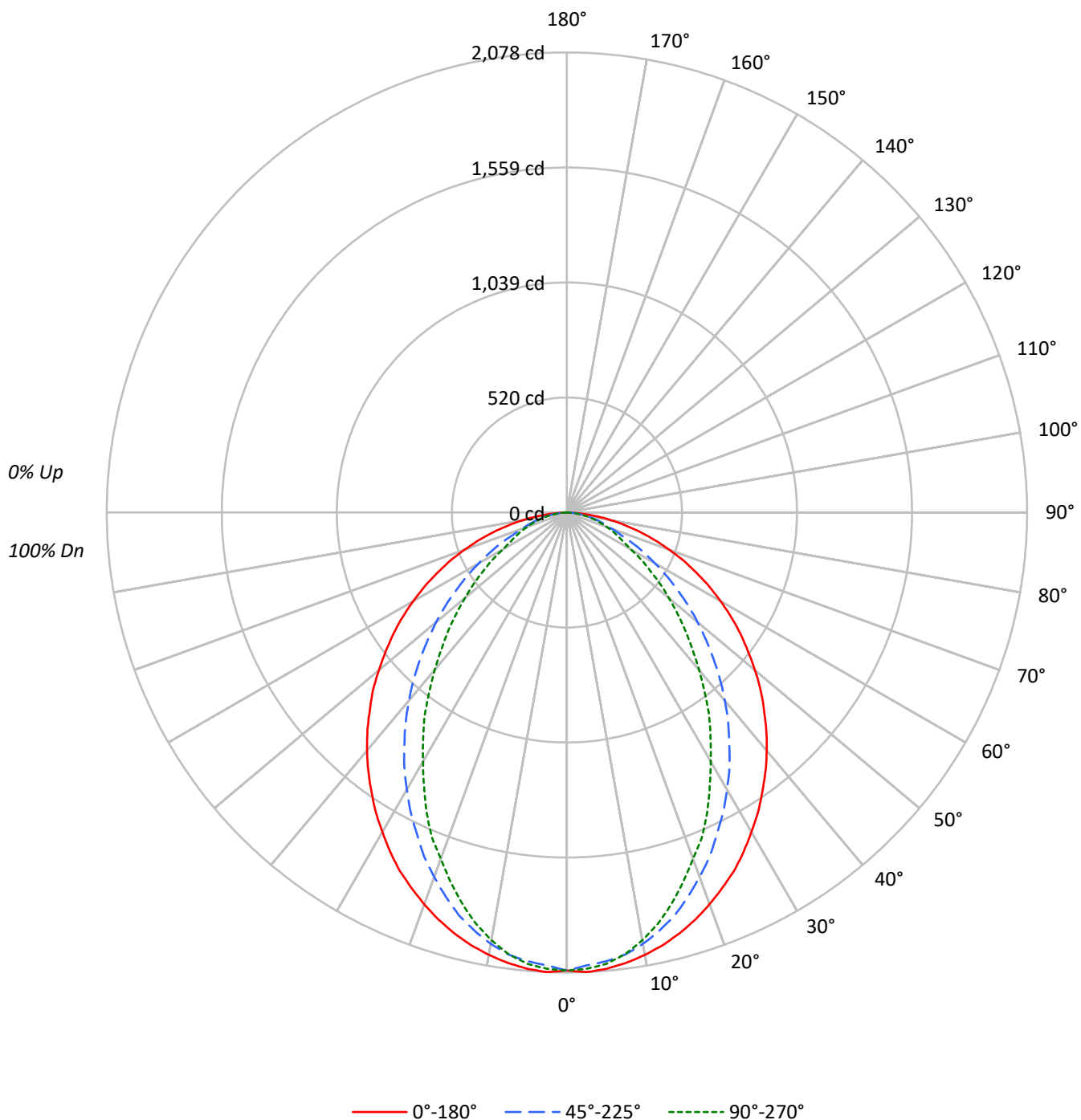
Lumens per Lamp: N/A
Luminaire Lumens: 4254.3 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 48.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
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			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1643	1643	1643
5°	1650	1623	1632
10°	1637	1596	1583
15°	1618	1549	1504
20°	1592	1481	1407
25°	1565	1405	1313
30°	1528	1326	1192
35°	1492	1240	1086
40°	1456	1151	963
45°	1413	1052	852
50°	1370	951	743
55°	1325	843	638
60°	1273	729	529
65°	1214	612	482
70°	1144	504	443
75°	1057	459	414
80°	933	411	377
85°	734	324	324

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1413 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.9	4.6
10°-20°	532.2	12.5
20°-30°	747.2	17.6
30°-40°	814.5	19.1
40°-50°	748.6	17.6
50°-60°	587.9	13.8
60°-70°	382.7	9.0
70°-80°	197.0	4.6
80°-90°	50.3	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°	1473.3	34.6
0°-40°	2287.8	53.8
0°-60°	3624.3	85.2
0°-90°	4254.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4254.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2069	2069	2069	2069	2069	
5°	2069	2059	2035	2052	2046	196
15°	1968	1947	1883	1848	1829	554
25°	1786	1726	1602	1526	1498	821
35°	1539	1443	1279	1161	1119	963
45°	1258	1132	936	803	758	972
55°	957	810	608	496	461	855
65°	646	494	326	262	256	640
75°	344	213	150	137	135	364
85°	80	41	36	36	36	96
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2068.6	2068.6	2068.6	2068.6	2068.6
2.5°	2077.9	2068.6	2047.9	2066.8	2063.0
5°	2068.6	2059.3	2034.8	2051.6	2046.1
7.5°	2051.6	2040.5	2014.3	2021.7	2012.3
10°	2029.2	2016.1	1978.8	1973.1	1961.9
12.5°	2001.2	1984.4	1933.7	1922.6	1901.9
15°	1967.5	1946.8	1883.3	1847.7	1829.0
17.5°	1928.1	1898.2	1819.5	1778.4	1748.3
20°	1883.3	1845.7	1752.2	1705.5	1664.2
22.5°	1834.6	1791.5	1682.9	1619.3	1591.3
25°	1785.9	1725.9	1602.4	1525.7	1497.5
27.5°	1727.9	1664.2	1527.5	1439.5	1396.5
30°	1666.2	1594.9	1445.1	1349.7	1299.1
32.5°	1606.2	1520.0	1366.7	1254.3	1207.4
35°	1538.8	1443.3	1278.7	1160.7	1119.4
37.5°	1473.3	1370.3	1196.3	1067.0	1020.3
40°	1404.0	1291.8	1110.0	977.2	928.5
42.5°	1332.9	1213.1	1024.0	885.4	838.7
45°	1258.1	1132.5	936.0	803.0	758.1
47.5°	1186.9	1054.1	851.9	718.8	677.7
50°	1108.3	975.4	769.5	640.1	601.0
52.5°	1031.4	891.0	690.8	567.3	531.7
55°	956.6	810.5	608.3	496.1	460.6
57.5°	879.9	730.1	535.4	430.6	400.6
60°	801.2	651.5	458.6	363.3	333.2
62.5°	724.5	574.8	393.1	303.3	288.4
65°	645.8	494.2	325.7	262.2	256.5
67.5°	571.0	419.3	262.2	230.2	224.6
70°	492.4	346.3	217.1	198.4	190.9
72.5°	417.5	278.9	181.6	166.7	162.9
75°	344.4	213.3	149.7	136.6	134.8
77.5°	271.5	151.6	118.0	110.4	106.6
80°	204.0	108.6	89.8	82.4	82.4
82.5°	142.2	73.1	61.8	58.0	58.0
85°	80.5	41.1	35.5	35.5	35.5
87.5°	30.0	14.9	14.9	13.1	13.1
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	12.96	14.48	13.33	14.80	15.11	8.92	10.44	9.29	10.76	11.07
	3H	14.73	16.09	15.10	16.42	16.78	10.19	11.55	10.56	11.88	12.24
	4H	15.39	16.67	15.79	17.02	17.40	10.69	11.97	11.09	12.32	12.70
	6H	15.88	17.06	16.29	17.43	17.82	11.07	12.25	11.48	12.62	13.01
	8H	16.05	17.17	16.47	17.56	17.96	11.19	12.32	11.62	12.71	13.11
	12H	16.15	17.23	16.58	17.61	18.04	11.27	12.35	11.70	12.73	13.16
4H	2H	13.06	14.35	13.46	14.69	15.07	9.62	10.90	10.02	11.25	11.62
	3H	15.00	16.06	15.41	16.46	16.86	11.06	12.12	11.47	12.52	12.92
	4H	15.75	16.70	16.18	17.12	17.56	11.66	12.62	12.09	13.03	13.47
	6H	16.34	17.17	16.80	17.61	18.07	12.15	12.98	12.60	13.42	13.88
	8H	16.55	17.33	17.02	17.77	18.24	12.31	13.09	12.77	13.53	14.00
	12H	16.71	17.40	17.19	17.88	18.35	12.43	13.12	12.91	13.60	14.07
8H	4H	15.77	16.55	16.23	16.99	17.46	12.01	12.79	12.48	13.23	13.70
	6H	16.41	17.05	16.91	17.54	18.02	12.60	13.24	13.10	13.73	14.21
	8H	16.66	17.24	17.17	17.75	18.23	12.82	13.40	13.33	13.91	14.39
	12H	16.86	17.37	17.37	17.87	18.43	13.00	13.51	13.51	14.00	14.57
12H	4H	15.76	16.45	16.24	16.93	17.40	12.06	12.75	12.54	13.23	13.70
	6H	16.39	16.97	16.90	17.48	17.97	12.66	13.24	13.18	13.75	14.24
	8H	16.67	17.18	17.18	17.68	18.24	12.94	13.45	13.45	13.94	14.50

END OF REPORT